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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549  
FORM 20-F**

(Mark One)

REGISTRATION STATEMENT PURSUANT TO SECTION 12(B) OR 12(G) OF THE SECURITIES EXCHANGE ACT OF 1934

**OR**

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2022.

**OR**

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

**OR**

SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell company report \_\_\_\_\_

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number: 001-35729

**JOYY INC.**

(Exact name of Registrant as specified in its charter)

N/A

(Translation of Registrant's name into English)

**Cayman Islands**

(Jurisdiction of incorporation or organization)

**30 Pasir Panjang Road #15-31A Mapletree Business City,  
Singapore 117440**

(Address of principal executive offices)

**David Xueling Li,**

**Chief Executive Officer,**

**Tel: +65 63519330, E-mail: lxl@joyy.com,**

**30 Pasir Panjang Road #15-31A Mapletree Business City,  
Singapore 117440**

(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

<u>Title of Each Class</u>	<u>Trading symbol(s)</u>	<u>Name of Exchange on Which Registered</u>
American depositary shares (each representing 20 Class A common shares, par value US\$0.00001 per share)	YY	The Nasdaq Stock Market LLC
Class A common shares, par value US\$0.00001 per share*		The Nasdaq Stock Market LLC

\* Not for trading, but only in connection with the listing on The Nasdaq Stock Market LLC of the American depositary shares ("ADSs").

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None  
(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None  
(Title of Class)

Indicate the number of outstanding shares of each of the Issuer's classes of capital or common stock as of the close of the period covered by the annual report. 1,066,177,028 Class A common shares, par value US\$0.00001 per share, and 326,509,555 Class B common shares, par value US\$0.00001 per share, were outstanding as of December 31, 2022.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

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Yes  No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes  No

Note—Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of “large accelerated filer,” “accelerated filer,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act.

† The term “new or revised financial accounting standard” refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark whether the registrant has filed a report on and attestation to its management’s assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report.

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements.

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant’s executive officers during the relevant recovery period pursuant to §240.10D-1(b).

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP

International Financial Reporting Standards as issued by the International Accounting Standards Board

Other

If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

Item 17  Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Sections 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court.

Yes  No

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## INTRODUCTION

Unless otherwise indicated and except where the context otherwise requires, references in this annual report on Form 20-F to:

- “active user” for any period means a registered user account that has logged onto our social entertainment platforms, including Bigo Live, Likee, imo or Hago at least once during such relevant period;
- “concurrent users” for any point in time means the total number of users that are simultaneously logged onto at least one of our social entertainment platforms, including Bigo Live, Likee, imo and Hago, at such point in time;
- “paying user” for any period means a registered user account that has purchased virtual items or other products and services on Bigo Live, Likee or imo at least once during the relevant period. A paying user is not necessarily a unique user, however, as a unique user may set up multiple paying user accounts on our platforms; thus, the number of paying users referred to in this annual report may be higher than the number of unique users who are purchasing virtual items or other products and services;
- “registered user account” means a user account that has downloaded, registered and logged onto our social entertainment platforms, including Bigo Live, Likee, imo and Hago, at least once since registration. We calculate registered user accounts as the cumulative number of user accounts at the end of the relevant period that have logged onto our social entertainment platforms at least once after registration. Each individual user may have more than one registered user account, and consequently, the number of registered user accounts we present in this annual report may overstate the number of unique individuals who are our registered users; and
- “we,” “us,” “our company,” “the Company,” and “our” refer to JOYY Inc., a Cayman Islands company, its subsidiaries, and, in the context of describing our operations and consolidated financial statements, also include the variable interest entities, or the VIEs, and the subsidiaries of the variable interest entities in mainland China in which we do not have any equity ownership but whose financial results have been consolidated based solely on contractual arrangements in accordance with U.S. GAAP.

Historically, we presented our financial results in Renminbi. Starting from January 1, 2021, we changed our reporting currency from Renminbi to U.S. dollars since a majority of our revenues and expenses are now denominated in U.S. dollars. We believe the alignment of the reporting currency with the underlying operations would better illustrate our results of operations for each period. We have applied the change of reporting currency retrospectively to our historical results of operations and financial statements included in this annual report.

On November 16, 2020, we entered into definitive agreements with Baidu, Inc. (Nasdaq: BIDU; HKEX: 9888), or Baidu. Pursuant to the agreements, Baidu would acquire JOYY’s video-based entertainment live streaming business in mainland China, or YY Live, which includes YY mobile app, YY.com website and PC YY, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. Subsequently, the sale was substantially completed as of February 8, 2021, with certain matters remaining to be completed in the future, including necessary regulatory approvals from government authorities. As a result, the historical financial results of YY Live are reflected in our consolidated financial statements as discontinued operations and we ceased consolidation of YY Live business since February 8, 2021. On August 22, 2022, we entered into a share subscription agreement with Shipline Corporation Limited, or Shipline. As a result of and upon the closing of the proposed financing transaction, the financial results of Shipline have been consolidated by us since September 6, 2022.

The financial information and other relevant information disclosed in this annual report is presented on a continuing operations basis, unless otherwise specifically stated. For the avoidance of confusion, the continuing operations for the year ended December 31, 2020, 2021 and 2022 as presented in this annual report primarily consisted of BIGO (including Bigo Live, Likee, imo and others), and did not include Huya or YY Live.

## FORWARD-LOOKING STATEMENTS

This annual report contains forward-looking statements that involve risks and uncertainties. All statements other than statements of historical facts are forward-looking statements. These forward-looking statements are made under the “safe harbor” provisions of the U.S. Private Securities Litigation Reform Act of 1995. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from those expressed or implied by the forward-looking statements.

You can identify these forward-looking statements by words or phrases such as “may,” “will,” “expect,” “is expected to,” “anticipate,” “aim,” “estimate,” “intend,” “plan,” “believe,” “is/are likely to” or other similar expressions. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs. These forward-looking statements include, but are not limited to, statements about:

- our growth strategies;
- our ability to retain and increase our user base and expand our product and service offerings;
- our ability to monetize our platforms;
- our future business development, results of operations and financial condition;
- competition from companies in a number of industries, including internet companies that provide online voice and video communications services, social networking services and online games;
- expected changes in our revenues and certain cost or expense items;
- global economic and business condition; and
- assumptions underlying or related to any of the foregoing.

You should thoroughly read this annual report and the documents that we refer to herein with the understanding that our actual future results may be materially different from and/or worse than what we expect. Other sections of this annual report, including “Item 3. Key Information—D. Risk Factors” and “Item 5. Operating and Financial Review and Prospects” sections, discuss factors which could adversely impact our business and financial performance. Moreover, we operate in an evolving environment. New risk factors emerge from time to time and it is not possible for our management to predict all risk factors, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. We qualify all of our forward-looking statements by these cautionary statements.

You should not rely upon forward-looking statements we make as predictions of future events. The forward-looking statements made in this annual report relate only to events or information as of the date on which the statements are made in this annual report. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by applicable law.

## PART I

### ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

Not applicable.

### ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

**ITEM 3. KEY INFORMATION**

**Our Holding Company Structure and Contractual Arrangements with the Variable Interest Entities**

JOYY Inc. is a Cayman Islands holding company that does not have substantive operations on its own. We conduct our operations primarily through (i) our subsidiaries in Singapore, the United States, the United Kingdom, and other jurisdictions for a majority of our global business; and (ii) the variable interest entities, or the VIEs, with which we have maintained contractual arrangements, and their subsidiaries for some of our remaining business in mainland China. Laws and regulations of mainland China prohibit or restrict foreign investment in certain internet-related business, value-added telecommunication services and other-related businesses. Accordingly, we operate these businesses in mainland China through the variable interest entities, the structure of which is used to provide investors with exposure to foreign investment in companies based in mainland China where laws and regulations in mainland China prohibit or restrict direct foreign investment in certain operating companies, and rely on contractual arrangements among our subsidiaries and the variable interest entities in mainland China as well as their shareholders to direct the business operations of the variable interest entities. Revenues contributed by the variable interest entities and their subsidiaries accounted for 20.7%, 17.1% and 19.8% of our total net revenues for the year ended December 31, 2020, 2021 and 2022, respectively. As used in this annual report, “we,” “us,” “our company” and “our” refers to JOYY Inc., its subsidiaries, and, in the context of describing our operations in mainland China and consolidated financial information, also including the variable interest entities and their subsidiaries, primarily including Guangzhou Huaduo Network Technology Co., Ltd., or Guangzhou Huaduo, and Guangzhou BaiGuoYuan Network Technology Co., Ltd, or Guangzhou BaiGuoYuan. Investors in our ADSs are purchasing equity interest in a holding company incorporated in the Cayman Islands that holds equity interests in its subsidiaries in various jurisdictions. JOYY Inc. does not hold any equity interest in the variable interest entities in mainland China so investments in our ADSs would not render the investors any equity interest in the variable interest entities.

A series of contractual agreements, including voting rights proxy agreements, exclusive service agreements, equity interest pledge agreements and exclusive option agreements, have been entered into by and among our subsidiaries and the variable interest entities in mainland China as well as their respective shareholders. Terms contained in each set of contractual arrangements with the variable interest entities and their respective shareholders are substantially similar. As a result of the contractual arrangements, we are considered the primary beneficiary of these companies, and we have consolidated the financial results of these companies in our consolidated financial statements under U.S. GAAP for accounting purposes. For more details of these contractual arrangements, see “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements.”

However, the contractual arrangements may not be as effective as direct ownership in providing us with control over the variable interest entities and we may incur substantial costs to enforce the terms of the arrangements. If the variable interest entities or the nominee shareholders fail to perform their respective obligations under the contractual arrangements, we could be limited in our ability to enforce the contractual arrangements. Meanwhile, there are very few precedents as to whether contractual arrangements would be judged to form effective control over the variable interest entities through the contractual arrangements, or how contractual arrangements in the context of a variable interest entity should be interpreted or enforced by the courts of mainland China. Furthermore, if we are unable to direct the operations of the variable interest entities and to obtain economic benefits from them through contractual arrangements, we would not be able to continue to consolidate the financial results of these entities in our financial statements. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—We rely on contractual arrangements with the variable interest entities and their shareholders for some of our operation in mainland China, which may not be as effective as direct ownership. If the variable interest entities and their shareholders fail to perform their obligations under these contractual arrangements, we may have to resort to litigation or other legal proceedings to enforce our rights, which may be time-consuming, unpredictable, expensive and damaging to our operations and reputation.”

There are also substantial uncertainties regarding the interpretation and application of current and future laws, regulations and rules of mainland China regarding the status of the rights of our Cayman Islands holding company with respect to its contractual arrangements with the variable interest entities and their shareholders. It is uncertain whether any new laws or regulations of mainland China relating to variable interest entity structures will be adopted or what they would provide if adopted. If we or any of the variable interest entities is found to be in violation of any existing or future laws or regulations of mainland China, or fail to obtain or maintain any of the required permits or approvals, the relevant regulatory authorities of mainland China would have broad discretion to take action in dealing with such violations or failures. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—If the mainland China’s government finds that the structure we have adopted for our business operations in mainland China does not comply with laws and regulations of mainland China, or if these laws or regulations or interpretations of existing laws or regulations change in the future, we could be subject to severe penalties, including the shutting down of our platforms and our business operations currently operated in mainland China” and “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—If the variable interest entities fail to obtain and maintain the requisite licenses and approvals required under the complex regulatory environment for internet-based businesses in mainland China, our business, financial condition and results of operations in mainland China may be adversely affected.”

Our corporate structure is subject to risks associated with our contractual arrangements with the variable interest entities. If the mainland China’s government deems that our contractual arrangements with the variable interest entities do not comply with regulatory restrictions of mainland China on foreign investment in the relevant industries, or if these regulations or the interpretation of existing regulations change or are interpreted differently in the future, we could be subject to severe penalties or be forced to relinquish our interests in those operations. Our holding company, our subsidiaries and the consolidated variable interest entities in mainland China, and investors of our company face uncertainty about potential future actions by the mainland China’s government that could affect the enforceability of the contractual arrangements with the variable interest entities and, consequently, significantly affect the financial performance of the variable interest entities and our company as a whole. For a detailed description of the risks associated with our corporate structure, please refer to risks disclosed under “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure.”

These risks could result in a material adverse change in our operations and the value of our ADSs, significantly limit or completely hinder our ability to continue to offer securities to investors, or cause the value of such securities to significantly decline or become worthless. For a detailed description of risks related to doing business in multiple jurisdictions, please refer to risks disclosed under “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate.”

#### **Permissions and Approvals Required from the Authorities of Mainland China for Our Operations**

We generated 17.5%, 16.8% and 19.7% of our total net revenues from mainland China for the year ended December 31, 2020, 2021 and 2022, respectively. We conduct the mainland China portion of our business primarily through our subsidiaries and the variable interest entities in mainland China and are therefore subject to the laws and regulations of mainland China to the extent applicable. As of the date of this annual report, our subsidiaries and the variable interest entities in mainland China have obtained the requisite licenses and permits from the mainland China’s government authorities that are material for the business operations of our holding company, our subsidiaries and the variable interest entities in mainland China, including, among others, the Internet Culture Operation License, the Value-added Telecommunications Business Operation License (ICP License), the Radio and Television Program Production and Operating Permit and the License for Online Transmission of Audio-Visual Programs. Given the uncertainties of interpretation and implementation of relevant laws and regulations and the enforcement practice by relevant mainland China’s government authorities, we may be required to obtain additional licenses, permits, filings or approvals for the functions and services of our platform in the future. For more detailed information, see “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—If the variable interest entities fail to obtain and maintain the requisite licenses and approvals required under the complex regulatory environment for internet-based businesses in mainland China, our business, financial condition and results of operations in mainland China may be adversely affected.”

The China Securities Regulatory Commission, or the CSRC, promulgated Trial Administrative Measures of the Overseas Securities Offering and Listing by Domestic Companies, or the Overseas Listing Trial Measures, and five relevant guidelines on February 17, 2023, which came into effect on March 31, 2023. The Overseas Listing Trial Measures regulate both direct and indirect overseas offering and listing by domestic company in mainland China by adopting a filing-based regulatory regime. For details of the Overseas Listing Trial Measures, see “Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulations on Overseas Listing by Domestic Companies.”

As the Overseas Listing Trial Measures are relatively new, it remains unclear on how these measures will be interpreted and implemented by CSRC and the relevant mainland China’s governmental authorities, how mainland China’s governmental authorities will regulate overseas listing in general. Given the uncertainty of the interpretation and implementation of the Overseas Listing Trial Measures and our global operations, substantial uncertainties remain and we could not rule out the possibility that we may be required to file the relevant documents with the CSRC in connection with our proposed offerings and listings outside mainland China in the future.

In addition, on December 28, 2021, the Cyberspace Administration of China, or the CAC, and several other administrations jointly promulgated the Measures for Cybersecurity Review, or the Cybersecurity Review Measures, which came into effect on February 15, 2022, superseding and replacing the current cybersecurity review measures that had been in effect since June 2020. The Cybersecurity Review Measures provide that (i) a “network platform operator” holding over one million users’ personal information shall apply for a cybersecurity review when listing their securities “in a foreign country” (ii) a critical information infrastructure operator, or a CIIIO, that intends to purchase internet products and services that affect or may affect national security should apply for a cybersecurity review, and (iii) a “network platform operator” carrying out data processing activities that affect or may affect national security should apply for a cybersecurity review. Since the Cybersecurity Review Measures are relatively new, substantial uncertainties remain in relation to their interpretation and implementation. Additionally, the Cybersecurity Review Measures do not provide the exact scope of “network platform operator” or the criteria for determining which circumstance falls within the definition of “holding over one million users’ personal information.” Furthermore, on November 14, 2021, the CAC commenced to publicly solicit comments on the Regulations on the Administration of Cyber Data Security (Draft for Comments), or the Draft Cyber Data Security Regulation. The Draft Cyber Data Security Regulation provides that, among others, data processors that handle personal information of more than one million people contemplating to list its securities on a foreign stock exchange shall apply for cybersecurity review. As a result, it is possible that we may be required to go through cybersecurity review by the CAC. Moreover, the CAC issued the Measures for Security Assessment of Cross-border Data Transfer on July 7, 2022, which came into effect on September 1, 2022. According to such measures, in addition to the requirement to conduct self-assessment on the risks of the outbound data transfer, a data processor must apply to the national cyberspace department for data security assessment through the provincial-level cyberspace administration authority if it involves cross-border data transfer under any of the following circumstances: (i) outbound transfer of important data by a data processor; (ii) outbound transfer of personal information by a critical information infrastructure operator or a personal information processor who has processed the personal information of more than one million people; (iii) outbound transfer of personal information by a personal information processor who has made outbound transfers of the personal information of 100,000 people cumulatively or the sensitive personal information of 10,000 people cumulatively since January 1 of the previous year; and (iv) other circumstances where an application for the security assessment of an outbound data transfer is required as prescribed by the national cyberspace administration authority. In addition, the CAC published the Guidelines for the Security Assessment Application for Cross-border Data Transfer (first edition) on August 31, 2022, which further specifies the procedures and documents for security assessment application under the Measures for Security Assessment of Cross-Border Data Transfer.

However, the Draft Cyber Data Security Regulation has not been officially enacted as of the date of this annual report, and the Cybersecurity Review Measures and the Measures for Security Assessment of Cross-border Data Transfer are relatively new. It remains unclear as to how these regulations will be interpreted, amended and implemented by the relevant mainland China’s governmental authorities, how mainland China’s governmental authorities will regulate overseas listing in general and whether we are required to obtain any specific regulatory approvals from, or complete any filing procedures with, the CSRC, CAC or any other mainland China’s governmental authorities for our offerings outside mainland China. Therefore, there can be no assurance that we will not be required to apply for a cybersecurity review pursuant to the Cybersecurity Review Measures or a data security assessment pursuant to the Measures for Security Assessment of Cross-Border Data Transfer. To the extent any cybersecurity review or data security assessment is required, we cannot assure you that we will be able to complete it in a timely manner, or at all, and such approvals may be rescinded even if obtained. As of the date of this annual report, we have not been subject to any cybersecurity review under the Cybersecurity Review Measures or data security assessment pursuant to the Measures for Security Assessment of Cross-Border Data Transfer.

If we fail to obtain the relevant approval or complete other filing or review procedures for our operations and/or any future offshore offering or listing, we may face sanctions by the CSRC or other regulatory authorities of mainland China, which may include warnings, fines, suspension of business to rectify, revocation of licenses, cancellation of filings, shutdown of our platform or even criminal liability, limitations on our operating privileges in mainland China, restrictions on or prohibition of the payments or remittance of dividends by our subsidiaries in mainland China, restrictions on or delays to our future financing transactions outside mainland China, or other actions that could have a material and adverse effect on our business, financial condition, results of operations, reputation and prospects, as well as the trading price of our ADSs. For more detailed information, see “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—Our business is subject to complex and evolving laws and regulations across the globe regarding cybersecurity, information security, privacy and data protection. Many of these laws and regulations are subject to change and uncertain interpretation, and any failure or perceived failure to comply with these laws and regulations could result in claims, changes to our business practices, negative publicity, legal proceedings, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business” and “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—The approval of and the filing with the CSRC or other government authorities of mainland China may be required in connection with our offerings and financing activities outside mainland China in the future under the laws of mainland China, and, if required, we cannot predict whether or for how long we will be able to obtain such approval or complete such filing”

We currently operate in several key markets across the globe, such as North America, Europe, the Middle East, Southeast Asia, Eastern Pacific regions, and others. We face various risks and uncertainties related to doing business in multiple jurisdictions across the globe. In particular, for our operations in mainland China, we are subject to complex and evolving laws and regulations of mainland China to the extent applicable. For example, we face risks associated with oversight on cybersecurity and data privacy and anti-monopoly regulatory actions. These may impact our ability to conduct certain businesses, accept foreign investments, or list on a United States or other foreign exchange. Implementation of industry-wide regulations, including data security or anti-monopoly related regulations, in this nature may cause the value of such securities to significantly decline or become worthless. Risks and uncertainties arising from the legal system in mainland China, including risks and uncertainties regarding the enforcement of laws and quickly evolving rules and regulations in mainland China, could result in a material adverse change in our operations in mainland China and the value of our ADSs.

#### **Cash and Asset Flows through Our Organization**

JOYY Inc. is a holding company with no material operations of its own. We conduct our operations primarily through our subsidiaries, the variable interest entities and their subsidiaries incorporated under the laws of various jurisdictions where we have business presence. As a result, JOYY Inc.’s ability to pay dividends depends upon dividends paid by our subsidiaries, which may be subject to restrictions imposed by the applicable laws and regulations in these jurisdictions. In certain jurisdictions, such as Singapore, there are currently no foreign exchange control regulations which restrict the ability of our subsidiaries in these jurisdictions to distribute dividends to us. However, the relevant regulations may be changed and the ability of these subsidiaries to distribute dividends to us may be restricted in the future. As for the jurisdiction of mainland China, under the laws and regulations of mainland China, if our existing subsidiaries in mainland China or any newly formed ones incur debt on their own behalf in the future, the instruments governing their debt may restrict their ability to pay dividends to us. In addition, our wholly foreign-owned subsidiaries in mainland China are permitted to pay dividends to us only out of their retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. Under the laws and regulations of mainland China, each of our subsidiaries and the variable interest entities in mainland China is required to make appropriations to certain statutory reserve funds or may make appropriations to certain discretionary funds, which are not distributable as cash dividends except in the event of a solvent liquidation of the companies. For more details, see “Item 5. Operating and Financial Review and Prospects—Liquidity and Capital Resources—Holding Company Structure.”

We have established stringent controls and procedures for cash flows within our organization. Each transfer of cash between our Cayman Islands holding company and our subsidiaries, the variable interest entities or the subsidiaries of the variable interest entities is subject to internal approval. The cash inflows of the Cayman Islands holding company were primarily generated from the proceeds we received from our public offerings of common shares, our offerings of convertible senior notes and other financing activities.

Under the laws and regulations of mainland China, JOYY Inc. may provide funding to its subsidiaries in mainland China only through capital contributions or loans, and to the variable interest entities only through loans, subject to satisfaction of applicable government registration and approval requirements. Currently, there is no statutory limit to the amount of funding that we can provide to our subsidiaries in mainland China through capital contributions. However, the maximum amount we can loan to our subsidiaries and the variable interest entities in mainland China is subject to statutory limits. According to the current laws and regulations of mainland China, we can provide funding to our subsidiaries in mainland China through loans of up to either (i) the amount of the difference between the respective registered total investment amount and registered capital of each of our subsidiaries in mainland China, or the Total Investment and Registered Capital Balance, or (ii) two times, or the then applicable statutory multiple, the amount of their respective net assets, calculated in accordance with PRC GAAP, or the Net Assets Limit, at our election. We may also fund the variable interest entities through cross-border loans and the maximum amount would be their respective Net Assets Limit. Increasing the Total Investment and Registered Capital Balance of our subsidiaries in mainland China is subject to governmental procedures and may require a subsidiary in mainland China to increase its registered capital at the same time. If we choose to make a loan to an entity in mainland China based on its Net Assets Limit, the maximum amount we would be able to loan to the relevant entity in mainland China would depend on the relevant entity's net assets and the applicable statutory multiple at the time of calculation. For details, see "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Regulations of mainland China in relation to offshore investment activities by mainland China residents and direct investment and loans by offshore holding companies to entities in mainland China may delay or limit our ability to effectively use the proceeds of public offerings, such as limiting the ability of our subsidiaries in mainland China to distribute profits to us and limiting our ability to make additional capital contributions or loans to our subsidiaries in mainland China or otherwise expose us to liability and penalties under law of mainland China."

For the years ended December 31, 2020, 2021 and 2022, JOYY Inc., through its intermediate holding companies, provided capital contributions of US\$7.2 million, US\$7.8 million and US\$8.7 million, respectively, to our subsidiaries in mainland China.

For the years ended December 31, 2020, 2021 and 2022, JOYY Inc. provided loans of US\$954.1 million, nil and nil, respectively, to our intermediate holding companies and subsidiaries, and received repayments of nil, US\$723.3 million and US\$365.5 million, respectively.

For the years ended December 31, 2020, 2021 and 2022, cash paid by the variable interest entities to our subsidiaries for the settlement of technical support fees and software transactions were US\$423.6 million, US\$114.6 million and US\$109.7 million, respectively. For the years ended December 31, 2020, 2021 and 2022, cash received by the variable interest entities from our subsidiaries were US\$25.0 million, US\$129.4 million and US\$9.7 million, respectively, as the revenues earned from our subsidiaries. In the future, to the extent there is any fee owed to our subsidiaries in mainland China under the contractual arrangements with the variable interest entities, the variable interest entities intend to settle it.

For the years ended December 31, 2020, 2021 and 2022, the variable interest entities' cash flows for investing activities provided to our subsidiaries were net cash outflows of US\$104.1 million, US\$35.6 million and US\$194.1 million, respectively. For the years ended December 31, 2020, 2021 and 2022, the variable interest entities' cash flows for financing activities provided by our subsidiaries were net cash inflows of US\$25.2 million, US\$5.4 million and US\$32.8 million, respectively.

For the years ended December 31, 2020, 2021 and 2022, no assets other than cash were transferred between the Cayman Islands holding company and a subsidiary, a variable interest entity or its subsidiary within our corporate structure, and no subsidiaries paid dividends or made other distributions to JOYY Inc. For details of the financial position, cash flows and results of operations of the variable interest entities, see "—Financial Information Related to the Variable Interest Entities" and Note 4(a) to our audited consolidated financial statements included elsewhere in this annual report.

Under laws and regulations of mainland China, our subsidiaries and the variable interest entities in mainland China are subject to certain restrictions with respect to paying dividends or otherwise transferring any of their net assets to us. Remittance of dividends by a wholly foreign-owned enterprise out of mainland China is also subject to examination by the banks designated by SAFE. Current regulations of mainland China permit our subsidiaries in mainland China to pay dividends to us only out of their accumulated after-tax profits upon satisfaction of relevant statutory condition and procedures, if any, determined in accordance with PRC accounting standards and regulations. In addition, each of our subsidiaries in mainland China is required to set aside at least 10% of its accumulated profits each year, if any, to fund certain reserve funds until the total amount set aside reaches 50% of its registered capital. As of December 31, 2022, appropriations to statutory reserves amounting to US\$32.5 million were made by thirty-two variable interest entities. These reserves are not distributable as cash dividends. Furthermore, if our subsidiaries and the variable interest entities in mainland China incur debt on their own behalf in the future, the instruments governing the debt may restrict their ability to pay dividends or make other payments to us, which may restrict our ability to satisfy our liquidity requirements. In addition, the EIT Law, and its implementation rules provide that withholding tax rate of 10% will be applicable to dividends payable by companies in mainland China to non-mainland-China-resident enterprises unless otherwise exempted or reduced according to treaties or arrangements between the mainland China's central government and governments of other countries or regions where the non-mainland-China-resident enterprises are incorporated. For details, see "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Our subsidiaries and the variable interest entities in mainland China are subject to restrictions on paying dividends or making other payments to us, which may restrict our ability to satisfy our liquidity requirements." With the sale of YY Live to Baidu being substantially completed with certain matters, including necessary regulatory approvals from government authorities, remaining to be completed in the future, the majority of our revenue and operating cash are currently generated from subsidiaries outside of mainland China, and our reliance on dividends from subsidiaries in mainland China would be limited.

JOYY Inc. has declared cash dividends from time to time, and plans to continue to pay cash dividends in accordance with its authorized dividend policy. On August 11, 2020, our board of directors approved a quarterly dividend policy for three years commencing in the second quarter of 2020. Under the policy, total cash dividend amount expected to be paid would be approximately US\$300 million and quarterly dividends would be set at approximately US\$25 million in each fiscal quarter. On November 20, 2020, our board of directors approved an additional quarterly dividend policy for three years, under which the total cash dividend amount expected to be paid would be approximately US\$200 million and quarterly dividend would be set at a fixed amount of approximately US\$16.67 million in each fiscal quarter. As of the date of this annual report, we have paid dividends in an aggregate amount of US\$372.9 million. See "Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Dividend Policy." For the material Cayman Islands, Singapore, mainland China and U.S. federal income tax consequences of an investment in our ADSs or common shares, see "Item 10. Additional Information—E. Taxation."

#### **Financial Information Related to the Variable Interest Entities**

The following table presents the condensed consolidating schedule of financial information of JOYY Inc., the variable interest entities, the primary beneficiaries of the variable interest entities, and other equity subsidiaries for the periods and as of the dates presented.

**Selected Condensed Consolidated Statements of Operations and Comprehensive Income (Loss) Data**

	<b>For the Year Ended December 31, 2022</b>					
	<b>The Company</b>	<b>Equity Subsidiaries</b>	<b>Primary Beneficiaries of VIEs</b>	<b>VIEs and VIEs' Subsidiaries</b>	<b>Eliminations</b>	<b>Consolidated</b>
	(US\$ in thousands)					
Inter-company revenues <sup>(1)</sup>	—	20,524	221,628	54,587	(296,739)	—
Third-party revenues	—	1,930,532	2,328	478,656	—	2,411,516
<b>Total revenue</b>	<b>—</b>	<b>1,951,056</b>	<b>223,956</b>	<b>533,243</b>	<b>(296,739)</b>	<b>2,411,516</b>
Total cost and operating expenses	(3,212)	(1,908,859)	(221,141)	(547,931)	302,857	(2,378,286)
Share of income of subsidiaries/VIEs <sup>(2)</sup>	586,900	62,332	37,360	—	(686,592)	—
Others, net	(12,963)	562,107	22,149	45,801	(15,750)	601,344
<b>Income before income tax</b>	<b>570,725</b>	<b>666,636</b>	<b>62,324</b>	<b>31,113</b>	<b>(696,224)</b>	<b>634,574</b>
Income tax (expense) benefits	—	(27,178)	8	(7,405)	—	(34,575)
Share of (loss) income in equity method investments, net of income taxes	(441,834)	(70,255)	—	13,658	—	(498,431)
<b>Net income from continuing operations</b>	<b>128,891</b>	<b>569,203</b>	<b>62,332</b>	<b>37,366</b>	<b>(696,224)</b>	<b>101,568</b>
Net income (loss) from continuing operations attributable to the non-controlling interest shareholders and the mezzanine equity classified non-controlling interest shareholders	—	27,329	—	(6)	—	27,323
<b>Net income from continuing operations attributable to controlling interest of JOYY Inc.</b>	<b>128,891</b>	<b>596,532</b>	<b>62,332</b>	<b>37,360</b>	<b>(696,224)</b>	<b>128,891</b>
Net income from discontinued operations attributable to controlling interest of JOYY Inc.	—	—	—	—	—	—
<b>Net income attributable to controlling interest of JOYY Inc.</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>128,891</b>

	<b>For the Year Ended December 31, 2021</b>					
	<b>The Company</b>	<b>Equity Subsidiaries</b>	<b>Primary Beneficiaries of VIEs</b>	<b>VIEs and VIEs' Subsidiaries</b>	<b>Eliminations</b>	<b>Consolidated</b>
	(US\$ in thousands)					
Inter-company revenues <sup>(1)</sup>	—	13,995	239,595	109,618	(363,208)	—
Third-party revenues	—	2,170,655	925	447,471	—	2,619,051
<b>Total revenue</b>	<b>—</b>	<b>2,184,650</b>	<b>240,520</b>	<b>557,089</b>	<b>(363,208)</b>	<b>2,619,051</b>
Total cost and operating expenses	—	(2,176,663)	(264,414)	(701,686)	391,694	(2,751,069)
Share of loss of subsidiaries/VIEs <sup>(2)</sup>	(117,603)	(134,745)	(104,447)	—	356,795	—
Others, net	(6,068)	26,408	18,016	22,680	(6,607)	54,429
<b>Loss before income tax</b>	<b>(123,671)</b>	<b>(100,350)</b>	<b>(110,325)</b>	<b>(121,917)</b>	<b>378,674</b>	<b>(77,589)</b>
Income tax expense	—	(13,222)	(8,289)	(4,234)	—	(25,745)
Share of income (loss) in equity method investments, net of income taxes	7,811	(37,887)	—	3,859	—	(26,217)
<b>Net loss from continuing operations</b>	<b>(115,860)</b>	<b>(151,459)</b>	<b>(118,614)</b>	<b>(122,292)</b>	<b>378,674</b>	<b>(129,551)</b>
Net income from continuing operations attributable to the non-controlling interest shareholders and the mezzanine equity classified non-controlling interest shareholders	—	11,977	—	1,714	—	13,691
<b>Net loss from continuing operations attributable to controlling interest of JOYY Inc.</b>	<b>(115,860)</b>	<b>(139,482)</b>	<b>(118,614)</b>	<b>(120,578)</b>	<b>378,674</b>	<b>(115,860)</b>
Net income from discontinued operations attributable to controlling interest of JOYY Inc.	—	—	—	—	—	35,567
<b>Net loss attributable to controlling interest of JOYY Inc.</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>(80,293)</b>

For the Year Ended December 31, 2020						
	The Company	Equity Subsidiaries	Primary Beneficiaries of VIEs	VIEs and VIEs' Subsidiaries	Eliminations	Consolidated
	(US\$ in thousands)					
Inter-company revenues <sup>(1)</sup>	—	379,331	189,743	79,609	(648,683)	—
Third-party revenues	—	1,521,123	678	396,343	—	1,918,144
<b>Total revenue</b>	<b>—</b>	<b>1,900,454</b>	<b>190,421</b>	<b>475,952</b>	<b>(648,683)</b>	<b>1,918,144</b>
Total cost and operating expenses	—	(1,795,101)	(118,923)	(1,030,300)	611,305	(2,333,019)
Share of loss of subsidiaries/VIEs <sup>(2)</sup>	(208,247)	(463,276)	(523,848)	—	1,195,371	—
Others, net	187,044	192,742	(4,825)	55,183	(1,612)	428,532
<b>Income (Loss) before income tax</b>	<b>(21,203)</b>	<b>(165,181)</b>	<b>(457,175)</b>	<b>(499,165)</b>	<b>1,156,381</b>	<b>13,657</b>
Income tax expense	—	(7,332)	(1,491)	(19,002)	—	(27,825)
Share of income (loss) in equity method investments, net of income taxes	2,462	2,841	—	(12,937)	—	(7,634)
<b>Net loss from continuing operations</b>	<b>(18,741)</b>	<b>(169,672)</b>	<b>(458,666)</b>	<b>(531,104)</b>	<b>1,156,381</b>	<b>(21,802)</b>
Net income from continuing operations attributable to the non-controlling interest shareholders and the mezzanine equity classified non-controlling interest shareholders	—	415	—	2,646	—	3,061
<b>Net loss from continuing operations attributable to controlling interest of JOYY Inc.</b>	<b>(18,741)</b>	<b>(169,257)</b>	<b>(458,666)</b>	<b>(528,458)</b>	<b>1,156,381</b>	<b>(18,741)</b>
Net income from discontinued operations attributable to controlling interest of JOYY Inc.	—	—	—	—	—	1,391,638
<b>Net income attributable to controlling interest of JOYY Inc.</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1,372,897</b>

Notes:

- (1) Represents the elimination of the intercompany transaction and service charge at the consolidation level. The VIEs recognized inter-company cost of revenues and operating expenses in the amounts of US\$447.3 million, US\$35.9 million and US\$55.8 million for the years ended December 31, 2020, 2021 and 2022, respectively, for technical support services.
- (2) Represents the elimination of investments among JOYY Inc., the primary beneficiaries of VIEs, the other subsidiaries, and VIEs and their subsidiaries that we consolidate.

**Selected Condensed Consolidated Balance Sheets Data**

As of December 31, 2022						
<u>The Company</u>	<u>Equity Subsidiaries</u>	<u>Primary Beneficiaries of VIEs</u>	<u>VIEs and VIEs' subsidiaries</u>	<u>Eliminations</u>	<u>Consolidated</u>	
(US\$ in thousands)						
<b>Assets</b>						
Cash and cash equivalents	40,369	890,731	35,852	247,497	—	1,214,449
Restricted cash	—	297,131	—	6,239	—	303,370
Short-term deposits	50,000	1,933,877	14,358	362,310	—	2,360,545
Restricted short-term deposits	—	47,741	—	—	—	47,741
Short-term investments	86,150	196,675	43,707	36,108	—	362,640
Accounts receivable	—	112,075	22	5,830	—	117,927
Prepayments and other current assets	15,663	136,122	6,560	77,838	—	236,183
Amounts due from Group companies <sup>(1)</sup>	1,051,001	2,882	363,235	476,689	(1,893,807)	—
Investments in subsidiaries/VIEs <sup>(2)</sup>	4,631,368	2,302,101	1,916,108	—	(8,849,577)	—
Long-term investments	168,230	136,913	—	355,261	—	660,404
Property, plant and equipment, net	—	40,258	81,362	221,614	(33)	343,201
Land use rights, net	—	—	—	330,005	—	330,005
Intangible assets, net	—	375,249	5,861	49,016	(31,826)	398,300
Goodwill	—	2,649,307	—	—	—	2,649,307
Other assets	—	28,948	6,255	12,378	—	47,581
<b>Total assets</b>						<b>9,071,653</b>
<b>Liabilities and shareholders' equity Liabilities</b>						
Convertible bonds	836,260	—	—	—	—	836,260
Deferred tax liabilities	—	52,009	—	12,253	—	64,262
Accounts payable	—	26,333	81	29,586	—	56,000
Deferred revenue	—	75,364	335	20,080	—	95,779
Income taxes payable	12,986	29,387	10,376	25,354	—	78,103
Accrued liabilities and other current liabilities	15,308	2,217,220	42,172	85,302	—	2,360,002
Amounts due to Group companies <sup>(1)</sup>	—	1,736,600	89,509	67,698	(1,893,807)	—
Other liabilities	10	29,996	28,746	19,763	—	78,515
<b>Total liabilities</b>						<b>3,568,921</b>
<b>Mezzanine equity</b>	<b>—</b>	<b>91,366</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>91,366</b>
<b>Shareholders' equity</b>						
<b>Total JOYY Inc.'s shareholders' equity</b>	<b>5,178,217</b>	<b>4,663,227</b>	<b>2,302,101</b>	<b>1,916,108</b>	<b>(8,881,436)</b>	<b>5,178,217</b>
Non-controlling interests	—	228,508	—	4,641	—	233,149
<b>Total shareholders' equity</b>	<b>5,178,217</b>	<b>4,891,735</b>	<b>2,302,101</b>	<b>1,920,749</b>	<b>(8,881,436)</b>	<b>5,411,366</b>
<b>Total liabilities, mezzanine equity and shareholders' equity</b>						<b>9,071,653</b>

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As of December 31, 2021						
<u>The Company</u>	<u>Equity Subsidiaries</u>	<u>Primary Beneficiaries of VIEs</u>	<u>VIEs and Subsidiaries</u>	<u>Eliminations</u>	<u>Consolidated</u>	
(US\$ in thousands)						
<b>Assets</b>						
Cash and cash equivalents	615	1,287,290	115,875	433,405	—	1,837,185
Restricted cash	—	289,658	—	7,364	—	297,022
Short-term deposits	—	1,263,843	31,369	308,986	—	1,604,198
Restricted short-term deposits	—	285	—	—	—	285
Short-term investments	193,925	400,744	62,930	288,944	—	946,543
Accounts receivable	—	108,469	23	5,880	—	114,372
Prepayments and other current assets	—	106,748	5,812	101,173	—	213,733
Amounts due from Group companies <sup>(1)</sup>	1,416,481	69,112	242,517	263,373	(1,991,483)	—
Investments in subsidiaries/VIEs <sup>(2)</sup>	4,211,891	2,444,874	1,982,371	—	(8,639,136)	—
Long-term investments	648,153	104,655	34,370	235,277	—	1,022,455
Property, plant and equipment, net	—	117,037	76,524	171,831	—	365,392
Land use rights, net	—	—	—	370,052	—	370,052
Intangible assets, net	—	266,375	10,261	58,893	(23,447)	312,082
Goodwill	—	1,958,263	—	—	—	1,958,263
Other assets	—	14,296	48,484	15,650	—	78,430
<b>Total assets</b>						<b>9,120,012</b>
<b>Liabilities and shareholders' equity Liabilities</b>						
Convertible bonds	924,077	—	—	—	—	924,077
Deferred tax liabilities	—	27,109	—	9,105	—	36,214
Accounts payable	—	3,454	357	14,200	—	18,011
Deferred revenue	—	49,119	491	17,722	—	67,332
Income taxes payable	13,573	26,322	237	25,606	—	65,738
Accrued liabilities and other current liabilities	5,087	2,160,029	66,397	114,325	—	2,345,838
Amounts due to Group companies <sup>(1)</sup>	—	1,822,123	37,475	131,887	(1,991,485)	—
Other liabilities	—	12,345	7,348	14,811	—	34,504
<b>Total liabilities</b>						<b>3,491,714</b>
<b>Mezzanine equity</b>	<b>—</b>	<b>65,833</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>65,833</b>
<b>Shareholders' equity</b>						
<b>Total JOYY Inc.'s shareholders' equity</b>	<b>5,528,328</b>	<b>4,235,336</b>	<b>2,498,231</b>	<b>1,929,014</b>	<b>(8,662,581)</b>	<b>5,528,328</b>
Non-controlling interests	—	29,979	—	4,158	—	34,137
<b>Total shareholders' equity</b>	<b>5,528,328</b>	<b>4,265,315</b>	<b>2,498,231</b>	<b>1,933,172</b>	<b>(8,662,581)</b>	<b>5,562,465</b>
<b>Total liabilities, mezzanine equity and shareholders' equity</b>						<b>9,120,012</b>

Notes:

- (1) Represents the elimination of intercompany balances among JOYY Inc., the primary beneficiaries of VIEs, the other subsidiaries, and the VIEs and their subsidiaries that we consolidate. Unsettled balance related to technology service fees payable by VIEs to our subsidiaries amounted to US\$66.8 million and US\$325.4 million as of December 31, 2021 and 2022, respectively.
- (2) Represents the elimination of investments among JOYY Inc., the primary beneficiaries of VIEs, the other subsidiaries, and VIEs and their subsidiaries that we consolidate.

**Selected Condensed Consolidated Cash Flows Data**

	For the Year Ended December 31, 2022					
	The Company	Equity Subsidiaries	Primary Beneficiaries of VIEs	VIEs and VIEs' Subsidiaries	Eliminations	Consolidated
	(US\$ in thousands)					
Net cash (used in) provided by transactions with external parties	(3,949)	456,134	(230,750)	95,059	—	316,494
Net cash (used in) provided by transactions with intra-Group entities	—	(12,588)	59,743	(47,155)	—	—
<b>Net cash (used in) provided by continuing operating activities<sup>(1)</sup></b>	<b>(3,949)</b>	<b>443,546</b>	<b>(171,007)</b>	<b>47,904</b>	<b>—</b>	<b>316,494</b>
Net cash provided by (used in) transactions with external parties	49,963	(521,706)	3,858	(42,399)	—	(510,284)
Net cash used in transactions with intra-Group entities	—	(372,005)	(44,222)	(194,107)	610,334	—
<b>Net cash provided by (used in) continuing investing activities<sup>(1)</sup></b>	<b>49,963</b>	<b>(893,711)</b>	<b>(40,364)</b>	<b>(236,506)</b>	<b>610,334</b>	<b>(510,284)</b>
Net cash (used in) provided by transactions with external parties	(371,740)	17,045	32,032	754	—	(321,909)
Net cash provided by transactions with intra-Group entities	365,480	106,413	105,688	32,753	(610,334)	—
<b>Net cash (used in) provided by continuing financing activities<sup>(1)</sup></b>	<b>(6,260)</b>	<b>123,458</b>	<b>137,720</b>	<b>33,507</b>	<b>(610,334)</b>	<b>(321,909)</b>
	For the Year Ended December 31, 2021					
	The Company	Equity Subsidiaries	Primary Beneficiaries of VIEs	VIEs and VIEs' Subsidiaries	Eliminations	Consolidated
	(US\$ in thousands)					
Net cash provided by (used in) transactions with external parties	—	393,061	(400,649)	153,715	—	146,127
Net cash (used in) provided by transactions with intra-Group entities	—	(302,728)	225,409	77,319	—	—
<b>Net cash provided by (used in) continuing operating activities<sup>(1)</sup></b>	<b>—</b>	<b>90,333</b>	<b>(175,240)</b>	<b>231,034</b>	<b>—</b>	<b>146,127</b>
<b>Net cash (used in) provided by discontinued operating activities</b>	<b>—</b>	<b>(1,404)</b>	<b>37,207</b>	<b>28,486</b>	<b>—</b>	<b>64,289</b>
<b>Net cash provided by (used in) operating activities</b>	<b>—</b>	<b>88,929</b>	<b>(138,033)</b>	<b>259,520</b>	<b>—</b>	<b>210,416</b>
Net cash (used in) provided by transactions with external parties	(104,264)	(978,039)	65,334	170,112	—	(846,857)
Net cash (used in) provided by transactions with intra-Group entities	—	(758,196)	47,051	(35,559)	746,704	—
<b>Net cash (used in) provided by continuing investing activities<sup>(1)</sup></b>	<b>(104,264)</b>	<b>(1,736,235)</b>	<b>112,385</b>	<b>134,553</b>	<b>746,704</b>	<b>(846,857)</b>
<b>Net cash provided by (used in) discontinued investing activities</b>	<b>—</b>	<b>1,831,847</b>	<b>(11,403)</b>	<b>(183,994)</b>	<b>—</b>	<b>1,636,450</b>
<b>Net cash (used in) provided by investing activities</b>	<b>(104,264)</b>	<b>95,612</b>	<b>100,982</b>	<b>(49,441)</b>	<b>746,704</b>	<b>789,593</b>
Net cash (used in) provided by transactions with external parties	(620,839)	5,508	(11,007)	(97,198)	—	(723,536)
Net cash provided by (used in) transactions with intra-Group entities	723,302	60,137	(42,113)	5,378	(746,704)	—
<b>Net cash provided by (used in) continuing financing activities<sup>(1)</sup></b>	<b>102,463</b>	<b>65,645</b>	<b>(53,120)</b>	<b>(91,820)</b>	<b>(746,704)</b>	<b>(723,536)</b>
<b>Net cash used in discontinued financing activities</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>Net cash provided by (used in) financing activities</b>	<b>102,463</b>	<b>65,645</b>	<b>(53,120)</b>	<b>(91,820)</b>	<b>(746,704)</b>	<b>(723,536)</b>

	For the Year Ended December 31, 2020					
	The Company	Equity Subsidiaries	Primary Beneficiaries of VIEs	VIEs and VIEs' Subsidiaries	Eliminations	Consolidated
	(US\$ in thousands)					
Net cash (used in) provided by transactions with external parties	—	(32,982)	104,095	(73,830)	—	(2,717)
Net cash provided by (used in) transactions with intra-Group entities	—	314,557	30,301	(344,858)	—	—
<b>Net cash provided by (used in) continuing operating activities <sup>(1)</sup></b>	<b>—</b>	<b>281,575</b>	<b>134,396</b>	<b>(418,688)</b>	<b>—</b>	<b>(2,717)</b>
<b>Net cash provided by discontinued operating activities</b>	<b>—</b>	<b>89,804</b>	<b>—</b>	<b>408,059</b>	<b>—</b>	<b>497,863</b>
<b>Net cash provided by (used in) operating activities</b>	<b>—</b>	<b>371,379</b>	<b>134,396</b>	<b>(10,629)</b>	<b>—</b>	<b>495,146</b>
Net cash provided by (used in) transactions with external parties	760,322	(16,184)	(6,181)	(47,787)	—	690,170
Net cash (used in) provided by transactions with intra-Group entities	(954,102)	16,776	(49,718)	(104,111)	1,091,155	—
<b>Net cash (used in) provided by continuing investing activities <sup>(1)</sup></b>	<b>(193,780)</b>	<b>592</b>	<b>(55,899)</b>	<b>(151,898)</b>	<b>1,091,155</b>	<b>690,170</b>
<b>Net cash provided by (used in) discontinued investing activities</b>	<b>262,681</b>	<b>(177,572)</b>	<b>—</b>	<b>7,262</b>	<b>—</b>	<b>92,371</b>
<b>Net cash provided by (used in) investing activities</b>	<b>68,901</b>	<b>(176,980)</b>	<b>(55,899)</b>	<b>(144,636)</b>	<b>1,091,155</b>	<b>782,541</b>
Net cash (used in) provided by transactions with external parties	(66,743)	(130,275)	38,594	21,690	—	(136,734)
Net cash provided by transactions with intra-Group entities	—	1,019,855	46,081	25,219	(1,091,155)	—
<b>Net cash (used in) provided by continuing financing activities <sup>(1)</sup></b>	<b>(66,743)</b>	<b>889,580</b>	<b>84,675</b>	<b>46,909</b>	<b>(1,091,155)</b>	<b>(136,734)</b>
<b>Net cash provided by discontinued financing activities</b>	<b>—</b>	<b>1,232</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>1,232</b>
<b>Net cash (used in) provided by financing activities</b>	<b>(66,743)</b>	<b>890,812</b>	<b>84,675</b>	<b>46,909</b>	<b>(1,091,155)</b>	<b>(135,502)</b>

Note:

- (1) Represents the elimination of the net cash provided by (used in) operating activities, investing activities and financing activities of JOYY Inc., the primary beneficiaries of VIEs, the other subsidiaries, and the VIEs and their subsidiaries that we consolidate. For the years ended December 31, 2020, 2021 and 2022, cash paid by the VIEs to our subsidiaries for the settlement of technical support fees in operating activities were US\$369.9 million, US\$52.1 million and US\$56.8 million, respectively.

**A. Reserved**

**B. Capitalization and Indebtedness**

Not applicable.

**C. Reasons for the Offer and Use of Proceeds**

Not applicable.

## **D. Risk Factors**

### **Summary of Risk Factors**

An investment in our ADSs is subject to a number of risks, including risks related to our business and industry, risks related to doing business in jurisdictions we operate, risks related to our corporate structure and risks related to our ADSs. The following summarizes some, but not all, of these risks. Please carefully consider all of the information discussed in “Item 3. Key Information—D. Risk Factors” in this annual report for a more thorough description of these and other risks.

### **Risks Related to Our Business and Industry**

- We are subject to risks associated with operating in a rapidly developing industry and an evolving market.
- If we fail to effectively manage our growth or implement our business strategies, our business and results of operations may be materially and adversely affected.
- We face risks associated with the sale of YY Live to Baidu.
- We have a limited operating history for some of our businesses, and you should consider our prospects in light of the risks and uncertainties which early-stage companies in evolving industries globally may be exposed to or encounter, including possible volatility in the trading prices of our ADSs.
- We generate a substantial majority of our revenue from live streaming services. If our live streaming revenue declines in the future, our results of operations may be materially and adversely affected.
- We may face significant risks related to the content, information, communications and other activities on our platforms.
- The revenue model for each of our live streaming and our membership program may not remain effective, which may affect our ability to retain existing users and attract new users and materially and adversely affect our business, financial condition and results of operations.
- We generate a portion of our revenues from online advertising. If we fail to attract more advertisers to our platforms or if advertisers are less willing to advertise with us, our revenues may be adversely affected.
- Our business is subject to complex and evolving laws and regulations across the globe regarding cybersecurity, information security, privacy and data protection. Many of these laws and regulations are subject to change and uncertain interpretation, and any failure or perceived failure to comply with these laws and regulations could result in claims, changes to our business practices, negative publicity, legal proceedings, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business.
- We face competition in several major aspects of our business. If we fail to compete effectively, we may lose users, advertisers and merchants which could materially and adversely affect our business, financial condition and results of operations.

### **Risks Related to Doing Business in Jurisdictions We Operate**

- We are subject to the risks of doing business globally.
- We have limited experience in international markets. If we fail to meet the challenges presented by our increasingly globalized operations, our business, financial condition and results of operations may be materially and adversely affected.
- We face risks and uncertainties to comply with the laws, regulations and rules in various aspects in multiple jurisdictions across the globe. Failure to comply with such applicable laws, regulations and rules may subject our global operations to strict scrutiny by local authorities, which in turn may materially and adversely affect our globalized operations.

- Fluctuations in foreign currency exchange rates may adversely affect our operational and financial results, which we report in U.S. dollars.
- Rising international political tension may adversely impact our business and operating results.
- The approval of and the filing with the CSRC or other government authorities of mainland China may be required in connection with our offerings and financing activities outside mainland China in the future under the laws of mainland China, and, if required, we cannot predict whether or for how long we will be able to obtain such approval or complete such filing

#### **Risks Related to Our Corporate Structure**

- If the mainland China's government finds that the structure we have adopted for our business operations in mainland China does not comply with laws and regulations of mainland China, or if these laws or regulations or interpretations of existing laws or regulations change in the future, we could be subject to severe penalties, including the shutting down of our platforms and our business operations currently operated in mainland China.
- We rely on contractual arrangements with the variable interest entities and their shareholders for some of our operation in mainland China, which may not be as effective as direct ownership. If the variable interest entities and their shareholders fail to perform their obligations under these contractual arrangements, we may have to resort to litigation or other legal proceedings to enforce our rights, which may be time-consuming, unpredictable, expensive and damaging to our operations and reputation.
- The shareholders of the variable interest entities may have potential conflicts of interest with us, and if any such conflicts of interest are not resolved in our favor, our business may be materially and adversely affected.

#### **Risks Related to Our ADSs**

- The trading prices of our ADSs are likely to be volatile, which could result in substantial losses to investors.
- We may be named as a defendant in putative shareholder class action lawsuits and may be subject to the SEC or third-party investigations which could have a material adverse impact on our business, financial condition, results of operation, cash flows and reputation.
- We believe that we were a passive foreign investment company, or PFIC, for United States federal income tax purposes for the taxable year ended December 31, 2022, which could subject United States holders of our ADSs or Class A common shares to significant adverse United States income tax consequences.
- Our dual class common share structure with different voting rights will limit your ability to influence corporate matters and could discourage others from pursuing any change of control transactions that holders of our Class A common shares and ADSs may view as beneficial.

#### **Risks Related to Our Business and Industry**

*We are subject to risks associated with operating in a rapidly developing industry and an evolving market.*

Many of the elements of our business are unique, evolving and relatively unproven. Our business and prospects depend on continuing development of the online social entertainment and smart commerce solution industries of the world. The market for our services is rapidly developing and evolving, also subject to significant challenges. The success of our business heavily relies on the size and engagement level of our user base, and our ability to successfully monetize our user base and products and services. Developing and integrating new content and services could be expensive and time-consuming, and our efforts in those aspects may not yield the benefits we expect to achieve in a timely manner, or at all. We cannot assure you that we will continue to succeed in the industry or such industry will continue to grow as rapidly as it did in the past.

As users are facing a growing number of entertainment or smart commerce solution options that directly or indirectly compete with online social entertainment and smart commerce solution services that we offer, these services may not maintain or increase their current popularity. Growth of the online social entertainment and smart commerce solution industries is affected by numerous factors, such as quality, user experience, technological innovations, development of internet and internet-based services, regulatory environment, and macroeconomic environment. If the services that we offer lose their popularity due to changing social trends and consumer preferences, or if the global online social entertainment or smart commerce solution market does not grow as quickly as expected, our results of operation and financial condition may be materially and adversely affected.

***If we fail to effectively manage our growth or implement our business strategies, our business and results of operations may be materially and adversely affected.***

We have experienced a period of significant rapid growth and expansion that has placed, and continues to place, significant strain on our management and resources. We cannot assure you that this level of significant growth will be sustainable or achieved at all in the future. We believe that our continued growth will depend on our ability to develop new sources of revenue, increase monetization, attract new users, retain and expand paying users, encourage additional purchases by our paying users, continue developing innovative products, services and technologies in response to user demand, increase brand awareness through marketing and promotional activities, react to changes in user access to and use of the internet, expand into new market segments, integrate new devices, platforms and operating systems, develop new advertising and promotion methods, attract new advertisers and retain existing advertisers, attract new merchants, retain and increase revenues from existing merchants, and take advantage of any growth in the relevant markets. We cannot assure you that we will achieve any of the above or achieve any of the above in a cost-effective manner.

To manage our growth and maintain profitability, we anticipate that we will need to continue to implement, from time to time, a variety of new and upgraded operational and financial systems, procedures and controls on an as-needed basis. We will also need to further expand, train, manage and motivate our workforce and manage our relationships with users, performers, third-party game developers, advertisers, media platforms, merchants, app developers, payment processors, shipping companies and other business partners. All of these endeavors involve risks and will require substantial management efforts and skills and significant additional expenditures. We cannot assure you that we will be able to effectively manage our growth or implement our future business strategies, and failure to do so may materially and adversely affect our business and results of operations.

***We face risks associated with the sale of YY Live to Baidu.***

On November 16, 2020, we entered into definitive agreements with Baidu, Inc., or Baidu, and made certain amendments to the share purchase agreement on February 7, 2021, pursuant to which Baidu agreed to acquire our video-based entertainment live streaming business in mainland China, or YY Live, including the YY mobile app, YY.com website, and PC YY, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. The acquisition has been substantially completed, with certain matters remaining to be completed in the future, including necessary regulatory approvals from government authorities. In April 2022, we and Baidu have agreed to extend the long stop date, which is the closing deadline of the proposed acquisition, indefinitely until the extension is terminated by either party. As of the date of this annual report, Baidu has paid an aggregate amount of US\$1.9 billion to us in our designated escrow account, and deposited an aggregate of US\$1.6 billion into Baidu's escrow accounts, in accordance with the terms and schedule set forth in the share purchase agreement. The necessary regulatory approval with respect to the proposed acquisitions has not been obtained yet. Together with this transaction, we entered into a non-compete undertaking with Baidu and its affiliates, which poses restrictions to our video-based entertainment livestreaming business in mainland China and may adversely affect our relationship with existing partners and may have an adverse effect on our future growth prospects in the mainland China market. As we have a globalization strategy and we currently operate in a number of markets across the globe, we believe the sale of YY Live would not affect our long-term growth prospects.

On November 18, 2020, Muddy Waters Capital LLC, an entity unrelated to us, issued the Muddy Water short seller report, or the Short Report, containing certain allegations against us, including YY Live business. Our audit committee has conducted an independent review of the allegations raised in the Short Report related to the YY Live business, with the assistance of independent counsel, working with a team of experienced forensic auditors and data analytics experts. Our announcement dated February 8, 2021 disclosed the conclusion of the independent review, which concluded that the allegations raised and conclusions reached in the Short Report about the YY Live business were not substantiated. But even if the allegations against us may ultimately be proven to be groundless, we have incurred and may continue to incur resources to address fallout from the Short Report. On November 20, 2020, we and certain of our directors and officers were named in a federal putative securities class action alleging that we have made material misstatements and omissions in documents filed with the SEC regarding certain of the allegations contained in the Short Report. On March 9, 2022, the court granted the defendants' motion to dismiss and dismissed the operative complaint in its entirety with prejudice. On April 8, 2022, the co-lead plaintiffs filed a notice of appeal. The court heard oral arguments on April 21, 2023 and took the case under submission. We are not able to predict the final outcome of such class action and there might be other class actions or regulatory enforcement actions in connection with such allegations. We are not able to predict the possible consequence that may arise from or relate in any way to the allegations contained in the Short Report. Any adverse outcome as a result of the Short Report, or any class action or regulatory enforcement action in connection thereof, could have a material adverse effect on our and YY Live's business, financial condition, results of operation, cash flows, and reputation.

***We have a limited operating history for some of our businesses, and you should consider our prospects in light of the risks and uncertainties which early-stage companies in evolving industries globally may be exposed to or encounter, including possible volatility in the trading prices of our ADSs.***

We have a limited operating history upon which to evaluate the viability and sustainability of our businesses. Our historical results may not be indicative of our future performance. Many of our global social entertainment platforms (such as Bigo Live, Likee and Hago) were launched after 2016. In 2019, we acquired BIGO, which is now our core business segment, and has been evolving constantly to further expand our global business. Also, Shopleveline was established in 2013 and started to be consolidated by us from September 2022. As a result of our relatively short history and introduction of new businesses, our historical results of operations may not provide a meaningful basis for evaluating our business, financial performance and future prospects. We may not be able to achieve similar growth rates in future periods as we had witnessed historically. Accordingly, you should not rely on our results of operations for any prior periods as an indication of our future performance. We may again incur net losses and experience adverse impact on our results of operations brought on by our new businesses in the future and you should consider our prospects in light of the risks and uncertainties which early-stage companies in evolving industries globally with limited operating history may be exposed to or encounter, including risks associated with being a public company with global business operations. See “—Risks Related to Our ADSs—The trading prices of our ADSs are likely to be volatile, which could result in substantial losses to investors.”

As we have discontinued Huya and YY Live from our results of operations in April 2020 and February 2021, respectively, our results of operations have been and may continue to be adversely affected by such dispositions. As a result of the discontinuation of Huya and YY Live, we recorded net losses of US\$125.1 million from continuing operations attributable to common shareholders of JOYY in 2021. Therefore, we were not profitable on a continuing operation basis in 2021. Although our core business segment BIGO has started to generate profit and achieved net income of US\$103.8 million in 2021 and US\$225.9 million in 2022, the recent consolidation of Shopleveline's financial results starting from September 6, 2022 adversely affected our financial results in 2022 as Shopleveline has been incurring net losses and may continue to have similar impact on our results of operations in the future. We may incur significant costs and expenses in many aspects of our business, such as sales and marketing expenses to acquire users and raise our brand awareness, as well as research and development costs to update existing services and launch new services and rising bandwidth costs to support our social entertainment and smart commerce solution functions, grow our user base and generally expand our business operations.

Our profitability is also affected by other factors beyond our control, such as the continual development of the industries in which we operate in multiple countries, changes in the macroeconomic and regulatory environment or competitive dynamics and our inability to respond to these changes in a timely and effective manner. The continued success of our business depends on our ability to identify which services will appeal to our user base and to offer such services on commercially acceptable terms. Our ability to finance our planned expansion also depends in part on our ability to convert active users into paying users and increase the average revenue per paying user, or ARPU, and successfully compete in a very competitive market. We may continue to incur net losses in the future.

***We generate a substantial majority of our revenues from live streaming services. If our live streaming revenues decline in the future, our results of operations may be materially and adversely affected.***

Historically, a substantial majority of our revenues are from live streaming services, membership subscription fees and advertisement. For the year ended December 31, 2022, revenues from live streaming constituted 92.3% of our total net revenues. We expect that the majority of our revenues will continue to be contributed from live streaming services in the near future. Any decline in live streaming revenues may materially and adversely affect our results of operations. See “—The revenue model for each of our live streaming and our membership program may not remain effective, which may affect our ability to retain existing users and attract new users and materially and adversely affect our business, financial condition and results of operations.”

***We may face significant risks related to the content, information, communications and other activities on our platforms.***

Our live streaming, short-form video and video communication platforms enable users to exchange information, generate and distribute content, advertise products and services, conduct business and engage in various other online activities. However, because a majority of the communications on our platforms are conducted in real time, we are unable to verify the sources of all information posted thereon or examine the content generated by users before it is posted. Even though we have implemented content monitoring system, there can be no assurance that it will be effective at all times in preventing misconduct by our platform users. For a description of how content can be accessed on or through our platforms, and what measures we take to lessen the likelihood that we will be held liable for the nature of such content, see “Item 4. Information on the Company—B. Business Overview—Technology,” “Item 4. Information on the Company—B. Business Overview—Intellectual Property,” and “—Risks Related to Our Business and Industry—We have been and may be subject to intellectual property infringement, misappropriation or other claims or allegations in multiple jurisdictions, which could result in our payment of substantial damages, penalties and fines, removal of relevant content from our website or seeking license arrangements which may not be available on commercially reasonable terms.”

Because we do not have full control over how and what users will use our platform to communicate, our platform may be misused by individuals or groups of individuals to engage in immoral, disrespectful, fraudulent or illegal activities. Even though we detect spam accounts through which illegal or inappropriate content is streamed or posted and illegal or fraudulent activities are conducted on a timely basis, there is no guarantee that such incidents would not occur. Media reports and internet forums have covered some of these incidents, which have in some cases generated negative publicity about our platforms and brand. We have implemented control procedures to detect and block illegal or inappropriate content and illegal or fraudulent activities conducted through the misuse of our platforms, but such procedures may not prevent all such content from being broadcasted or posted or activities from being carried out. If we fail to timely and effectively manage and discipline such misconduct or misuse, it may materially and adversely impact our brand image, business, financial condition and results of operations. Moreover, as we have limited control over real-time and offline behavior of our users, to the extent such behavior is associated with our platforms, our ability to protect our brand image and reputation may be limited. Our business and the public perception of our brand may be materially and adversely affected by misuse of our platforms. In addition, if any of our users suffers or alleges to have suffered physical, financial or emotional harm following contact initiated on our platforms or after watching unsettling or inappropriate content that our content monitoring system fails to filter out, we may face civil lawsuits or other liabilities initiated by the affected viewer, or governmental or regulatory actions against us. In response to allegations of illegal or inappropriate activities conducted through our platforms or any negative media coverage about us, government authorities may intervene and hold us liable for non-compliance with relevant laws and regulations concerning the dissemination of information on the internet and subject us to administrative penalties or other sanctions, such as requiring us to restrict or discontinue some of the features and services provided on our website and mobile application, or even revoke our licenses or permits to provide internet content service. We endeavor to ensure all users are in compliance with relevant regulations, but we cannot guarantee that all users will comply with all the relevant laws and regulations. Therefore, we may be subject to investigations or subsequent penalties if content displayed on our platform is deemed to be illegal or inappropriate under relevant laws and regulations. As a result, our business may suffer and our user base, revenues and profitability may be materially and adversely affected.

In addition, it is possible that users may engage in illegal, obscene or incendiary conversations or activities, including the publishing of inappropriate, infringing or illegal content on our platforms that may be deemed unlawful. If any content on our platforms is considered or deemed illegal, obscene, infringing or incendiary, or if appropriate licenses and third-party consents have not been obtained, allegations or claims may be brought against us for defamation, libel, negligence, copyright, patent or trademark infringement, other unlawful activities or based on other theories. For example, we have occasionally received fines for certain inappropriate materials placed by third parties on our platforms, and may be subject to similar fines and penalties in the future. In September 2021, Hello, our real-time voice interactive platform operated in mainland China was temporarily removed from the app store at the request of the Office of the Central Cyberspace Affairs Commission and was re-launched in June 2022 after rectification. After comprehensive evaluation of all relevant factors, in April 2023, we voluntarily ceased operations of certain real-time voice interactive platforms operated in mainland China. We also may face liability for copyright or trademark infringement, fraud, and other claims based on the nature and content of the materials that are delivered, shared or otherwise accessed through or published on our platforms. Defending any such actions could be costly and involve significant time and attention of our management and other resources. If they find that we have not adequately managed the content on our platforms, or if any of our platforms fails to comply with any of such provisions, jurisdictional authorities in various regions may impose legal sanctions on us, including, interviews held by relevant cyberspace authorities, warnings, information update suspension, and in serious cases, suspending or revoking the licenses necessary to operate our platforms, restriction from engaging in internet information services, online behavior restrictions or industry bans.

As our international operations continue to expand, we face significant challenges to ensure the content and communications on our platform are in compliance with local jurisdiction's regulatory framework and social environment, many of which could be substantially different from each other due to the differences in, among others, the legal system, political environment, culture and religion. Such differences may impose more stringent requirements and restrictions to the content we presented. In addition, the regulatory framework for live streaming, short-form video or video communication and smart commerce solution business is still developing and remains uncertain in several countries where we have operations, including, but not limited to, countries such as Saudi Arabia, Indonesia, India and mainland China. New laws and regulations may also be adopted from time to time to address new issues that come to the government authorities' attention. Considerable uncertainties still exist with respect to the interpretation and implementation of existing and future laws and regulations governing our business activities in these areas. In addition, we may be required to impose more stringent content monitoring measures, be in compliance with relevant content regulatory regime, obtain relevant licenses or permits or renew or expand the coverage of our existing licenses, and we cannot assure you that we will be able to timely obtain or maintain all the required licenses or permits or make any necessary filings applicable in the future, or comply with other relevant regulatory requirements. If we fail to obtain, hold or maintain any of the required licenses or permits or make the necessary filings on time or at all, or fail to comply with other regulatory requirements, we may be subject to various penalties, including fines, discontinuation restriction of our operations as well as reputation damage. Cultural differences may also impose additional challenges to our efforts in content control. Therefore, such different and possibly more stringent regulatory and cultural environments may increase the risk exposure to our daily operations in multiple jurisdictions across the globe. We have experienced incidents in the past where our application was temporarily suspended in certain markets due to inappropriate content being displayed on our platform. We have also received claims in connection with intellectual property infringement and entered into settlement or license agreements with third parties or are in the process of negotiating such agreements with third parties to resolve such claims. Such incidents or similar incidents related to our failure to comply with laws, regulations and rules in multiple jurisdictions across the globe could materially and adversely affect our business, results of operations, global reputation and global growth efforts. Requirements of entering into license or settlement agreements may also significantly increase our costs of operations and adversely affect our business results. In addition, each jurisdiction may have a different regulatory framework, implementation and enforcement for live streaming or short-form video or video communication business or smart commerce solution business, which may substantially increase our compliance costs to obtain, maintain or renew requisite licenses and permits or fulfill any required administrative procedures.

***The revenue model for each of our live streaming and our membership program may not remain effective, which may affect our ability to retain existing users and attract new users and materially and adversely affect our business, financial condition and results of operations.***

We offer live streaming services to our users through multiple platforms using a virtual items-based revenue model whereby users can make real-time broadcast to share life moments, show their talents, interact and send virtual gifts, and enjoy fun live sessions with people worldwide. We have generated, and expect to continue to generate, a substantial majority of our live streaming revenues using this revenue model. In 2022, revenues from live streaming contributed 92.3% of our total net revenues. Our live streaming business has experienced significant growth in recent years, but we cannot assure you that we will continue to achieve a similar growth rate in the future, as the user demand for this service may change, decrease substantially or dissipate, or we may fail to anticipate and serve user demands effectively.

We may not be able to continue to successfully implement the virtual items-based revenue model for live streaming, as users may not be able to develop new relationships in the community, or popular performers, channel owners, and famous professional game teams may leave our platforms and we may be unable to attract new talent that can attract users or cause such users to increase the amount of time spent engaging and money spent on purchasing in-channel virtual items on our platforms. In addition, certain content on our live streaming platforms, such as certain online games owned by or licensed to certain gaming companies or publishers, may not continue to be available to our users for live streaming purposes. Failure to keep our users engaged in the live streaming service may result in reducing average revenue per user and the number of paying users, which may adversely affect our financial condition and results of operations.

Furthermore, under our current arrangements with certain talent performers, agencies, channel owners and famous professional game teams, we share with them a portion of the revenues we derive from the sales of in-channel virtual items on our live streaming platform. In turn, this may affect the user and revenue growth in this business, which may materially and adversely affect our financial condition and results of operations.

In addition, we have been a pioneer in offering an online concert platform to music performers and platform users. We also continue to focus on the development of professionally-curated user generated content, or PUGC, and professionally generated content, or PGC, as well as introducing more e-sports content on our platforms. However, if our users decide to access live streaming content provided by our current or future competitors, our business, financial condition and results of operations could be materially and adversely affected.

Users may also purchase time-based virtual items from us, such as the membership subscription service with the designation of Noble Members for themselves. We offer a range of privileges and benefits, such as virtual items exclusively available to members, dedicated customer services specialist and priority entrance to certain live performances. However, we may not be able to further build or maintain our membership base in the future for various reasons—for example, if we fail to continue to provide innovative products and services that are attractive to members, we may not be able to retain them and our business, financial condition and results of operations could be adversely affected.

***We generate a portion of our revenues from online advertising. If we fail to attract more advertisers to our platforms or if advertisers are less willing to advertise with us, our revenues may be adversely affected.***

We generate a portion of our revenues from online advertising. Although we have become less dependent upon online advertising revenues due to a shift in the majority of our revenues from online advertising to live streaming service, our revenues still partly depend on the continual development of the online advertising industry and advertisers' allocation of budgets to internet advertising. In addition, companies that decide to advertise or promote online may utilize more established methods or channels for online advertising, such as more established internet portals or search engines, over advertising on our platforms. If the online advertising market size does not increase from current levels, or if we are unable to capture and retain a sufficient share of that market, our ability to maintain or increase our current level of online advertising revenues and our profitability and prospects could be adversely affected.

We offer advertising services substantially through contracts entered into with third-party advertising agencies and by way of displaying advertisement on our websites and platforms or providing promotion integrated into the programs, shows or other content offered on our platforms. We cannot assure you that we will be able to retain existing direct advertisers or advertising agencies or attract new direct advertisers and advertising agencies. Since our arrangements with third-party advertising agencies typically involve one-year framework agreements, these advertising arrangements may be easily amended or terminated without incurring liabilities. If we fail to retain existing advertisers and advertising agencies or attract new direct advertisers and direct advertising agencies or any of our current advertising methods or promotion activities become less effective, our business, financial condition and results of operations may be adversely affected.

***Our business is subject to complex and evolving laws and regulations across the globe regarding cybersecurity, information security, privacy and data protection. Many of these laws and regulations are subject to change and uncertain interpretation, and any failure or perceived failure to comply with these laws and regulations could result in claims, changes to our business practices, negative publicity, legal proceedings, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business.***

We operate in several key markets across the globe. Our business generates and processes a large quantity of data. We face risks inherent in handling and protecting large volume of data. In particular, we face a number of challenges relating to data from transactions and other activities on our platforms, including:

- protecting the data in and hosted on our system, including against attacks on our system by outside parties or fraudulent behavior or improper use by our employees;
- addressing concerns related to privacy and sharing, safety, security and other factors; and
- complying with applicable laws, rules and regulations relating to the collection, use, storage, transfer, disclosure and security of personal information, including any requests from regulatory and government authorities relating to these data.

In general, we expect that data security and data protection compliance will receive greater attention and focus from regulators globally, as well as attract continued or greater public scrutiny and attention going forward, which could increase our compliance costs and subject us to heightened risks and challenges associated with data security and protection. If we are unable to manage these risks, we could become subject to penalties, including fines, suspension of business and revocation of required licenses, and our reputation and results of operations could be materially and adversely affected.

Legal developments in Europe have created compliance uncertainty regarding the processing of personal data. For example, the General Data Protection Regulation, or GDPR, which came into application in the European Union, or EU, on May 25, 2018, applies to all of our activities conducted from an establishment in the EU or related to products and services that we offer to EU users. The GDPR creates significant new requirements regarding the protection of personal data and significantly increases the financial penalties for noncompliance. We may be considered in violation of the GDPR and thus be required to adopt additional measures in the future. If we fail to comply with the requirements stipulated by the GDPR in a timely manner, or at all, we may be subject to significant penalties and fines, which may in turn adversely affect our business, reputation, financial condition and operating results.

In addition to the new requirements imposed by the GDPR, the privacy requirements and expectations created in the EU by the GDPR are stricter than certain other regions. These requirements include rules restricting the flow of data across borders. These restrictions may cause companies to localize data, and may otherwise impact the use of our services.

Additionally, California enacted legislation that has been dubbed the first “GDPR-like” law in the United States. Known as the California Consumer Privacy Act, or CCPA, it creates new individual privacy rights for consumers (as that word is broadly defined in the law) and places increased privacy and security obligations on entities handling personal data of consumers or households. The CCPA, which came into effect on January 1, 2020, requires covered companies to provide new disclosures to California consumers, and provides such consumers new ways to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. The CCPA may increase our compliance costs and potential liability. Some observers have noted that the CCPA could mark the beginning of a trend toward more stringent privacy legislation in the United States, which could increase our potential liability and adversely affect our business.

Under Personal Data Protection Act 2012 of Singapore, as amended from time to time, or the Singapore PDPA, when an organization collects personal data, it must procure the individual's consent to the collection, use and disclosure of his/her personal data. Individuals have clearly defined rights, such as the right to access their personal data, request information on how their personal data has been used, and correct any inaccuracies in the personal data held by the organization. The organization should designate a Data Protection Officer for this purpose. Indonesia, Vietnam and Malaysia also enacted legislation providing protection on personal data, the general principles of which are substantially similar. For details, see "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Regulations on Data Privacy and Protection." Furthermore, we may also be subject to the Information Technology Act 2000 of India, which primarily provides for (i) civil liability to compensate for wrongful loss or gain to any person arising from negligence in implementing and maintaining reasonable security practices and procedures with respect to sensitive personal data or information that we possess, deal with or handle in our computer systems, networks, databases and software, and (ii) criminal punishment if, in the course of performing a contract, a service provider discloses personal information without the consent of the person concerned or is in breach of a lawful contract and does so with the intention to cause, or knowing it is likely to cause, wrongful loss or wrongful gain. As our global expansion evolves, we may incur additional costs for the compliance with these legislations and be exposed to additional risks and challenges in our ordinary course of business. Also, we may, from time to time, be subject to data protection regulations from additional jurisdictions, which may impose additional and more stringent requirements.

For our operations in mainland China, the regulatory and enforcement regime of mainland China with regard to data security and data protection is evolving and may be subject to different interpretations or significant changes. Moreover, different mainland China's regulatory bodies, including the Standing Committee of the National People's Congress, the Ministry of Industry and Information Technology, or the MIIT, the CAC, the Ministry of Public Security, or the MPS, and the State Administration for Market Regulation, or the SAMR, have enforced data privacy and protections laws and regulations with varying standards and applications. See "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Information Security and Censorship," "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Privacy Protection," and "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulations on Overseas Listing by Domestic Companies." The following are examples of certain recent mainland China's regulatory activities in this area:

Data Security

- On November 7, 2016, the Standing Committee of the National People's Congress promulgated the Cyber Security Law, which came into effect on June 1, 2017. The Cyber Security Law provides that network operators must take technical and other necessary measures as required by laws, regulations, and mandatory requirements to safeguard the operation of networks, respond to network security incidents effectively, prevent illegal and criminal activities, and maintain the integrity, confidentiality, and usability of network data. On September 12, 2022, the CAC proposed a series of draft amendments to the PRC Cyber Security Law, which imposes more stringent legal liabilities for certain violations. Such draft amendments were released for soliciting public comments and its final form, interpretation and implementation remain substantially uncertain. In June 2021, the Standing Committee of the National People's Congress promulgated the PRC Data Security Law, which took effect in September 2021. The PRC Data Security Law, among other things, provides for security review procedure for data-related activities that may affect national security. In July 2021, the State Council promulgated the Regulations on Protection of Critical Information Infrastructure, which came into effect on September 1, 2021. Pursuant to this regulation, critical information infrastructure means key network facilities or information systems of critical industries or sectors, such as public communication and information service, energy, transportation, water conservancy, finance, public services, e-government affairs and national defense science, technology and industry, the damage, malfunction or data leakage of which may seriously endanger national security, people's livelihood and public interests. In December 2021, the CAC, together with other authorities, jointly promulgated the Cybersecurity Review Measures, which came into effect on February 15, 2022 and replaces its predecessor regulation. Pursuant to the Cybersecurity Review Measures, critical information infrastructure operators that procure internet products and services, and operators of network platforms conducting data processing activities must be subject to the cybersecurity review if their activities affect or may affect national security. The Cybersecurity Review Measures further stipulates that network platform operators that hold personal information of over one million users shall apply with the Office of Cybersecurity Review of the CAC for a cybersecurity review when listing their securities "in a foreign country." In addition, relevant mainland China's regulatory authorities may initiate cybersecurity review if they determine that an operator's network products or services or data processing activities affect or may affect national security. Given that the Cybersecurity Review Measures was recently promulgated, there are substantial uncertainties as to its interpretation, application, and enforcement.

- On November 14, 2021, the CAC published a draft of the Administrative Measures for Internet Data Security, or the Draft Data Security Regulations, for public comments. The Draft Data Security Regulations provides that data processors refer to individuals or organizations that, during their data processing activities such as data collection, storage, utilization, transmission, publication and deletion, have autonomy over the purpose and the manner of data processing. In accordance with the Draft Data Security Regulations, data processors conducting the following activities must apply for cybersecurity review: (i) merger, reorganization, or division of internet platform operators that have acquired a large number of data resources related to national security, economic development, or public interests, which affects or may affect national security; (ii) a foreign listing by a data processor processing personal information of over one million users; (iii) a listing in Hong Kong which affects or may affect national security; or (iv) other data processing activities that affect or may affect national security. There have been no further clarifications from the authorities as of the date of this annual report as to the standards for determining such activities that “affects or may affect national security.” In addition, the Draft Data Security Regulations requires that data processors that process “important data” or are listed overseas must conduct an annual data security assessment by itself or commission a data security service provider to do so, and submit the assessment report of the preceding year to the municipal cybersecurity department by the end of January each year. The period for which the CAC solicited comments on this draft ended on December 13, 2021, but there is no timetable as to when the draft regulations will be enacted. As such, substantial uncertainties exist with respect to the enactment timetable, final content, interpretation, and implementation of the draft regulations, including the standards for determining activities that “affects or may affect national security.” As the Draft Data Security Regulations have not been adopted and it remains unclear whether the formal version adopted in the future will have any further material changes, it is uncertain how the draft regulations will be enacted, interpreted or implemented and how they will affect us.
- On July 7, 2022, the CAC issued the Measures for Security Assessment of Cross-border Data Transfer, which came into effect on September 1, 2022. According to these measures, in addition to the requirement to conduct self-assessment on the risks of the outbound data transfer, a data processor must apply to the national cyberspace department for data security assessment through the provincial-level cyberspace administration authority if it involves cross-border data transfer under any of the following circumstances: (i) outbound transfer of important data by a data processor; (ii) outbound transfer of personal information by a critical information infrastructure operator or a personal information processor who has processed the personal information of more than one million people; (iii) outbound transfer of personal information by a personal information processor who has made outbound transfers of the personal information of 100,000 people cumulatively or the sensitive personal information of 10,000 people cumulatively since January 1 of the previous year; and (iv) other circumstances where an application for the security assessment of an outbound data transfer is required as prescribed by the national cyberspace administration authority. In addition, the CAC published the Guidelines for the Security Assessment Application for Cross-Border Data Transfer on August 31, 2022, which further specifies the procedures and documents for security assessment application under the Measures for Security Assessment of Cross-Border Data Transfer.
- On December 8, 2022, the MIIT issued the Administrative Measures for Data Security in the Industry and Information Technology Field (Trial), which came into effect on January 1, 2023. According to these measures, data in the field of industry and information technology include industrial data, telecommunications data, and radio data. The MIIT shall organize the draft of standards and specifications for data classification and grading, identification and determination of important data and core data, and graded data protection in the field of industry and information technology, guide the management of data classification and grading, and formulate specific catalogues of important data and core data of the industry and conduct dynamic management. A data processor in the field of industry and information technology shall file its catalogue of important data and core data to the local industrial regulatory department for recordation. Where there is any material change of the filing, the data processor in the field of industry and information technology shall undergo the change filing procedures within three months of such change. Material changes means changes in the scale (such as the number of data items or total amount of storage) of a certain type of important data or core data by more than 30%, or other changes of the filing. Important data and core data collected and produced by a data processor in the field of industry and information technology within mainland China shall be stored within mainland China, and shall conduct the security assessment if the cross-border transfer of data is necessary.

#### Personal Information and Privacy

- The Anti-monopoly Guidelines for the Platform Economy Sector published by the Anti-monopoly Committee of the State Council, effective on February 7, 2021, prohibits collection of unnecessary user information through coercive means by online platforms operators.

- In August 2021, the Standing Committee of the National People’s Congress promulgated the PRC Personal Information Protection Law, which integrates the scattered rules with respect to personal information rights and privacy protection and took effect on November 1, 2021. We update our privacy policies from time to time to meet the latest regulatory requirements of mainland China’s government authorities and adopt technical measures to protect data and ensure cybersecurity in a systematic way. Nonetheless, the PRC Personal Information Protection Law elevates the protection requirements for personal information processing, and many specific requirements of this law remain to be clarified by the CAC, other regulatory authorities, and courts in practice. We may be required to make further adjustments to our business practices to comply with the personal information protection laws and regulations.

Many of the data-related legislations are relatively new and certain concepts thereunder remain subject to interpretation by the regulators. If any data that we possess belongs to data categories that are subject to heightened scrutiny, we may be required to adopt stricter measures for protection and management of such data. The Cybersecurity Review Measures and the Draft Data Security Regulations remain unclear on whether the relevant requirements will be applicable to companies that are already listed in the United States, such as us, if we were to pursue another listing outside of mainland China. We cannot predict the impact of the Cybersecurity Review Measures and the Draft Data Security Regulations, if any, at this stage, and we will closely monitor and assess any development in the rule-making process. If the Cybersecurity Review Measures, the enacted version of the Draft Data Security Regulations and the Measures for Security Assessment of Cross-border Data Transfer mandate clearance of cybersecurity review, data security assessment and other specific actions to be taken by issuers like us, we face uncertainties as to whether these additional procedures can be completed by us timely, or at all, which may delay or disallow our future listings (should we decide to pursue them), subject us to government enforcement actions and investigations, fines, penalties, suspension of our non-compliant operations, or removal of our apps from the relevant application stores, and materially and adversely affect our business and results of operations. As of the date of this annual report, we have not been involved in any formal investigations on cybersecurity review made by the CAC on such basis.

In general, compliance with the existing laws and regulations of mainland China, as well as additional laws and regulations that mainland China’s regulatory bodies may enact in the future, related to data security and personal information protection, may be costly and result in additional expenses to us, and subject us to negative publicity, which could harm our reputation and business operations. There are also uncertainties with respect to how such laws and regulations will be implemented and interpreted in practice.

We make statements about our use and disclosure of PII through our privacy policy, information provided on our internet platform and press statements. Any failure by us to comply with these public statements or with international privacy-related or data protection laws and regulations could result in proceedings against us by governmental entities or others. In addition to reputational impacts, penalties could include ongoing audit requirements and significant legal liability. None of the data security measures can provide absolute security, and losses or unauthorized access to or releases of confidential information, in particular PII, may still occur, which could materially and adversely affect our reputation, financial condition and operating results.

From time to time, concerns may be expressed about whether our products, services, or processes compromise the privacy of users, customers, and others. Concerns about our practices with regard to the collection, use, disclosure, or security of PII or other privacy related matters, even if unfounded, could damage our reputation and adversely affect our operating results.

***We face competition in several major aspects of our business. If we fail to compete effectively, we may lose users and advertisers which could materially and adversely affect our business, financial condition and results of operations.***

We face competition in several major aspects of our business in each market where we operate, particularly from companies that provide social media and smart commerce solution services. Some of our competitors may have longer operating histories, significantly larger user bases, more established brand recognition, and significantly greater financial, technical and marketing resources than we do, and in turn may have an advantage in attracting and retaining users, merchants and advertisers. In addition, competitors in some areas of our business may be able to develop products and services better received by users or merchants, or maybe able to respond more quickly and effectively than we can to new or evolving opportunities, technologies, regulations or user trends. Some competitors may be able to leverage a stronger financial position to adopt more aggressive pricing policies and offer more attractive terms to our users, merchants or business partners.

In relation to our global business, our competitors primarily include global short-form video platforms such as TikTok, and livestreaming platforms such as Twitch in certain regions. We also compete for online advertising revenues with other internet companies that sell online advertising services globally. In the meanwhile, we face competition from companies that provide smart commerce solutions for merchants, such as Shopify.

If we are not able to effectively compete in any of our lines of business, our overall user base and level of user engagement may decrease, which could reduce our paying users or make us less attractive to advertisers or merchants. We may be required to spend additional resources to further increase our brand recognition and promote our products and services, and such additional spending could adversely affect our profitability. Furthermore, if we are involved in disputes with any of our competitors that result in negative publicity to us, such disputes, regardless of their veracity or outcome, may harm our reputation or brand image and in turn lead to reduced number of users and advertisers. Any legal proceedings or measures we take in response to such disputes may be expensive, time-consuming and disruptive to our operations and divert our management's attention.

Our competitors may unilaterally decide to adopt a wide range of measures targeted at us, including possibly designing their products to negatively impact our operations, such as sending virus-like programs to attack elements of our platforms. Some competitors may also make their applications incompatible with ours, effectively requiring users to either stop using our competitors' products or uninstall our products, leading to a reduction in our number of users.

***We have granted employee stock options and other share-based awards in the past and are very likely to continue to do so in the future. We recognize share-based compensation expenses in our consolidated statements of operations in accordance with the relevant rules under U.S. GAAP, which have had and may continue to have a material and adverse effect on our results of operations.***

We have adopted several share incentive plans and granted share-based compensation awards pursuant to which, including share options, restricted shares and restricted share units, to various employees, key personnel and other non-employees to incentivize performance and align their interests with ours. As of March 31, 2023, options to purchase 9,414,400 Class A common shares, 11,179,892 restricted shares and 43,943,732 restricted share units were outstanding under our share incentive plans. As a result of these grants and potential future grants, we had incurred in the past and expect to continue to incur significant share-based compensation expenses in the future. The amount of these expenses is based on the fair value of the share-based awards. We account for compensation costs for certain share-based compensation awards granted in the past using a graded-vesting method and recognize expenses in our consolidated statements of operations in accordance with the relevant rules under U.S. GAAP. The expenses associated with share-based compensation materially increased our net losses or reduced our net income in the past, and may reduce our net income in the future. In addition, any additional securities issued under share-based compensation schemes will dilute the ownership interests of our shareholders, including holders of our ADSs. However, if we limit the scope of the share-based compensation schemes, we may not be able to attract or retain key personnel who expect to be compensated by options, restricted shares or restricted share units.

***The number of mobile active users we have may fluctuate and we may fail to attract more paying users, which may materially and adversely affect our revenues growth, results of operations and financial condition.***

The number of our mobile monthly active users across various platforms of ours may fluctuate significantly from time to time. The number of our mobile monthly active users may vary significantly from quarter to quarter due to a variety of factors, including, but not limited to, (i) overall consumer demand for online entertainment services such as livestreaming; (ii) our ability to attract and attain users; (iii) seasonality in activity level of our users; (iv) increases in sales and marketing expenses and other operating expenses that we may incur to grow and expand our operations; (v) timing of promotional and marketing activities; and (vi) government regulations of the markets that we currently operate in.

For instance, in late June 2020, the Indian government took extensive measures to block certain apps in its local market and defend other geopolitical risks. Our platforms, including Bigo Live, Likee and Hago were subsequently blocked as a result, which has negatively affected the scale of our user base and resulted a short-term impact on our operations. In addition, we voluntarily reduced the sales and marketing expenditures for Likee and Hago in 2021, which has negatively affected our user acquisition and in turn led to a decrease in their user base. If we are unable to attract new users and retain them as active users and convert non-paying active users into paying users, the numbers of our active users and paying users may further fluctuate and our growth prospects, results of operations and financial condition may be materially and adversely affected.

***We may not be able to keep our users highly engaged, which may reduce our monetization opportunities and materially and adversely affect our revenues, profitability and prospects.***

Our success depends on our ability to maintain and grow our user base and keep our users highly engaged. In order to attract and retain users and remain competitive, we must continue to innovate our products and services, implement new technologies and functionalities and improve the features of our platforms in order to entice users to use our products and services more frequently and for longer durations.

The internet industry is characterized by constant changes, including rapid technological evolution, continual shifts in customer demands, frequent introductions of new products and services and constant emergence of new industry standards and practices. Thus our success will depend, in part, on our ability to respond to these changes on a cost-effective and timely basis; failure to do so may cause our user base to shrink and user engagement level to decline and our results of operations would be materially and adversely affected. For example, our plan to more broadly support mobile-live broadcasting across our live streaming platform and retain the ability to offer high quality delivery of voice and video data may cause us to incur significant additional costs and may not succeed.

Due to the intensified competitions among audio and video-based social entertainment platforms, users may leave us for competitors' platforms more quickly than in other online sectors. A decrease in the number of our active users may reduce the diversity and vibrancy of our platforms' online ecosystem and affect our user-generated channels, which may in turn reduce our monetization opportunities and have a material and adverse effect on our business, financial condition and results of operations.

We cannot assure you that our platforms will continue to be sufficiently popular with our users to offset the costs incurred to operate and expand it. Our sales and marketing expenses may significantly increase in the future, which could have an adverse effect on our results of operations. Failure to maintain or grow our user base in a cost-effective manner, or at all, and keep our users highly engaged would materially and negatively affect our results of operations.

***Spammers and malicious applications may affect user experience, which could reduce our ability to attract users and advertisers and materially and adversely affect our business, financial condition and results of operations.***

Spammers may use our platforms to send targeted and untargeted spam messages to users, which may affect user experience. As a result, our users may use our products and services less or stop using them altogether. In spamming activities, spammers typically create multiple user accounts for the purpose of sending spam messages. Although we attempt to identify and delete accounts created for spamming purposes, we may not be able to effectively eliminate all spam messages from our platforms in a timely fashion. Any spamming activities could have a material and adverse effect on our business, financial condition and results of operations.

***We use third-party services and technologies in connection with our business, and any disruption to the provision of these services and technologies to us could result in adverse publicity and a slowdown in the growth of our users, which could materially and adversely affect our business, financial condition and results of operations.***

Our business depends upon services provided by, and relationships with, third parties. For example, we primarily rely on third-party application distribution channels, such as the iOS App Store and the Google Play Store, to allow users to download and access our applications and games. If our third-party distribution channels voluntarily or involuntarily suspend their services to us, including taking down or removing our applications in response to government actions or other legal actions or pursuant to their own policies, and we are unable to arrange for alternative measures in a timely manner or at all, our users will have difficulties accessing our applications or making payments for our products and services. Consequently, we may lose users temporarily or permanently, and our business and results of operations could be materially and adversely affected. Additionally, if we are unable to retain or attract popular talents such as performers, channel managers, professional game players, commentators and hosts for our live streaming platform or if these talents cannot draw fans or participants, our results of operations may be adversely affected. Also, if channel owners are unable to reach or maintain mutually satisfactory cooperation arrangements with the performers on their channels on our live streaming platform, we may lose popular performers and our business and operations may be adversely affected. Furthermore, if we are unable to obtain or retain rights to host popular online games or popular in-game virtual items, or if we are required to share a bigger portion of our revenues with third-party game developers, we could be required to devote greater resources and time to obtain hosting rights for new games and applications from other parties, and our results of operations may be impacted. In addition, some third-party software we use in our operations are currently publicly available without charge. If the owner of any such software decides to charge users or no longer makes the software publicly available, we may need to incur significant cost to license the software, find replacement software or develop alternative software. If we are unable to find or develop replacement software at a reasonable cost, or at all, our business and operations may be adversely affected.

Some of the services offered by us run on a complex network of servers located in and maintained by third-party data centers and our overall network relies on broadband connections provided by third-party operators. We expect this dependence on third parties to continue. The networks maintained and services provided by such third parties are vulnerable to damage or interruption, which could impact our results of operations. See “—System failure, interruptions and downtime can result in adverse publicity for our products and result in net revenue losses, a slowdown in the growth of our registered user accounts and a decrease in the number of our active users. If any of these system disruptions occurs, our business, financial condition and results of operations may be materially and adversely affected.”

Furthermore, we generate substantially all of our online advertising revenues through agreements entered into with various third-party advertising agencies that represent advertisers. We do not have long-term cooperation agreements or exclusive arrangements with these agencies and they may elect to direct business opportunities to other advertising service providers. If we fail to retain and enhance our business relationships with these third-party advertising agencies, we may suffer from a loss of advertisers and our business and results of operations may be materially and adversely affected.

In addition, we sell a significant portion of our products and services through third-party online payment systems. If any of these third-party online payment systems suffer from security breaches, users may lose confidence in such payment systems and refrain from purchasing our virtual items online, in which case our results of operations would be negatively impacted. See “—The security of operations of, and fees charged by, third-party online payment platforms may have a material adverse effect on our business and results of operations.”

We exercise no control over the third parties with whom we have business arrangements. If such third parties increase their prices, fail to provide their services effectively, terminate their service or agreements or discontinue their relationships with us, we could suffer service interruptions, reduced revenues or increased costs, any of which may have a material adverse effect on our business, financial condition and results of operations.

***System failure, interruptions and downtime can result in adverse publicity for our products and result in net revenue losses, a slowdown in the growth of our registered user accounts and a decrease in the number of our active users. If any of these system disruptions occurs, our business, financial condition and results of operations may be materially and adversely affected.***

Although we seek to reduce the possibility of disruptions or other outages, our services may be disrupted by problems with our own technology and system, such as malfunctions in our software or other facilities and network overload. Our systems may be vulnerable to damage or interruption from telecommunication failures, power loss, computer attacks or viruses, earthquakes, floods, fires, terrorist attacks, geopolitical events, and similar events. We have experienced system failures for some operations. Those responsible were subsequently found guilty and penalized by the courts and we have subsequently updated our system to make it more difficult for similar attacks to succeed in the future, but we cannot assure you that there will be no similar technical failures in other jurisdictions in the future. Parts of our system are not fully redundant, and our disaster recovery planning is not sufficient for all eventualities. Despite any precaution we may take, the occurrence of a natural disaster or other unanticipated problems at our hosting facilities could result in lengthy interruptions in the availability of our products and services. Any interruption in the ability of our users to use our products and services could reduce our future revenues, harm our future profits, subject us to regulatory scrutiny and lead users to seek alternative forms of online social interactions.

Our servers that process user payments experience some downtime on a regular basis, which may negatively affect our brand and user perception of the reliability of our systems. Any scheduled or unscheduled interruption in the ability of users to use our payment systems could result in an immediate, and possibly substantial, loss of revenues.

Our users may use our products or services for critical transactions and communications, especially business communications. As a result, any system failures could result in damage to such users' businesses. These users could seek significant compensation from us for their losses. Even if unsuccessful, this type of claim would likely be time consuming and costly for us to address.

We have limited control over the prices of the services provided by telecommunication service providers and may have limited access to alternative networks or services. If the prices we pay for telecommunications and internet services rise significantly, our results of operations may be materially and adversely affected. Furthermore, if internet access fees or other charges to internet users increase, our user traffic may decline and our business may be harmed.

***The respective number of our registered user accounts, active users and paying users may overstate the number of unique individuals who register to use our products and services, log on to our platforms, purchase virtual items or other products and services on our platforms, respectively, and may therefore lead to an inaccurate interpretation of our average revenue per paying user metric and of our business operations by our management and by investors, and may affect advertisers' decisions on the amount spent on advertising with us.***

Users of BIGO who raised withdrawal transactions are required to provide full name, date of birth and identity information, otherwise users are not required or obligated to undergo real-name verification under the current valid regulation. Therefore we cannot and do not track all the number of unique paying users. Instead, we track the number of registered user accounts, active users and paying users. We calculate certain operating metrics in the following ways: (a) the number of registered user accounts is the cumulative number of user accounts at the end of the relevant period that have logged onto our platforms at least once after registration, (b) the number of active users is the cumulative number of user accounts at the end of the relevant period that have signed onto our platforms at least once during the relevant period, and (c) the number of paying users is the cumulative number of registered user accounts that have purchased virtual items or other products and services on our platforms at least once during the relevant period. The actual number of unique individual users, however, is likely to be lower than that of registered user accounts, active users and paying users, potentially significantly, for three primary reasons. First, each individual user may register more than once and therefore have more than one account, and sign onto each of these accounts during a given period. For example, a user may (a) create separate accounts for community and personal use and log onto each account at different times for different activities or (b) if he or she lost his or her original username or password, he or she can simply register again and create an additional account. Second, we experience irregular registration activities such as the creation of a significant number of improper user accounts by a limited number of individuals, which may be in violation of our policies, including for the purpose of clogging our network or posting spam to our channels. We believe that some of these accounts may also be created for specific purposes such as to increase the number of votes for certain performers in various contests, but the number of registered user accounts, paying users and active users do not exclude user accounts created for such purposes. We have limited ability to validate or confirm the accuracy of information provided during the user registration process to ascertain whether a new user account created was actually created by an existing user who is registering duplicative accounts. Thus, the respective number of our registered user accounts, active users and paying users may overstate the number of unique individuals who register on our platforms, sign onto our platforms, purchase virtual items or other products and services on our platforms, respectively which may lead to an inaccurate interpretation of our average revenue per paying user metric.

In addition, we may be unable to track whether we are successfully converting registered users or active users into paying users since we do not track the number of unique individuals or operate our platforms on a real-name basis. If the growth in the number of our registered user accounts, active users or paying users is lower than the actual growth in the number of unique individual registered, active or paying users, our user engagement level, sales and our business may not grow as quickly as we expect, and advertisers may reduce the amount spent on advertising with us, which may harm our business, financial condition and results of operations. In addition, such overstatement may cause inaccurate evaluation of our business operations by our management and by investors, which may also materially and adversely affect our business and results of operations.

***Concerns about collection and use of personal data could damage our reputation and deter current and potential users from using our products and services, which could lead to lower revenues.***

Concerns about our practices with regard to the collection, use or disclosure of personal information or other privacy-related matters, even if unfounded, could damage our reputation and operating results. We apply strict management and protection for any information provided by users and, under our privacy policy, without our users' prior consent, we will not provide any of our users' personal information to any unrelated third party. While we strive to comply with our privacy guidelines as well as all applicable data protection laws and regulations, any failure or perceived failure to comply may result in proceedings or actions against us by government entities or others, and could damage our reputation. User and regulatory attitudes towards privacy are evolving, and future regulatory or user concerns about the extent to which personal information is used or shared with advertisers or others may adversely affect our ability to share certain data with advertisers, which may limit certain methods of targeted advertising. Concerns about the security of personal data could also lead to a decline in general internet usage, which could lead to lower registered, active or paying user numbers on our platforms. A significant reduction in registered, active or paying user numbers could lead to lower revenues, which could have a material and adverse effect on our business, financial condition and results of operations.

***The security of operations of, and fees charged by, third-party online payment platforms may have a material adverse effect on our business and results of operations.***

Currently, we sell almost all of our products and services to our users through third-party online payment systems. We expect that an increasing amount of our sales will be conducted over the internet as a result of the growing use of online payment systems. In all these online payment transactions, secured transmission of confidential information such as customers' credit card numbers and personal information over public networks is essential to maintain consumer confidence.

We do not have control over the security measures of our third-party online payment vendors, and security breaches of the online payment systems that we use could expose us to litigation and possible liability for failing to secure confidential customer information and could, among other things, damage our reputation and the perceived security of all of the online payment systems that we use. If a well-publicized internet or mobile network security breach were to occur, users concerned about the security of their online financial transactions may become reluctant to purchase our virtual items even if the publicized breach did not involve payment systems or methods used by us. In addition, there may be billing software errors that would damage customer confidence in these online payment systems. If any of the above were to occur and damage our reputation or the perceived security of the online payment systems we use, we may lose paying users and users may be discouraged from purchasing our services, which may have a material adverse effect on our business.

In addition, there are currently only a limited number of third-party online payment systems. If any of these major payment systems decides to cease to provide services to us, or significantly increase the percentage they charge us for using their payment systems for our virtual items and other services, our results of operations may be materially and adversely affected.

***Our core values of focusing on user experience and satisfaction first and acting for the long-term may conflict with the short-term operating results of our business, and also negatively impact our relationships with advertisers or other third parties.***

One of our core values is to focus on user experience and satisfaction, which we believe is essential to our success and serves the best, long-term interests of our company and our shareholders. Therefore, we have made, and may make in the future, significant investments or changes in strategy that we think will benefit our users, even if our decision negatively impacts our operating results in the short term. In addition, this philosophy of putting our users first may also negatively impact our relationships with advertisers or other third parties, and may not result in the long-term benefits that we expect, in which case the success of our business and operating results could be harmed.

***Our business may continue to be affected by the COVID-19 pandemic.***

Beginning in 2020, outbreaks of COVID-19 resulted in authorities implementing numerous preventative measures to contain or mitigate the outbreak of the virus, such as travel bans and restrictions, limitations on business activities, quarantines, and shelter-in-place orders. These measures have caused business slowdowns or shutdowns in affected areas, both regionally and worldwide, which have significantly impacted our business and results of operations, especially the willingness of some of our users to purchase virtual items or other products or services on our platform. The pandemic also adversely affected the activity level of certain users and broadcasters on some of our social entertainment platforms in certain regions, particularly those who are interested in, or rely on, offline activities and offline venues.

On the other hand, lockdown and social distancing measures implemented to control the spread of COVID-19 have led to the increase in demand for premium online entertainment content and authentic social engagement. As a result, we experienced an increase in user traffic on our live streaming and short-form video platforms and time spent by our users on our platforms during the lockdown period, which partially led to the rapid growth of our global business. However, there can be no assurance that such momentum will sustain in the future.

With the lockdown and social distancing measures being largely relaxed or lifted in many areas of the world in late 2021 and 2022, we have observed some moderation in online activities and fluctuations in user engagement in our businesses. Relaxation of pandemic-related restrictions may decrease the willingness of users to remain at home, and instead make travelling and other offline activities more attractive, which may adversely affect the usage of our platforms by our users and their spending habit. The overall situation of COVID-19 has been significantly improved and normalized in 2023. However, substantial uncertainties remain as to the future impact of the virus. The extent to which the pandemic impacts our results of operations going forward will depend on future developments which are highly uncertain and unpredictable, including the frequency, duration and extent of outbreaks of COVID-19, the appearance of new variants with different characteristics, the effectiveness of efforts to contain or treat cases, and future actions that may be taken in response to these developments. Macroeconomic environment, both regionally and worldwide, may experience lower domestic consumption, higher unemployment, severe disruptions to exporting of goods to other countries and greater economic uncertainty, which may impact our business in a materially negative way. Our users will need time to recover from the economic effects of the pandemic even after business conditions begin to return to normal. Consequently, the COVID-19 pandemic may materially and adversely affect our business, financial condition and results of operations in the current and future years.

***Our strategic alliances, investments or acquisitions may have a material and adverse effect on our business, reputation and results of operations. There can be no assurance that the anticipated benefits of our strategic alliances, investments or acquisitions could be realized.***

We may enter into strategic alliances, including joint ventures or minority equity investments, with various third parties to further our business purpose from time to time. These alliances could subject us to a number of risks, including risks associated with sharing proprietary information, non-performance by the third party and increased expenses in establishing new strategic alliances, any of which may materially and adversely affect our business. We may have limited ability to monitor or control the actions of these third parties and, to the extent any of these strategic third parties suffers negative publicity or harm to their reputation from events relating to their business, we may also suffer negative publicity or harm to our reputation by virtue of our association with any such third party.

In addition, if appropriate opportunities arise, we may acquire and/or invest in additional assets, products, technologies or businesses that are complementary to our existing business. Past and future acquisitions and the subsequent integration of new assets and businesses into our own require significant attention from our management and could result in a diversion of resources from our existing business, which in turn could have an adverse effect on our business operations. The integration of previously independent businesses is a complex, costly and time-consuming process, and may result in material unanticipated problems, expenses, liabilities, competitive responses, and diversion of management's attention.

Also, there can be no assurance that we can achieve the intended objectives or anticipated benefits by such strategic investments or acquisitions. Acquired assets or businesses may not generate the financial results we expect. Acquisitions could result in the use of substantial amounts of cash, potentially dilutive issuances of equity securities, the occurrence of significant goodwill impairment charges, amortization expenses for other intangible assets, exposure to potential unknown liabilities of the acquired business and decrease in our gross and net margins as a result of the consolidation of the financial results of the acquired business. If implemented ineffectively or if impacted by unforeseen negative economic or market conditions or other factors, we may not realize the full anticipated benefits of our strategic investments. Our failure to meet the challenges involved in realizing the anticipated benefits of the strategic investments could cause an interruption of, or a loss of momentum in, our activities and could adversely affect our results of operations.

Moreover, the costs of identifying and consummating acquisitions may be significant. In addition to possible shareholders' approval, we may also have to obtain approvals and licenses from relevant government authorities for the acquisitions and to comply with any applicable laws and regulations, which could result in increased delay and costs. Furthermore, we may be subject to negative public perception as a result of those strategic investments or acquisition and be viewed negatively by our users, investors and financial markets in general. The market value of our investments or acquisitions may also fluctuate, particularly in volatile markets, which may adversely affect our results of operations and financial condition.

**Registered trademarks, purchased internet search engine keywords and registered domain names of third parties that are similar to our trademarks, brands or domain names could cause confusion to our users, divert online customers away from our products and services or harm our reputation.**

Competitors and other third parties may register trademarks or domain names that are similar to our trademarks or domain names or purchase keywords that are confusingly similar to our brands or websites in internet search engine advertising programs and in the header and text of the resulting sponsored links or advertisements in order to divert potential customers from us to their websites. Preventing such activity is inherently difficult. If we are unable to prevent such activity, competitors and other third parties may continue to drive potential online customers away from our platforms to competing, irrelevant or potentially offensive platforms, which could harm our reputation and cause us to lose revenue.

**We have been and may be subject to intellectual property infringement, misappropriation or other claims or allegations in multiple jurisdictions, which could result in our payment of substantial damages, penalties and fines, removal of relevant content from our website or seeking license arrangements which may not be available on commercially reasonable terms.**

Third party owners or right holders of patents, copyrights, trademarks, trade secrets and website content may assert intellectual property infringement, misappropriation or other claims against us. Our success depends, in part, on our ability to develop and commercialize our platforms without infringing, misappropriating or otherwise violating the intellectual property rights of third parties. However, we may not be aware that our platforms are infringing, misappropriating or otherwise violating third-party intellectual property rights and such third parties may bring claims alleging such infringement, misappropriation or violation. In addition, content generated through our platforms, including real-time content, may also potentially cause disputes regarding content ownership or intellectual property rights. For example, we could face copyright infringement claims with respect to songs performed live, recorded or made accessible and online games being streamed live, recorded or made accessible on our audio and video-based social entertainment platforms. Separately, as our business expands in global landscape, the costs of carrying out these procedures and obtaining authorization and licenses for the growing content on our platforms and to use such content in multiple jurisdictions into which we may expand our operations may increase, which may potentially have material and adverse effects on our results of operations.

The validity, enforceability and scope of protection of intellectual property rights in internet-related industries are uncertain and still evolving. Considering the nature of our business, we have been subject to infringement claims and may continue to be subject to such infringement claims from time to time. For example, we were involved in a lawsuit with Guangzhou NetEase Computer System Co., Ltd. in the past few years, see “Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal Proceedings” for details. However, we cannot predict the possible outcome of the legal proceedings of such nature. Also, these legal proceedings may be expensive, time-consuming and disruptive to our operations and divert our management’s attention. There can be no assurance that we will prevail in those legal proceedings and we cannot assure you that no intellectual property claims or lawsuits will be initiated by other companies in the future.

We have implemented procedures to reduce the likelihood that we may use, develop or make available any content or applications without the proper licenses or necessary third-party consents; such procedures include requiring performers, channel owners and users to acknowledge and agree that they would not perform or upload copyrighted content without proper authorization and that they will indemnify us for any relevant copyright infringement claims. However, these procedures may not be effective in preventing unauthorized posting or use of copyrighted content on our platforms or the infringement of third-party rights. Specifically, such acknowledgments and agreements by performers, channel owners and users are not enforceable against third parties who may nevertheless file claims of copyright infringement against us. Furthermore, individual performers or channel owners who generate content on our platform that may infringe copyrights of third parties may not be easily traceable, if at all, by a plaintiff who may then choose to file a claim against us, and these individual performers and channel owners may not have resources to fully indemnify us, if at all, for any such claims. Given that, we cannot assure you that we will not become subject to other intellectual property claims and lawsuits in the jurisdictions where we have presence, including the United States, by virtue of our ADSs being listed on the Nasdaq Global Select Market, the ability of users to access our platforms in the United States and other jurisdictions, the performance of songs and other contents which are subject to copyright and other intellectual property laws of multiple jurisdictions, the ownership of our ADSs by investors in the United States and other jurisdictions, or the extraterritorial application of laws by courts in any other jurisdiction or otherwise. In addition, as a publicly listed company, we may be exposed to increased risk of litigation.

If an infringement claim brought against us under the jurisdictional laws is successful, we may be required to pay substantial statutory penalties or other damages and fines, remove relevant content from our platforms, face injunctive relief or enter into license agreements which may not be made on commercially reasonable terms or at all. We currently have a U.S. patent portfolio, and our competitors and other third parties may now or in the future have significantly larger and more mature patent portfolios than we have. Litigation or other claims against us also subject us to adverse publicity which could harm our reputation and affect our ability to attract and retain users, including channel owners, singers and other performers, which could materially and adversely affect the popularity of our platforms and therefore, our business, financial condition, results of operations and prospects may be materially and adversely affected.

***We may not be able to successfully halt the operations of platforms that aggregate our data as well as data from other companies, including social networks, or “copycat” platforms that have misappropriated our data in the past or may misappropriate our data in the future. Those platforms may also lure away some of our users or advertisers or reduce our market share, causing material and adverse effects on our business operations.***

From time to time, third parties have misappropriated our data through scraping our platforms, robots or other means and aggregated this data on their platforms with data from other companies. In addition, historically “copycat” platforms or client applications had misappropriated data on our platforms, implanted Trojan viruses in user PCs or mobiles to steal user data from YY Client (our discontinued business in mainland China) or other mobile applications and attempted to imitate our brand or the functionality of our platforms. When we became aware of such platforms, we employed technological and legal measures in an attempt to halt their operations. However, we may not be able to detect all such misappropriation in a timely manner and, even if we could, technological and legal measures may be insufficient to stop all such misappropriation. In those cases, our available remedies may not be adequate to protect us against such misappropriation. Regardless of whether we can successfully enforce our rights against these third parties, any measures that we may take could require significant financial or other resources from us. Those third parties may also lure away some of our users or advertisers or reduce our market share, causing material and adverse effects to our business operations.

***We may not be able to prevent unauthorized use of our intellectual property, which could harm our business and competitive position.***

We regard our trademarks, service marks, patents, domain names, trade secrets, proprietary technologies and similar intellectual property as critical to our success, and we rely on trademark and patent law, trade secret protection and confidentiality and license agreements with our employees and others to protect our proprietary rights. However, the steps we take to obtain, maintain, protect and enforce our intellectual property rights may be inadequate. We will not be able to protect our intellectual property rights if we are unable to obtain such intellectual property rights, or enforce our rights or if we do not detect unauthorized use of our intellectual property rights. If we fail to protect our intellectual property rights adequately, our competitors may gain access to our proprietary technology and develop and commercialize substantially identical products, services or technologies, and our business, financial condition, results of operations or prospects may be harmed. In addition, defending our intellectual property rights may entail significant expense.

It is often difficult to obtain, maintain and enforce intellectual property rights in certain developing countries such as China and other jurisdictions, as compared with the United States. Patents, trademarks and service marks may be invalidated, circumvented, or challenged. Trade secrets are difficult to protect, and our trade secrets may be leaked or otherwise become known or be independently discovered by others. Moreover, no assurance can be given that confidential agreements will be effective in controlling access to, distribution, use, misuse, misappropriation, reverse engineering or disclosure of our proprietary information, know-how and trade secrets. Further, these agreements may not prevent our competitors from independently developing technologies that are substantially equivalent or superior to our platform capabilities. Confidentiality agreements may be breached, and we may not have adequate remedies for any breach. Even where adequate, relevant laws exist, it may not be possible to obtain swift and equitable enforcement of such laws, or to obtain enforcement of a court judgment or an arbitration award delivered in another jurisdiction, and accordingly, we may not be able to effectively protect our intellectual property rights or enforce agreements in mainland China or other jurisdictions. Policing any unauthorized use of our intellectual property is difficult and costly and the steps we have taken may be inadequate to prevent the misappropriation of our technologies. Given the potential cost, effort, risks and downsides of obtaining patent protection, in some cases we have not and do not plan to apply for patents or other forms of formal intellectual property protection for certain key technologies. If some of these technologies are later proven to be important to our business and are used by third parties without our authorization, especially for commercial purposes, our business and competitive position may be harmed. Patent, trademark, copyright, and trade secret protection may not be available to us in every country in which our platforms are or become available. For example, as we have expanded our business in multiple regions across the globe, we may be unable to register and obtain exclusive rights to use our trademarks in certain jurisdictions. As we expand our international activities, our exposure to unauthorized copying and use of our platforms will likely increase.

Litigation may be necessary in the future to enforce our intellectual property rights and to protect our trade secrets. Such litigation could be costly, time-consuming, and distracting to management, and could result in the impairment or loss of portions of our intellectual property. Further, our efforts to enforce our intellectual property rights may be met with defenses, counterclaims, and countersuits attacking the validity and enforceability of our intellectual property rights, and if such defenses, counterclaims or countersuits are successful, we could lose valuable intellectual property rights. Our inability to protect our proprietary technology against unauthorized copying or use, as well as any costly litigation or diversion of our management's attention and resources, could delay further sales or the implementation of our platforms, impair the functionality of our platforms, delay introductions of our platforms, result in our substituting inferior or more costly technologies into our platforms or damage our reputation.

***As our patents may expire and may not be extended, our patent applications may not be granted and our patent rights may be contested, circumvented, invalidated or limited in scope, our patent rights may not protect us effectively. In particular, we may not be able to prevent others from developing or exploiting competing technologies, which could have a material and adverse effect on our business operations, financial condition and results of operations.***

Generally, registered patents are subject to finite terms in various jurisdictions, which may vary from jurisdictions to jurisdictions as to the specific time period, term extension and other regulatory maintenance requirements. For example, in the United States and Singapore, once a patent is granted, it will be protected for twenty years from the date of application filing. The same twenty-year period also applies to patents for invention in Vietnam and invention patents in Thailand, while the valid period for patents for utility in Vietnam and design patents in Thailand is ten years. In mainland China, the valid period of utility model patent right and design patent right is ten years and fifteen years, respectively, according to the 2020 Patent Law that became effective on June 1, 2021, and is not extendable. Currently, we have patent applications pending in multiple regions across the globe, but we cannot assure you that we will be granted patents pursuant to our pending applications or will be granted patents based on patent applications we may file in other jurisdictions. Even if our patent applications succeed and we are issued patents in accordance with them, it is still uncertain whether these patents will be contested, circumvented or invalidated in the future. The rights granted under any issued patents may not provide us with proprietary protection or competitive advantages. Further, the claims under any patents that issue from our patent applications may not be broad enough to prevent others from developing technologies that are similar or that achieve results similar to ours. It is also possible that the intellectual property rights of others will bar us from licensing and from exploiting any patents that issue from our pending applications. Numerous U.S. and patents issued in other regions and pending patent applications owned by others exist in the fields in which we have developed and are developing our technology. These patents and patent applications might have priority over our patent applications and could subject our patent applications to invalidation and subject to patent infringement lawsuits if we expand our operations into such jurisdictions. Finally, in addition to those who may claim priority, any of our existing or pending patents may also be challenged by others on the basis that they are otherwise invalid or unenforceable.

***If we fail to maintain and enhance our brands or to effectively promote our products and acquire new users, or if we incur excessive expenses in these efforts, our business, results of operations and prospects may be materially and adversely affected.***

We believe that maintaining and enhancing our brands is of significant importance to the success of our business. Well-recognized brands are important to increasing the number of users and the level of engagement of our users and enhancing our attractiveness to advertisers. Since we operate in a highly competitive market, brand maintenance and enhancement directly affect our ability to maintain our market position.

As we expand in the future, we may conduct various marketing and brand promotion activities using various methods to continue promoting our brands. We cannot assure you, however, that these activities will be successful or that we will be able to achieve the brand promotion effect we expect. In addition, any negative publicity in relation to our products or services, regardless of its veracity, could harm our brands and reputation.

We have sometimes received, and expect to continue to receive, complaints from users regarding the quality of the products and services we offer. Negative publicity or public complaints by users may harm our reputation and affect our ability to attract new users and retain existing users. If our users' complaints are not addressed to their satisfaction, our reputation and our market position could be significantly harmed, which may materially and adversely affect our business, results of operations and prospects.

***Our business depends substantially on the continuing efforts of our executive officers and key employees, and our business operations may be severely disrupted if we lose their services.***

Our future success depends substantially on the continued efforts of our executive officers and key employees. If one or more of our executive officers or key employees were unable or unwilling to continue their services with us, we might not be able to replace them easily, in a timely manner, or at all. In addition, some of our executive officers and key employees hold the equity interests in the variable interest entities in mainland China. If any of these executive officers and key employees terminates their services with us, we have the contractual right to appoint designees to hold the variable interest entities' equity interests. However, our business may be severely disrupted, our financial condition and results of operations may be materially and adversely affected and we may incur additional expenses to recruit, train and retain personnel. If any of our executive officers or key employees joins a competitor or forms a competing company, we may lose customers, know-how and key professionals and staff members. Each of our executive officers and key employees has entered into an employment agreement and a non-compete agreement with us. However, as advised by our PRC counsel, Fangda Partners, certain provisions under the non-compete agreement may not be deemed valid or enforceable under laws of mainland China. If any dispute arises between our executive officers and key employees and us, we cannot assure you that we would be able to enforce these non-compete agreements in mainland China, where these executive officers reside, in light of uncertainties with mainland China's legal system. See “—Risks Related to Doing Business in Jurisdictions We Operate—Uncertainties in the interpretation and enforcement of laws and regulations of mainland China could limit the legal protections available to you and us.”

***If we are unable to attract, train and retain qualified personnel, our business may be materially and adversely affected.***

Our future success depends, to a significant extent, on our ability to attract, train and retain qualified personnel, particularly management, technical and marketing personnel with expertise in the internet industry; inability to do so may materially and adversely affect our business. Since the internet industry is characterized by high demand and intense competition for talent, we cannot assure you that we will be able to attract or retain qualified staff or other highly skilled employees. As our company is relatively young, our ability to train and integrate new employees into our operations may not meet the growing demands of our business which may materially and adversely affect our ability to grow our business and hence our results of operations.

***We may be exposed to cyber security risk.***

Computer hackers, governments or cyber terrorists may attempt to penetrate our network security and our website. Unauthorized access to our proprietary business information or customer data may be obtained through break-ins, sabotage, breach of our secure network by an unauthorized party, computer viruses, computer denial-of-service attacks, employee theft or misuse, breach of the security of the networks of our third-party providers, or other misconduct. Because the techniques used by computer programmers who may attempt to penetrate and sabotage our network security or our website change frequently and may not be recognized until launched against a target, we may be unable to anticipate these techniques. It is also possible that unauthorized access to customer data may be obtained through inadequate use of security controls by customers. We would suffer economic and reputational damages if a technical failure of our systems or a security breach compromises our user data, including identification or contact information, although there has not been any compromise in the past. Any disruption to our computer systems could have a material adverse effect on our on-site operations and ability to retain and attract users.

***Our results of operations are subject to substantial quarterly and annual fluctuations due to seasonality.***

We experience seasonality in our business, reflecting seasonal fluctuations in internet usage. As a result, comparing our operating results on a period-to-period basis may not be meaningful. For example, online user numbers tend to be lower during the holidays and celebrations in different cultures (including, but not limited to, Chinese New Year, Independence Day, Ramadan etc.), which negatively affects our cash flow for those periods. We may also experience a slight decrease of active users during Christmas and ending with the New Year's Day. Historically, excluding the impact of COVID-19, our revenues from advertising have followed the same general seasonal trend throughout the year with the first quarter of the year being the weakest quarter and the fourth quarter being the strongest. Furthermore, the number of paying users of our video content platform correlates with the marketing campaigns and promotional activities we conduct from time to time. Additionally, a portion of our e-commerce revenues correlate with the GMV that merchants facilitate through our smart commerce solution platform. Our merchants typically tend to process more GMV during the fourth quarter due to holiday season. Therefore, our financial results may reflect seasonal effects owing to the factors mentioned above.

As a result, our operating results in future quarters or years may fall below the expectations of securities analysts and investors. In such event, the trading price of our ADSs would likely be materially and adversely affected. See “Item 4. Information on the Company—B. Business Overview—Seasonality” for additional details regarding the effects of seasonality on our cash flow, operating performance and financial results.

***Our business is sensitive to global economic and various other conditions. Changes in the global and regional economy and other aspects could materially and adversely affect our business, financial condition and results of operations.***

The success of our business ultimately depends on consumer and business spending. Also, many of the merchants that use our smart commerce solution platform are small and medium-sized businesses, and usually in the entrepreneurial stage of their development, who are more sensitive to macroeconomic environment. As a result, our revenue is exposed to general economic and various other conditions that affect consumer confidence, discretionary income or changes in spending habits of individuals and businesses. As a result, our revenue and net income could be impacted to a significant extent by economic and various other conditions in respective regions where we operate, as well as economic conditions specific to the applicable industry. The regional and global economy, markets and levels of consumer and business spending are influenced by many factors beyond our control, including perception of current and future economic conditions, political uncertainty, employment levels, inflation or deflation, real disposable income, interest rates, taxation and currency exchange rates etc.

COVID-19 had a severe and negative impact on the global economy over the past three years. Whether this will lead to a prolonged downturn in the economy is still unknown. Even before the outbreak of COVID-19, the global macroeconomic environment was facing numerous challenges. Uncertainty about global economic conditions poses a risk as consumers and businesses may postpone spending in response to credit constraint, rising unemployment rate, financial market volatility, government austerity programs, negative financial news, declines in income or asset values and/or other factors. There is considerable uncertainty over the long-term effects of the expansionary monetary and fiscal policies which had been adopted by the central banks and financial authorities of the world’s leading economies. Unrest, terrorist threats and the potential for war in the Middle East and elsewhere may increase market volatility across the globe. For example, the war in Ukraine and the imposition of broad economic sanction on Russia could raise energy prices and disrupt global markets. These worldwide and regional economic and various other conditions could have a material adverse effect on demand for our products and services. Demand also could differ materially from our expectations as a result of currency fluctuations. Other factors that could influence worldwide or regional demand include changes in fuel and other energy costs, conditions in the real estate and mortgage markets, unemployment, labor and healthcare costs, access to credit, consumer confidence and other macroeconomic factors affecting consumer and business spending behavior. An economic downturn, whether actual or perceived, a further decrease in economic growth rates or an otherwise uncertain economic outlook in global markets which we may operate could have a material adverse effect on business and consumer spending and, as a result, adversely affect our business, financial condition and results of operations.

***We face risks associated with our long-term and short-term investments.***

We currently invest a portion of our capital in long-term and short-term investments. Our long-term investments mainly consisted of investment in equity method investees, equity investments with readily determinable fair values and equity investments without readily determinable fair values, and our short-term investments mainly consisted of financial products issued by commercial banks with a variable interest rate indexed to the performance of underlying assets and a maturity date within one year when purchased. These investments may earn yields substantially lower than anticipated, and any failure to realize the benefits we expected from these investments may materially and adversely affect our business and financial results. We may also suffer losses from these long-term and short-term investments, which could adversely affect our results of operations and financial condition. Further, we may be adversely affected by a crisis in the banking industry. For example, on March 10, 2023, the Federal Deposit Insurance Corporation, took control and was appointed as the receiver of Silicon Valley Bank. Although we have not held funds of meaningful amount at Silicon Valley Bank, we have funds at other banks in the United States and several other countries. If banks and financial institutions enter receivership or become insolvent in the future and a portion of our cash or cash equivalents and/or short-term investments is held in such banks and financial institutions, our ability to access our existing cash and cash equivalents and/or short-term investments may be impacted, which could have a material adverse effect on our business and financial condition.

***If we fail to maintain an effective system of internal control over financial reporting, we may be unable to accurately report our financial results or prevent fraud, and investor confidence in our company and the market price of our ADSs may be adversely affected.***

The SEC, as required by Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, adopted rules requiring most public companies to include a management report on such company's internal control over financial reporting in its annual report, which contains management's assessment of the effectiveness of the company's internal control over financial reporting. In addition, when a company meets the SEC's criteria, an independent registered public accounting firm must report on the effectiveness of the company's internal control over financial reporting.

Our management and independent registered public accounting firm have concluded that our internal control over financial reporting was effective as of December 31, 2022. However, we cannot assure you that in the future our management or our independent registered public accounting firm will not identify material weaknesses during the Section 404 of the Sarbanes-Oxley Act audit process or for other reasons. In addition, because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. As a result, if we fail to maintain effective internal control over financial reporting or should we be unable to prevent or detect material misstatements due to error or fraud on a timely basis, investors could lose confidence in the reliability of our financial statements, which in turn could harm our business, results of operations and negatively impact the market price of our ADSs, and harm our reputation. Furthermore, we have incurred and expect to continue to incur considerable costs and to use significant management time and the other resources in an effort to comply with Section 404 and other requirements of the Sarbanes-Oxley Act.

***Unauthorized third-party platforms may sell virtual items we offer for free on our platforms, which may affect our revenue-generating opportunities and exert downward pressure on the prices we charge for our virtual items.***

We, from time to time, offer virtual items free of charge to attract users or encourage user participation in channels. Some of our users may sell or purchase such free virtual items through unauthorized third-party sellers in exchange for real currency. For example, fans of a performer may pay other users to send flowers or gifts the latter have accumulated on our platforms to the performer, in order to show support and raise the popularity ranking of the performer of their choice. These unauthorized transactions are usually arranged on third-party platforms which we do not and are unable to track or monitor. Accordingly, these unauthorized purchases and sales from third-party sellers may affect our revenue-generating opportunities and may impede our revenue and profit growth by, among other things, reducing the revenues we could have generated and exerting downward pressure on the prices we charge for our virtual items.

***We have limited business insurance coverage, so that any uninsured occurrence of business disruption may result in substantial costs to us and the diversion of our resources, which could have an adverse effect on our results of operations and financial condition.***

Insurance products available in some emerging markets in which we operate currently are not as extensive as those offered in more developed economies. We may not have sufficient insurance coverage for business liabilities or disruptions. We have determined that the costs of insuring for these risks and the difficulties associated with acquiring such insurance on commercially reasonable terms make it impractical for us to have such insurance. Any uninsured occurrence may disrupt our business operations, require us to incur substantial costs and divert our resources, which could have an adverse effect on our results of operations and financial condition.

## **Risks Related to Doing Business in Jurisdictions We Operate**

***We are subject to the risks of doing business globally.***

We maintain our operations in multiple jurisdictions across the globe, and may in the future continue expanding, or seek to expand, our operations to additional jurisdictions. The global operation and expansion plan exposes us to international political, legal and economic risks, which are fluid and unpredictable. Our ability to maintain good operation in multiple countries and regions may be adversely affected by changes in international and local laws, regulations and government policies such as those related to investment, taxation, import and export tariffs, environmental regulations, land use rights, intellectual property, currency controls, network security and other matters. Many, if not all of the above-mentioned risks also apply to our operations in multiple jurisdictions across the globe where we operate or seek to operate. If any of these risks were to occur, our business, financial condition and results of operations could be materially and adversely affected by any of the risks above.

We cannot guarantee that we will be able to successfully carry out our global expansion strategy. We will face certain risks inherent in doing business globally, including, but not limited to, difficulties in developing, staffing and simultaneously managing global operations as a result of distance, language and cultural differences; challenges in formulating effective local sales and marketing strategies targeting users from various jurisdictions and cultures, who have a diverse range of preferences and demands; challenges in identifying appropriate local business partners and establishing and maintaining good working relationships with them; challenges in recruiting and retaining talented and capable management and employees in various markets; challenges in obtaining and maintaining sufficient intellectual property protection and rights in various jurisdictions; dependence on local platforms in marketing our international products and services in multiple regions across the globe; challenges in selecting suitable geographical regions for international business; political or social unrest or economic instability; compliance with applicable laws and regulations in multiple regions across the globe and unexpected changes in laws or regulations, including, but not limited to, investment restrictions and ownership requirements; exposure to different tax jurisdictions that may subject us to greater fluctuations in our effective tax rate and potentially adverse tax consequences; and increased costs associated with doing business in multiple jurisdictions across the globe.

As we operate in multiple jurisdictions across the globe, economic, political and social conditions of certain jurisdictions may represent unique features, as compared to other jurisdictions, in many aspects. With our subsidiaries incorporated in multiple jurisdictions across the globe, our business, financial condition, results of operations and prospects in those jurisdictions may be influenced to a significant degree by local political, economic and social conditions. Also, the economies in emerging markets generally differ from the economies of most developed countries in many respects, including the level of government involvement, level of development, growth rate, control of foreign exchange, government policy on public order and allocation of resources. The government authorities of certain jurisdictions, such as mainland China, has significant oversight over the conduct of our business in the region and may intervene or influence our operations in the region. These government authorities have published and may continue to publish new policies that significantly affected certain industries and we cannot rule out the possibility that it will in the future release regulations or policies that directly or indirectly affect our industry or require us to comply with more stringent regulatory requirements in order for us continue our local operations, which could result in a material adverse change in our operation in such jurisdictions and/or the value of our ADSs. Therefore, investors of our company face potential uncertainty from actions taken by the governmental authorities in markets in which we operate. If we cannot timely and effectively manage such challenge, it may place significant strain on our management and resources to keep balance among the jurisdictions where we operate, which may adversely affect our business, financial condition and results of operations.

***We have limited experience in international markets. If we fail to meet the challenges presented by our increasingly globalized operations, our business, financial condition and results of operations may be materially and adversely affected.***

We have limited experience in international markets and we expect to enter into and expand our operations in international markets. Our businesses have footprint around the world, primarily including North America, Europe, the Middle East, Southeast Asia and Eastern Pacific regions, etc. Global expansion is a key growth strategy for us, which exposes us to a number of risks, including:

- compliance with applicable laws and regulations in multiple jurisdictions, including, but not limited to, internet content provider licenses and other applicable licenses or governmental authorizations;
- policies that increase restrictions on our ability to invest in certain jurisdictions, especially in the telecommunication and internet sectors;
- challenges in identifying appropriate local business partners and establishing and maintaining good working relationships with them. Our business partners primarily include popular talents and their agencies, third parties that promote our platform and applications and third parties that provide us technology support;
- challenges in obtaining and maintaining sufficient intellectual property protection and rights;
- challenges in commercializing our platforms in international markets without infringing, misappropriating or otherwise violating the intellectual property rights of third parties;
- challenges in formulating effective marketing strategies targeting users from various jurisdictions and cultures, who have a diverse range of preferences and demands;
- lack of acceptance of our product and service offerings, and challenges of localizing our offerings to appeal to local tastes;
- challenges in replicating or adapting our company policies and procedures to operating environments that are different from each other, including technology infrastructure;
- challenges in meeting local advertiser demands as well as online marketing practices and conventions;
- differences in user and advertiser reception and perception of our applications internationally;

- challenges in managing compliance with local labor regulations and risks associated with labor dispute across different jurisdictions;
- fluctuations in currency exchange rates;
- increased competition with local players in different markets and sub-markets;
- political instability and general economic or political conditions in particular countries or regions, including territorial or trade disputes, war and terrorism;
- exposure to different tax jurisdictions that may subject us to greater fluctuations in our effective tax rate and assessments in multiple jurisdictions on various tax-related assertions, including transfer pricing adjustments and permanent establishment;
- recruitment and retention of talented and capable management and employees in various markets;
- challenges of maintaining efficient and consolidated internal systems, including information technology infrastructure, and of achieving customization and integration of these systems;
- compliance with privacy laws and data security laws, including heightened restrictions and barriers on the transfer of data between different jurisdictions;
- regulatory regime and business practices that essentially favors the domestic companies, such as imposing restrictions on foreign ownership, which could, among other things, give rise to competitive disadvantage for us and hinder our ability to execute our business strategies;
- actions by local governments or others to restrict access to our products and services or to cause us to discontinue our operations in a particular market, regardless of whether these actions are taken for political, security or other reasons; and
- increased costs associated with doing business in multiple jurisdictions.

There is no assurance we will be able to manage these risks and challenges as we continue to grow our international businesses. Failure to manage these risks and challenges could negatively affect our ability to expand our international and cross-border businesses and operations as well as materially and adversely affect our business, financial condition and results of operations.

***We face risks and uncertainties to comply with the laws, regulations and rules in various aspects in multiple jurisdictions across the globe. Failure to comply with such applicable laws, regulations and rules may subject our global operations to strict scrutiny by local authorities, which in turn may materially and adversely affect our globalized operations.***

Nowadays, we operate in several key markets across the globe and our revenue is diversified across multiple markets. As we expand our operations in additional emerging markets and regions, we may have to take efforts to comply with the local legal requirements and markets conditions. Such efforts may include, among others, adapting our business models or operations to the local markets and engaging specialized professionals for compliance purpose. Our international operations and expansion efforts may result in increased costs and are subject to various risks, including difficulties in obtaining licenses, permits or other applicable governmental authorizations, content control from local authorities, uncertain enforcement of intellectual property rights, potential claims of intellectual property infringement, the complexity of compliance with laws and regulations and cultural differences. Compliance with applicable laws, regulations and rules related to matters that are central to our business, including those related to live streaming services, content restrictions, data privacy, virtual items, anti-corruption laws, anti-money laundering and protection of minors, increases the costs and risk exposure of doing business in multiple jurisdictions across the globe including North America, Europe, the Middle East, Southeast Asia, and Eastern Pacific regions, etc. In some cases, compliance with the laws and regulations of one country could violate the laws and regulations of another country. Additionally, as we operate across multiple markets across the globe, we are more likely to be exposed to international political tension, which may inevitably adversely affect our business and operating results. See “—Risks Related to Our Business and Industry—Rising international political tension may adversely impact our business and operating results.” As our globalized operations evolve, we cannot assure you that we are able to fully comply with the legal requirements of each jurisdiction and successfully adapt our business models to local market conditions. Due to the complexity involved in our global business expansion, we cannot assure you that we are in compliance with all local laws or regulations, including regulatory control, license requirements, or that our existing licenses will be successfully renewed or expanded to cover all of our areas of operations. If we fail to properly and timely address those risks and challenges, our business that are not compliant with the local regulations may be subject to penalties, rectification, suspension of business and/or platform shutdown.

***Fluctuations in foreign currency exchange rates may adversely affect our operational and financial results, which we report in U.S. dollars.***

We operate in multiple markets, which exposes us to the effects of fluctuations in currency exchange rates as we report our financials and key operational metrics in U.S. dollars. While a majority of our revenues and expenses are dominated in U.S. dollars, some of our expenses and revenues are denominated in various other foreign currencies, such as Renminbi, Euro, Singapore dollars, Japanese yen, Indonesian rupiah, Vietnamese dong, Thai baht, Malaysian ringgit, Turkish lira, among other currencies. We generally incur expenses for employee compensation and other operating expenses in the local currencies in the markets in which we operate. Therefore, fluctuations in the exchange rates among the various currencies that we use could cause fluctuations in our operational and financial results. Our expenses may become higher and our revenue and operating metrics may become lower than would be the case if exchange rates were stable or if we were operating and reporting in one currency. Movements in foreign currency exchange rates may have a material adverse effect on our results of operations, which may cause our financial and operational metrics reported in U.S. dollars to be not fully representative of our underlying business performance. Because fluctuations in the value of the local currencies are not necessarily correlated, our results of operations in any period may be adversely affected by such volatility. See “Item 11. Quantitative and Qualitative Disclosures About Market Risk.”

We may enter into derivatives transactions and incur relevant costs from time to time to manage our exposure to exchange rate risk. Such derivatives transactions while intended to be non-speculative, are designed to protect us against increases or decreases in exchange rates, but not both. If we have entered into derivatives transactions to protect against, for example, decreases in the value of a local currency and such local currency instead increases in value, we may incur financial losses. Such losses could materially and adversely affect our financial condition and results of operations.

***Rising international political tension may adversely impact our business and operating results.***

We currently operate in several key markets across the globe and our revenue is diversified across multiple markets. As a global company, we are more likely to be exposed to geopolitical tension, especially when the markets where we operate are involved. Actual or threatened geopolitical tension and conflicts lead to greater uncertainty, economic instability and a general lack of confidence in the markets involved. Sustained and evolving geopolitical tension may result in sanctions imposed by other countries, retaliatory actions in response to such sanctions, bans and other measures taken by governments, organizations and companies. Specifically, governments or government agencies in any of our markets may censor, ban or block access to our services, mobile apps or platforms for various reasons, including content restrictions, national security, data protection on regulatory concerns, or due to some misunderstanding, all of which may be attributable to political tension, which may accordingly materially and adversely affect our business, results of operations and financial condition. For example, India has banned hundreds of mobile apps over the last three years out of national security concerns, including our Bigo Live, Likee and Hago. We cannot predict the duration or outcome of these events and actions or whether future developments would have any material adverse impact on our business. These and other instabilities and any adverse changes in the political environment could increase our costs, increase our exposure to legal and business risks, disrupt our office operations or the business activities of our ecosystem participants, or affect our ability to expand or retain our user base.

As we operate in a number of markets across the globe, we may be subject to some international political tension involving any one of the markets where we currently operate. These tensions have affected both diplomatic and economic ties between the involved countries. Heightened tensions may continue to reduce levels of trade, investments, technological exchanges, and other economic activities.

***The approval of and the filing with the CSRC or other government authorities of mainland China may be required in connection with our offerings and financing activities outside mainland China in the future under the laws of mainland China, and, if required, we cannot predict whether or for how long we will be able to obtain such approval or complete such filing.***

The Regulations on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors, or the M&A Rules, adopted by six regulatory agencies of mainland China in 2006 and amended in 2009, requires an overseas special purpose vehicle formed for listing purposes through acquisitions of domestic companies in mainland China and controlled by PRC persons or entities to obtain the approval of the CSRC prior to the listing and trading of such special purpose vehicle's securities on an overseas stock exchange. As the interpretation and application of the regulations remain unclear, although we have a majority of our revenue outside mainland China, we are not certain if our offerings outside mainland China may ultimately require approval of the CSRC. If the CSRC approval is required, it is uncertain whether we can or how long it will take us to obtain the approval and, even if we obtain such CSRC approval, the approval could be rescinded. Any failure to obtain or delay in obtaining the CSRC approval for any of our offerings outside mainland China, or a rescission of such approval if obtained by us, would subject us to sanctions imposed by the CSRC or other regulatory authorities of mainland China, which could include fines and penalties on our operations in mainland China, restrictions or limitations on our ability to pay dividends outside of mainland China, and other forms of sanctions that may materially and adversely affect our business, financial condition, and results of operations.

The General Office of the Central Committee of the Communist Party of China and the General Office of the State Council jointly issued the Opinions on Strictly Cracking Down on Illegal Securities Activities According to Law, or the Opinions, which were made available to the public on July 6, 2021. The Opinions mentioned that the administration and supervision of overseas-listed companies based in mainland China will be strengthened, and the special provisions of the State Council on overseas issuance and listing of shares by such companies will be revised, clarifying the responsibilities of domestic industry competent authorities and regulatory authorities.

As a follow-up, on February 17, 2023, the CSRC promulgated the Trial Administrative Measures of the Overseas Securities Offering and Listing by Domestic companies, or the Overseas Listing Trial Measures, and relevant five guidelines, which came into effect on March 31, 2023. According to the Overseas Listing Trial Measures and guidelines, domestic companies in mainland China that seek to offer and list securities in overseas markets, including secondary listing and follow-on offerings, either directly or indirectly, are required to fulfill the filing procedure with the CSRC and report relevant information. The Overseas Listing Trial Measures provides that if the issuer meets both of the following criteria, the overseas securities offering and listing conducted by such issuer would be deemed as an indirect overseas offering subject to the filing procedure set forth under the Overseas Listing Trial Measures: (i) any of the operating revenue, total profit, total assets or net assets of domestic companies in mainland China for the most recent fiscal year accounts for 50% or more of the corresponding item as recorded in issuer's audited consolidated financial statements; and (ii) the issuer's business activities are substantially conducted in mainland China, or its principal place of business are located in mainland China, or the senior managers in charge of its business operations and management are mostly Chinese citizens or domiciled in mainland China. The Overseas Listing Trial Measures also provides that the determination for indirect overseas offering shall follow the "substance-over-formality" principle. In addition, at the press conference held for these new regulations on the same day, officials from the CSRC clarified that the domestic companies in mainland China whose securities have already been listed overseas on or before the effective date of the Overseas Listing Trial Measures (i.e., March 31, 2023) are not required to complete the filling procedures immediately, but they must file with the CSRC if they are involved in matters that are subject to the filing procedures, such as follow-on securities offerings conducted in overseas markets in the future. As the Overseas Listing Trial Measures are relatively new, it remains unclear on how these measures will be interpreted and implemented by CSRC and the relevant mainland China's governmental authorities, how mainland China's governmental authorities will regulate overseas listing in general. Given the uncertainty of interpretation and implementation of the Overseas Listing Trial Measures and our global operations, substantial uncertainties remain and we could not rule out the possibility that we may be required to file the relevant documents with the CSRC in connection with our proposed offerings and listings outside mainland China in the future.

Relatedly, on December 27, 2021, the NDRC and the Ministry of Finance, or the MOC, jointly issued the Special Administrative Measures (Negative List) for the Access of Foreign Investment (Edition 2021), or the 2021 Negative List, which became effective on January 1, 2022. Pursuant to the Special Administrative Measures, if a domestic company engaging in the prohibited business stipulated in the 2021 Negative List seeks an overseas offering and listing, it shall obtain the approval from the competent governmental authorities. Besides, the foreign investors of the company shall not be involved in the company's operation and management, and their shareholding percentages shall be subject, mutatis mutandis, to the relevant regulations on the domestic securities investments by foreign investors. As the 2021 Negative List is relatively new, there remain substantial uncertainties as to the interpretation and implementation of these new requirements, and it is unclear as to whether and to what extent listed companies like us will be subject to these new requirements. If we are required to comply with these requirements and fail to do so on a timely basis, if at all, our business operation, financial conditions and business prospect in mainland China may be adversely and materially affected.

We may inadvertently conclude that such permissions, approvals or filings are not required, or applicable laws, regulations, or interpretations may change and we are required to complete the filing procedures, obtain permission or approval from CSRC or the relevant mainland China's governmental authorities for the offering and any follow-on offering in the future. In addition, we cannot assure you that any new rules or regulations promulgated in the future will not impose additional requirements on us. If it is determined in the future that filing from the CSRC or approval from other regulatory authorities or other procedures, including the cybersecurity review under the enacted version of the revised Measures for Cybersecurity Review and the Regulations on the Administration of Cyber Data Security (Draft for Comments), or the Draft Cyber Data Security Regulations, are required for our offerings or follow-on financing activities (if any) outside mainland China, it is uncertain whether we can or how long it will take us to obtain such approval or complete such filing or review procedures and any such approval or filing could be rescinded or rejected. Any failure to obtain or delay in obtaining such approval or completing such filing procedures for our offerings or follow-on financing activities (if any) outside mainland China, or a rescission of any such approval or filing if obtained by us, would subject us to sanctions by the CSRC or other regulatory authorities of mainland China for failure to complete the CSRC filing or seek approval from other government authorization for our offerings outside mainland China. These regulatory authorities may order rectification, issue warnings, impose fines and penalties on our operations in mainland China and on directly responsible person-in-charge, other directly responsible persons of domestic companies in mainland China, the controlling shareholders and the actual controllers of such domestic companies in mainland China, limit our ability to pay dividends outside of mainland China, limit our operating privileges in mainland China, delay or restrict the repatriation of the proceeds from our offshore offerings into mainland China or take other actions that could materially and adversely affect our business, financial condition, results of operations, and prospects, as well as the trading price of our listed securities. The CSRC or other regulatory authorities of mainland China also may take actions requiring us, or making it advisable for us, to halt our offerings or follow-on financing activities (if any) outside mainland China before settlement and delivery of the shares offered. Consequently, if investors engage in market trading or other activities in anticipation of and prior to settlement and delivery, they do so at the risk that settlement and delivery may not occur. In addition, if the CSRC or other regulatory authorities later promulgate new rules or explanations requiring that we obtain their approvals or accomplish the required filing or other regulatory procedures for our prior offerings or follow-on financing activities (if any) outside mainland China, we may be unable to obtain a waiver of such approval requirements, if and when procedures are established to obtain such a waiver. Any uncertainties or negative publicity regarding such approval requirement could materially and adversely affect our business, prospects, financial condition, reputation, and the trading price of our listed securities.

***It is not certain if we will be classified as a Singapore tax resident.***

Under the Singapore Income Tax Act, a company established outside Singapore but whose governing body, being the board of directors, usually exercises de facto control and management of its business in Singapore could be considered a tax resident in Singapore. However, such control and management of the business should not be deemed to be in Singapore if physical board meetings are mainly conducted outside of Singapore. Where board resolutions are passed in the form of written consent signed by the directors each acting in their own jurisdictions, or where the board meetings are held by teleconference or videoconference, it is possible that the place of de facto control and management will be considered to be where the majority of the board are located when they sign such consent or attend such conferences.

We believe that we are not a Singapore tax resident for Singapore income tax purposes. However, our tax residence status is subject to determination by the Inland Revenue Authority of Singapore, or IRAS, and uncertainties remain with respect to the interpretation of the term “control and management” for the purposes of the Singapore Income Tax Act. If IRAS determines that we are a Singapore tax resident for Singapore income tax purposes, the portion of our single company income on an unconsolidated basis that is received or deemed by the Singapore Income Tax Act to be received in Singapore, where applicable, may be subject to Singapore income tax at the prevailing tax rate of 17% before applicable income tax exemptions or relief, where Bigo Singapore is entitled to enjoy the beneficial tax rate of 5% as the Incentive for the years 2018 through 2027. If we are regarded as a Singapore tax resident, any dividends received or deemed received by us in Singapore from subsidiaries located in a foreign jurisdiction with a rate of income tax or tax of a similar nature of no more than 15% may generally be subject to additional Singapore income tax where there is no other applicable tax treaty between such foreign jurisdiction and Singapore. Income is considered to have been received in Singapore when it is: (i) remitted to, transmitted or brought into Singapore; (ii) applied in or towards satisfaction of any debt incurred in respect of a trade or business carried on in Singapore; or (iii) applied to purchase any movable property that is brought into Singapore. In addition, as Singapore does not impose withholding tax on dividends declared by Singapore resident companies, if we are considered a Singapore tax resident, dividends paid to the holders of our common shares and ADSs will not be subject to withholding tax in Singapore. Regardless of whether or not we are regarded as a Singapore tax resident, holders of our common shares or the ADSs who are not Singapore tax residents would generally not be subject to Singapore income tax on gains derived from the disposal of our common shares or the ADSs if such shareholders do not maintain a permanent establishment in Singapore, to which the disposition gains may be effectively connected, and the entire process (including the negotiation, deliberation, execution of the acquisition and sale, etc.) leading up to the actual acquisition and sale of the ADSs or our common shares is performed outside of Singapore. For Singapore resident shareholders, if the gain from disposal of our common shares or the ADSs is considered by IRAS as income in nature, such gain will generally be subject to Singapore income tax, and not taxable in Singapore if the gain is considered by IRAS as capital gains in nature. See “Item 10. Additional Information—Taxation—Singapore Taxation.”

***Uncertainties in the interpretation and enforcement of laws and regulations of mainland China could limit the legal protections available to you and us.***

The legal system of mainland China is based on written statutes and prior court decisions have limited value as precedents. Each of our subsidiaries in mainland China is a foreign-invested enterprise and is subject to laws and regulations applicable to foreign-invested enterprises as well as various laws and regulations of mainland China generally applicable to companies incorporated therein. However, since these laws and regulations are relatively new and the legal system of mainland China continues to rapidly evolve, the interpretations of many laws, regulations and rules are not always uniform and enforcement of these laws, regulations and rules involves uncertainties.

From time to time, we may have to resort to administrative and court proceedings to enforce our legal rights. However, since mainland China’s administrative and court authorities have significant discretion in interpreting and implementing statutory and contractual terms, it may be more difficult to evaluate the outcome of administrative and court proceedings and the level of legal protection we enjoy than in more developed legal systems. Furthermore, the legal system of mainland China is based in part on government policies and internal rules (some of which are not published in a timely manner or at all) that may have retroactive effect. As a result, we may not be aware of our violation of these policies and rules until sometime after the violation. Such uncertainties, including uncertainty over the scope and effect of our contractual, property (including intellectual property) and procedural rights, could materially and adversely affect our business and impede our ability to continue our operations.

***We may be adversely affected by the complexity, uncertainties and changes in regulation of internet business and companies in mainland China.***

The mainland China’s government extensively regulates the internet industry, including foreign ownership of, and the licensing and permit requirements pertaining to, companies in the internet industry. These internet-related laws and regulations are relatively new and evolving, and their interpretation and enforcement involve significant uncertainty. As a result, in certain circumstances it may be difficult to determine what actions or omissions may be deemed to be in violations of applicable laws and regulations. Issues, risks and uncertainties relating to regulation of the internet business in mainland China include, but are not limited to, the following:

- We only have contractual arrangements, but no equity ownership, with the variable interest entities that own our platforms in mainland China due to the restriction of foreign investment in businesses providing value-added telecommunication services in mainland China, including internet content provision services. If any of the variable interest entities breaches its contractual arrangements with us and no longer satisfies the conditions for us to consolidate under U.S. GAAP, this may significantly disrupt our business, subject us to sanctions, compromise enforceability of related contractual arrangements, or have other harmful effects on us.

- There are uncertainties relating to the regulation of the internet business in mainland China, including evolving licensing practices and the requirement for real-name registrations. Permits, licenses or operations at some of our subsidiaries and the variable interest entities levels may be subject to challenge, or we may fail to obtain permits or licenses that may be deemed necessary for our operations or we may not be able to obtain or renew certain permits or licenses. See “—Risks Related to Our Corporate Structure—If the variable interest entities fail to obtain and maintain the requisite licenses and approvals required under the complex regulatory environment for internet-based businesses in mainland China, our business, financial condition and results of operations in mainland China may be adversely affected” and “Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations.”
- The evolving regulatory system of mainland China for the internet industry may lead to the establishment of new regulatory agencies. For example, in May 2011, the State Council announced the establishment of a new department, the State Internet Information Office (with the involvement of the State Council Information Office, or the SCIO, the MIIT and the Ministry of Public Security). The primary role of this new agency is to facilitate the policy-making and legislative development in this field to direct and coordinate with the relevant departments in connection with online content administration and to deal with cross-ministry regulatory matters in relation to the internet industry. We are unable to determine what policies this new agency or any new agencies to be established in the future may have or how they may interpret existing laws, regulations and policies and how they may affect us. Further, new laws, regulations or policies may be promulgated or announced that will regulate internet activities, including online video and online advertising businesses. If these new laws, regulations or policies are promulgated, additional licenses may be required for our operations in mainland China. If our operations in mainland China do not comply with these new regulations after they become effective, or if we fail to obtain any licenses required under these new laws and regulations, we could be subject to penalties.

On July 13, 2006, the MIIT issued the Notice of the Ministry of Information Industry on Intensifying the Administration of Foreign Investment in Value-added Telecommunications Services. This notice prohibits domestic telecommunication service providers from leasing, transferring or selling telecommunication business operating licenses to any foreign investor in any form, or providing any resources, sites or facilities to any foreign investor for their illegal operation of a telecommunication business in mainland China. According to this notice, either the holder of a value-added telecommunication business operating license or its shareholders must be the registered holders of the domain names or trademarks used by such license holders in their provision of value-added telecommunication services. The notice also requires each license holder to have the necessary facilities, including servers, for its approved business operations and to maintain such facilities in the regions covered by its license. Currently, all contracts with telecommunication carriers and other service providers to host the servers used in our business within mainland China were entered into by the variable interest entities, and such arrangements are in compliance with this notice. The variable interest entities also own the related domain names and trademarks, and hold the ICP License necessary to conduct our operations in mainland China.

The interpretation and application of existing laws, regulations and policies of mainland China and possible new laws, regulations or policies relating to the internet industry in mainland China have created substantial uncertainties regarding the legality of existing and future foreign investments in, and the businesses and activities of, internet businesses in mainland China, including our business. There are also risks that we may be found to violate the existing or future laws and regulations given the uncertainty and complexity of mainland China’s regulation of internet business.

***Under the PRC enterprise income tax law, we may be classified as a PRC “resident enterprise,” which could result in unfavorable tax consequences to us and our shareholders and have a material adverse effect on our results of operations and the value of your investment.***

Under the PRC Enterprise Income Tax Law that became effective on January 1, 2008 and respectively amended on February 24, 2017 and December 29, 2018, an enterprise established outside mainland China with “de facto management bodies” within mainland China is considered a “resident enterprise” for PRC enterprise income tax purposes and is generally subject to a uniform 25% enterprise income tax rate on its worldwide income. On April 22, 2009, the State Administration of Taxation, or the SAT, issued the Notice Regarding the Determination of Chinese-Controlled Overseas Incorporated Enterprises as PRC Tax Resident Enterprise on the Basis of De Facto Management Bodies, or SAT Circular 82, which provides certain specific criteria for determining whether the “de facto management body” of a PRC-controlled enterprise that is incorporated offshore is located in mainland China. Further to SAT Circular 82, on August 3, 2011, the SAT issued the Administrative Measures of Enterprise Income Tax of Chinese-Controlled Offshore Incorporated Resident Enterprises (Trial), or SAT Bulletin 45, which became effective on September 1, 2011, to provide more guidance on the implementation of SAT Circular 82. SAT Bulletin 45 clarified certain issues in the areas of resident status determination, post-determination administration and competent tax authorities.

According to SAT Circular 82, an offshore incorporated enterprise controlled by a PRC enterprise or a PRC enterprise group will be considered as a PRC tax resident enterprise by virtue of having its “de facto management body” in mainland China and will be subject to PRC enterprise income tax on its worldwide income only if all of the following conditions are met: (a) the senior management and core management departments in charge of its daily operations function have their presence mainly in mainland China; (b) its financial and human resources decisions are subject to determination or approval by persons or bodies in mainland China; (c) its major assets, accounting books, company seals, and minutes and files of its board and shareholders’ meetings are located or kept in mainland China; and (d) more than half of the enterprise’s directors or senior management with voting rights habitually reside in mainland China. SAT Bulletin 45 further clarifies the resident status determination, post-determination administration, as well as competent tax authorities.

Although SAT Circular 82 and SAT Bulletin 45 only apply to offshore incorporated enterprises controlled by PRC enterprises or PRC enterprise group instead of those controlled by PRC individuals or foreigners, the determination criteria set forth therein may reflect SAT’s general position on how the term “de facto management body” could be applied in determining the tax resident status of offshore enterprises, regardless of whether they are controlled by PRC enterprises, individuals or foreigners.

We believe that none of JOYY Inc. or its subsidiaries outside of mainland China is a PRC resident enterprise for PRC tax purposes. JOYY Inc. is not controlled by an enterprise or enterprise group of mainland China and we do not believe that JOYY Inc. meets all of the conditions above. JOYY Inc. is a company incorporated outside the mainland China. As a holding company, its key assets are its ownership interests in its subsidiaries, and its key assets are located, and its records (including the resolutions of its board of directors and the resolutions of its shareholders) are maintained, outside the mainland China. For the same reasons, we believe our other subsidiaries outside of mainland China are not PRC resident enterprises either. Therefore, we believe that we should not be treated as a “resident enterprise” for PRC tax purposes even if the standards for “de facto management body” prescribed in the SAT Circular 82 are applicable to us.

However, it is possible that the mainland China’s tax authorities may take a different view. If the mainland China’s tax authorities determine that our Cayman Islands holding company is a PRC resident enterprise for PRC enterprise income tax purposes, then our world-wide income could be subject to PRC tax at a rate of 25%, which could materially reduce our net income. In addition, we will also be subject to PRC enterprise income tax reporting obligations.

Although dividends paid by one PRC tax resident to another PRC tax resident should qualify as “tax-exempt income” under the enterprise income tax law, we cannot assure you that dividends by our subsidiaries in mainland China to our Cayman Islands holding company will not be subject to a 10% withholding tax, as the foreign exchange control authorities, which enforce the withholding tax on dividends, and the tax authorities of mainland China have not yet issued guidance with respect to the processing of outbound remittances to entities that are treated as resident enterprises for PRC enterprise income tax purposes.

***We face uncertainties on the reporting and consequences on private equity financing transactions, private share transfers and share exchange involving the transfer of shares in our company by non-resident investors.***

On February 3, 2015, the PRC State Administration of Taxation issued the Notice on Several Issues Concerning Enterprise Income Tax for Indirect Share Transfer by Non-PRC Resident Enterprises, or the SAT Circular 7, which partially replaced and supplemented previous rules under the Notice on Strengthening Administration of Enterprise Income Tax for Share Transfers by Non-PRC Resident Enterprises issued by the PRC State Administration of Taxation on December 10, 2009, with retroactive effect from January 1, 2008, or SAT Circular 698. Pursuant to SAT Circular 7, an “indirect transfer” of assets of a PRC resident enterprise, including equity interests in a PRC resident enterprise, by non-PRC resident enterprises may be re-characterized and treated as a direct transfer of PRC taxable properties, if such transaction arrangement lacks reasonable commercial purpose and was established for the purpose of reducing, avoiding or deferring PRC enterprise income tax. As a result, gains derived from such indirect transfer may be subject to PRC enterprise income tax, and tax filing or withholding obligations may be triggered, depending on the nature of the PRC taxable properties being transferred. According to SAT Circular 7, “PRC taxable properties” include assets of a PRC establishment or place of business, real properties in mainland China, and equity investments in PRC resident enterprises, in respect of which gains from their transfer by a direct holder, being a non-PRC resident enterprise, would be subject to PRC enterprise income taxes. When determining if there is a “reasonable commercial purpose” of the transaction arrangement, features to be taken into consideration include: whether the main value of the equity interest of the relevant offshore enterprise derives from PRC taxable properties; whether the assets of the relevant offshore enterprise mainly consists of direct or indirect investment in mainland China or if its income mainly derives from mainland China; whether the offshore enterprise and its subsidiaries directly or indirectly holding PRC taxable properties have real commercial nature which is evidenced by their actual function and risk exposure; the duration of existence of the business model and organizational structure; the replicability of the transaction by direct transfer of PRC taxable properties; and the tax situation of such indirect transfer and applicable tax treaties or similar arrangements. In respect of an indirect offshore transfer of assets of a PRC establishment or place of business of a foreign enterprise, the resulting gain is to be included with the annual enterprise filing of the PRC establishment or place of business being transferred, and would consequently be subject to PRC enterprise income tax at a rate of 25%. Where the underlying transfer relates to PRC real properties or to equity investments in a PRC resident enterprise, which is not related to a PRC establishment or place of business of a non-resident enterprise, a PRC enterprise income tax at a rate of 10% would apply, subject to available preferential tax treatment under applicable tax treaties or similar arrangements, and the party who is obligated to make the transfer payments has the withholding obligation. Where the payor fails to withhold any or sufficient tax, the transferor shall declare and pay such tax to the competent tax authority by itself within the statutory time limit. Late payment of applicable tax will subject the transferor to default interest. Circular 7 does not apply to transactions of sale of shares by investors through a public stock exchange where such shares were acquired from a transaction through a public stock exchange. On October 17, 2017, SAT issued the Announcement on Issues Relating to Withholding at Source of Income Tax of Non-resident Enterprises, or SAT Circular 37, effective December 2017, superseded the Non-resident Enterprises Measures and SAT Circular 698 as a whole and partially amended some provisions in SAT Circular 7. SAT Circular 37 purports to clarify certain issues by providing the definition of equity transfer income and tax basis, the foreign exchange rate to be used in the calculation of withholding amount, and the date of occurrence of the withholding obligation. Specifically, SAT Circular 37 provides that where the transfer income subject to withholding at source is derived by a non-PRC resident enterprise in instalments, the instalments may first be treated as recovery of costs of previous investments. Upon recovery of all costs, the tax amount to be withheld must then be computed and withheld. Currently, the sale of shares by investors through a public stock exchange where such shares were acquired from a transaction through a public stock exchange is not considered an “indirect transfer” subject to the rules described above.

We cannot assure you that the tax authorities of mainland China will not, at their discretion, adjust any capital gains and impose tax return filing and withholding or tax payment obligations on the transferors and transferees of our shares acquired or sold outside a public stock exchange, while our subsidiaries in mainland China may be requested to assist in the filing. Any PRC tax imposed on a transfer of our shares or any adjustment of such gains would cause us to incur additional costs and may have a negative impact on the value of your investment in our company.

***If our preferential tax treatments are revoked or become unavailable or if the calculation of our tax liability is successfully challenged by the relevant tax authorities, we may be required to pay tax, interest and penalties in excess of our tax provisions, and our financial condition and results of operations could be materially and adversely affected.***

According to the applicable provisions under Singapore law, corporations that are engaging in new high-value-added projects, expanding or upgrading their operations, or undertaking incremental activities after their pioneer period may apply for their profits to be taxed at a reduced rate of 5%, at minimum, for an initial period of up to ten years. The total tax relief period for each qualifying project or activity is subject to a maximum of 40 years (inclusive of the post-pioneer relief period previously granted, if applicable). Bigo Technology Pte. Ltd., or Bigo Singapore, was approved for such preferential tax treatment, enabling it to enjoy the preferential tax rate of 5% with the valid period from 2018 to 2022. Bigo Singapore renewed its qualification in 2022 and is entitled to continue to enjoy such preferential tax treatment from 2023 to 2027.

In addition, the mainland China's government has provided various tax incentives to our subsidiaries in mainland China, which include reduced enterprise income tax rates. For example, under the PRC Enterprise Income Tax Law, or the EIT Law, which came into effect on January 1, 2008 and subsequently amended on February 24, 2017 and on December 29, 2018, respectively, the statutory enterprise income tax rate is 25%. Certain subsidiaries and VIEs in mainland China, including Guangzhou Huanju Shidai Information Technology Co., Ltd., or Guangzhou Huanju Shidai, Guangzhou BaiGuoYuan and Guangzhou BaiGuoYuan Information Technology Co., Ltd., or BaiGuoYuan Technology, among others, are qualified HNTEs and enjoy a reduced tax rate of 15% for the year ended December 31, 2020, 2021 and 2022. An entity could re-apply for the HNTE certificate when the prior certificate expires.

However, if any of the abovementioned companies fails to maintain its qualification for preferential tax treatments, its applicable enterprise income tax rate may increase to the applicable standard tax rate, which could materially and adversely affect our financial condition and results of operations.

***Mainland China's M&A Rules and certain other regulations of mainland China establish complex procedures for certain acquisitions of companies in mainland China by foreign investors, which could make it more difficult for us to pursue growth through acquisitions in mainland China.***

Six regulatory agencies of mainland China promulgated regulations effective on September 8, 2006, subsequently amended on June 22, 2009, that are commonly referred to as the M&A Rules. See "Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulations on Overseas Listing by Domestic Companies." The M&A Rules establish procedures and requirements that could make some acquisitions of companies in mainland China by foreign investors more time-consuming and complex, including requirements in some instances that the MOFCOM be notified in advance of any change-of-control transaction in which a foreign investor takes control of a domestic enterprise in mainland China or a foreign company with substantial operations in mainland China, if certain thresholds under the Provisions on Thresholds for Prior Notification of Concentrations of Undertakings, issued by the State Council on August 3, 2008 and amended on September 18, 2018, are triggered. Moreover, the Anti-Monopoly Law promulgated by the Standing Committee of the National People's Congress on August 30, 2007, which became effective on August 1, 2008 and was amended on June 24, 2022 and came into effect on August 1, 2022, requires that transactions which are deemed concentrations and involve parties with specified turnover thresholds (for example, during the previous fiscal year, (i) the total global turnover of all operators participating in the transaction exceeds RMB10 billion and at least two of these operators each had a turnover of more than RMB400 million within mainland China, or (ii) the total turnover within mainland China of all the operators participating in the concentration exceeded RMB2 billion and at least two of these operators each had a turnover of more than RMB400 million within mainland China) must be cleared by the MOFCOM before they can be completed. In addition, on February 3, 2011, the General Office of the State Council promulgated a Notice on Establishing the Security Review System for Mergers and Acquisitions of Domestic Enterprises by Foreign Investors, or the Circular No. 6, which officially established a security review system for mergers and acquisitions of domestic enterprises by foreign investors. According to the Rules on Implementation of Security Review System for the Merger and Acquisition of Domestic Enterprises by Foreign Investors issued by the MOFCOM on August 25, 2011 and became effective on September 1, 2011 and Circular No. 6, a security review is required for mergers and acquisitions by foreign investors having "national defense and security" concerns and mergers and acquisitions by which foreign investors may acquire the "de facto control" of domestic enterprises with "national security" concerns, and the regulations prohibit any activities attempting to bypass such security review, including by structuring the transaction through a proxy or contractual control arrangement. Furthermore, on December 19, 2020, the NDRC and the MOFCOM promulgated the Measures for Security Review of Foreign Investment, or the Foreign Investment Security Review Measures, which took effect on January 18, 2021. Under the Foreign Investment Security Review Measures, investment in certain key areas which results in acquiring the actual control of the assets is required to obtain approval from designated governmental authorities in advance.

In the future, we may grow our business by acquiring complementary businesses. Complying with the requirements of the above-mentioned regulations and other relevant rules to complete such transactions could be time-consuming, and any required approval processes, including obtaining approval from the MOFCOM or its local counterparts, may delay or inhibit our ability to complete such transactions. As the Foreign Investment Security Review Measures was relatively new, there are great uncertainties with respect to its interpretation and implementation. It is unclear whether our business would be deemed to be in an industry that raises “national defense and security” or “national security” concerns. If our business is in an industry subject to the security review, in which case our future acquisitions in mainland China, including those by way of entering into contractual control arrangements with target entities, may be closely scrutinized or prohibited. Our ability to expand our business or maintain or expand our market share in mainland China through future acquisitions would as such be adversely affected.

***Regulations of mainland China in relation to offshore investment activities by mainland China residents and direct investment and loans by offshore holding companies to entities in mainland China may delay or limit our ability to effectively use the proceeds of public offerings, such as limiting the ability of our subsidiaries in mainland China to distribute profits to us and limiting our ability to make additional capital contributions or loans to our subsidiaries in mainland China or otherwise expose us to liability and penalties under law of mainland China.***

We are an offshore holding company conducting part of our operations in mainland China through our subsidiaries in mainland China and the variable interest entities. We may make loans to our subsidiaries in mainland China and the variable interest entities, or we may make additional capital contributions to our subsidiaries in mainland China and our subsidiaries in mainland China may distribute profits to us. Any capital contributions or loans that we, as an offshore entity, make to our subsidiaries in mainland China, including from the proceeds of our public offerings, and the distribution of profits by our subsidiaries in mainland China are subject to regulations of mainland China. For example, none of our loans to a subsidiary in mainland China can exceed the statutory limits, and the loans must be registered with the local branch of SAFE. Our capital contributions to our mainland China subsidiaries are subject to the requirement of making necessary registration with competent governmental authorities in mainland China.

In August 2008, the SAFE issued the Circular on the Relevant Operating Issues Concerning the Improvement of the Administration of the Payment and Settlement of Foreign Currency Capital of Foreign-Invested Enterprises, or the SAFE Circular 142, regulating the conversion by a foreign-invested enterprise of foreign currency-registered capital into RMB by restricting how the converted RMB may be used. In addition, the SAFE promulgated Circular 45, or the SAFE Circular 45, on November 9, 2011 in order to clarify the application of the SAFE Circular 142, which was repealed on March 19, 2015. Under the SAFE Circular 142 and the SAFE Circular 45, the RMB capital converted from foreign currency registered capital of a foreign-invested enterprise may only be used for purposes within the business scope approved by the applicable government authority and may not be used for equity investments within mainland China. In addition, the SAFE strengthened its oversight of the flow and use of the RMB capital converted from foreign currency registered capital of foreign-invested enterprises. The use of such RMB capital may not be changed without the SAFE’s approval, and such RMB capital may not in any case be used to repay RMB loans if the proceeds of such loans have not been used.

Later on, the SAFE issued the Circular on the Relevant Issues Concerning the Launch of Reforming Trial of the Administration Model of the Settlement of Foreign Currency Capital of Foreign-Invested Enterprises in Certain Areas on July 4, 2014, or the SAFE Circular 36. The SAFE Circular 36 suspends the application of the SAFE Circular 142 in certain areas and allows a foreign-invested enterprise registered in such areas to use the RMB capital converted from foreign currency registered capital for equity investments within the scope of business, which will be regarded as the reinvestment of foreign-invested enterprise. On March 30, 2015, the SAFE issued the Circular on the Reforming of the Management Method of the Settlement of Foreign Currency Capital of Foreign-Invested Enterprises, or the SAFE Circular 19, which came into effect on June 1, 2015, and replaced the SAFE Circular 142 and the SAFE Circular 36. Under the SAFE Circular 19, a foreign-invested enterprise, within the scope of business, may also choose to convert its registered capital from foreign currency to RMB on a discretionary basis, and the RMB capital so converted can be used for equity investments within mainland China, which will be regarded as the reinvestment of foreign-invested enterprise.

The Notice of the SAFE on Reforming and Standardizing the Foreign Exchange Settlement Management Policy of Capital Account, promulgated by the SAFE and came into effect on June 9, 2016 provides that discretionary foreign exchange settlement applies to foreign exchange capital, foreign debt offering proceeds and remitted foreign listing proceeds, and the corresponding RMB capital converted from foreign exchange are not restricted from extending loans to related parties or repaying the inter-company loans (including advances by third parties). In January 2017, the SAFE promulgated the Circular on Further Improving Reform of Foreign Exchange Administration and Optimizing Genuineness and Compliance Verification, or the Circular 3, which stipulates several capital control measures with respect to the outbound remittance of profit from domestic entities to offshore entities, including (i) under the principle of genuine transaction, banks shall check board resolutions regarding profit distribution, the original version of tax filing records and audited financial statements; and (ii) domestic entities shall hold income to account for previous years' losses before remitting the profits. Moreover, pursuant to the Circular 3, domestic entities shall make detailed explanations of the sources of capital and utilization arrangements, and provide board resolutions, contracts and other proof when completing the registration procedures in connection with an outbound investment.

In addition, the PRC State Administration of Foreign Exchange, or SAFE, has promulgated regulations, including the Notice on Relevant Issues Relating to Domestic Residents' Investment and Financing and Round-Trip Investment through Special Purpose Vehicles, or SAFE Circular No. 37, effective on July 4, 2014, and its appendixes, that require PRC residents, including institutions and individuals of mainland China, to register with local branches of SAFE in connection with their direct establishment or indirect control of an offshore entity, for the purpose of overseas investment and financing, with such PRC residents' legally owned assets or equity interests in domestic enterprises or offshore assets or interests, referred to in SAFE Circular No. 37 as a "special purpose vehicle." SAFE Circular No. 37 further requires amendment to the registration in the event of any significant changes with respect to the special purpose vehicle, such as increase or decrease of capital contributed by individuals of mainland China, share transfer or exchange, merger, division or other material event. In the event that a shareholder of mainland China holding interests in a special purpose vehicle fails to fulfill the required SAFE registration, the subsidiaries of that special purpose vehicle in mainland China may be prohibited from making profit distributions to the offshore parent and from carrying out subsequent cross-border foreign exchange activities, and the special purpose vehicle may be restricted in their ability to contribute additional capital into its subsidiary in mainland China. Further, failure to comply with the various SAFE registration requirements described above could result in liability under laws of mainland China for foreign exchange evasion, including (i) the requirement by SAFE to return the foreign exchange remitted overseas within a period specified by SAFE, with a fine of up to 30% of the total amount of foreign exchange remitted overseas and deemed to have been evasive and (ii) in circumstances involving serious violations, a fine of no less than 30% of and up to the total amount of remitted foreign exchange deemed evasive. Furthermore, the persons-in-charge and other persons at our subsidiaries in mainland China who are held directly liable for the violations may be subject to criminal sanctions.

Since there remains uncertainty with respect to the interpretation and implementation of Circular No. 37, and we cannot predict how such SAFE regulations will affect our business operations. For example, our present and prospective ability of subsidiaries in mainland China to conduct foreign exchange activities, such as the remittance of dividends and foreign currency-denominated borrowings, may be subject to compliance with the SAFE regulations by our PRC resident shareholders. In addition, in some cases, we may have little control over either our present or prospective direct or indirect PRC resident shareholders or the outcome of such registration procedures. A failure by our current or future PRC resident shareholders to comply with the SAFE regulations, including, but not limited to, any delay in subsequent filings, could subject us to fines or other legal sanctions, restrict our cross-border investment activities, limit our subsidiary's ability to make distributions or pay dividends or affect our ownership structure, which could adversely affect our business and prospects.

On February 15, 2012, SAFE promulgated the Notices on Issues Concerning the Foreign Exchange Administration for Domestic Individuals Participating in Stock Incentive Plans of Overseas Publicly-Listed Companies, or the Stock Option Rules. Under the Stock Option Rules and other relevant rules and regulations, PRC residents who participate in stock incentive plan in an overseas publicly-listed company are required to register with SAFE or its local branches and complete certain other procedures. Participants of a stock incentive plan who are PRC residents must retain a qualified PRC agent, which could be a subsidiary within mainland China of such overseas publicly listed company or another qualified institution selected by such subsidiary within mainland China, to conduct the SAFE registration and other procedures with respect to the stock incentive plan on behalf of its participants. Such participants must also retain an overseas entrusted institution to handle matters in connection with their exercise of stock options, the purchase and sale of corresponding stocks or interests and fund transfers. In addition, the PRC agent is required to amend the SAFE registration with respect to the stock incentive plan if there is any material change to the stock incentive plan, the PRC agent or the overseas entrusted institution or other material changes. We and our employees in mainland China who have been granted stock options, restricted shares and restricted share units are subject to these regulations, and are preparing to complete such SAFE registrations. Failure of our stock option holders, restricted shareholders or restricted share units holders in mainland China to complete their SAFE registrations may subject these PRC residents to fines and legal sanctions and may also limit our ability to contribute additional capital into our subsidiaries in mainland China, limited the ability of our subsidiaries in mainland China to distribute dividends to us, or otherwise materially and adversely affect our business.

In light of the various requirements imposed by regulations of mainland China on loans to and direct investment in entities in mainland China by offshore holding companies and offshore investment activities by PRC residents, we cannot assure you that we will be able to complete the necessary registration or obtain the necessary approval on a timely basis, or at all. If we fail to complete the necessary registration or obtain the necessary approval, our ability to make loans or equity contributions to our subsidiaries in mainland China and the ability of our subsidiaries in mainland China to distribute profits to us may be negatively affected, which could adversely affect the liquidity and the ability of our subsidiaries in mainland China to fund their working capital and expansion projects and meet their obligations and commitments.

***Our subsidiaries and the variable interest entities in mainland China are subject to restrictions on paying dividends or making other payments to us, which may restrict our ability to satisfy our liquidity requirements.***

We are a holding company incorporated in the Cayman Islands. We rely on proceeds from corporate transactions such as the sales of Huya and YY Live, and dividends from our subsidiaries as well as consulting and other fees paid to us by the variable interest entities for our cash and financing requirements, such as the funds necessary to pay dividends and other cash distributions to our shareholders, including holders of our ADSs, and service any debt we may incur. Current regulations of mainland China permit our subsidiaries in mainland China to pay dividends to us only out of their accumulated after-tax profits upon satisfaction of relevant statutory condition and procedures, if any, determined in accordance with Chinese accounting standards and regulations. In addition, each of our subsidiaries in mainland China is required to set aside at least 10% of its accumulated profits each year, if any, to fund certain reserve funds until the total amount set aside reaches 50% of its registered capital. As of December 31, 2022, appropriations to statutory reserves amounting to US\$32.5 million were made by thirty-two variable interest entities. These reserves are not distributable as cash dividends. Furthermore, if our subsidiaries in mainland China and the variable interest entities incur debt on their own behalf in the future, the instruments governing the debt may restrict their ability to pay dividends or make other payments to us, which may restrict our ability to satisfy our liquidity requirements. Our capital expenditures are primarily used to purchase office space.

In addition, the EIT Law, and its implementation rules provide that withholding tax rate of 10% will be applicable to dividends payable by companies in mainland China to non-mainland-China-resident enterprises unless otherwise exempted or reduced according to treaties or arrangements between the central government of mainland China and governments of other countries or regions where the non-mainland-China-resident enterprises are incorporated.

With the sale of YY Live to Baidu being substantially completed with certain matters, including necessary regulatory approvals from government authorities, remaining to be completed in the future, the majority of our revenue and operating cash are currently generated from subsidiaries outside mainland China, and our reliance on dividends from subsidiaries in mainland China would be limited.

***It may be difficult for overseas regulators to conduct investigation or collect evidence within mainland China.***

Shareholder claims or regulatory investigation that are common in the United States generally are difficult to pursue as a matter of law or practicality in mainland China. For example, in mainland China, there are significant legal and other obstacles to providing information needed for regulatory investigations or litigation initiated outside mainland China. Although the authorities in mainland China may establish a regulatory cooperation mechanism with the securities regulatory authorities of another country or region to implement cross-border supervision and administration, such cooperation with the securities regulatory authorities in the United States may not be efficient in the absence of mutual and practical cooperation mechanism. Furthermore, according to Article 177 of the PRC Securities Law, or Article 177, which became effective in March 2020, no overseas securities regulator is allowed to directly conduct investigation or evidence collection activities within the territory of mainland China and without the consent by the mainland China's securities regulatory authorities and the other competent governmental agencies, no entity or individual may provide documents or materials related to securities business to overseas parties. In addition, the Data Security Law and the Personal Information Protection Law provide that no entity or individual within the territory of mainland China shall provide any foreign judicial body and law enforcement body with any data or any personal information stored within the territory of mainland China without the approval of the competent governmental authority of mainland China. While detailed interpretation of or implementation rules under these laws have yet to be promulgated, the inability for an overseas securities regulator to directly conduct investigation or evidence collection activities within mainland China, and restrictions on the provision of documents, materials, data and personal information by entities and individuals in mainland China to an overseas securities regulator, foreign judicial body or foreign law enforcement body may further increase difficulties faced by you in protecting your interests.

**Risks Related to Our Corporate Structure**

***If the mainland China's government finds that the structure we have adopted for our business operations in mainland China does not comply with laws and regulations of mainland China, or if these laws or regulations or interpretations of existing laws or regulations change in the future, we could be subject to severe penalties, including the shutting down of our platforms and our business operations currently operated in mainland China.***

Foreign ownership of internet-based businesses is subject to significant restrictions under current laws and regulations of mainland China. The mainland China's government regulates internet access, the distribution of online information and the conduct of online commerce through strict business licensing requirements and other government regulations. These laws and regulations also limit foreign ownership in companies in mainland China that provide internet information distribution services. Specifically, foreign ownership in an internet information provider or other value-added telecommunication service providers may not exceed 50%. In addition, according to the Several Opinions on the Introduction of Foreign Investment in the Cultural Industry promulgated by the Ministry of Culture, or the MOC, currently known as the Ministry of Culture and Tourism, the State Administration of Radio, Film and Television, or the SARFT, the General Administration of Press and Publication, or the GAPP, currently known as the State Administration of Press Publication, Radio, Film and Television after combination of SARFT and GAPP, the National Development and Reform Commission and the Ministry of Commerce, or the MOFCOM, in July 2005, foreign investors are prohibited from investing in or operating, among others, any internet cultural operating entities and from engaging in the business of transmitting audio-visual programs through information networks. In addition, according to the 2021 Negative List promulgated by the National Development and Reform Commission and the MOC on December 27, 2021 and effective on January 1, 2022, other than e-commerce, domestic multiparty communication, store and forward, and call center services, the permitted foreign investment in value-added telecommunications service providers must not be more than 50%.

We are an exempted company incorporated in the Cayman Islands. We conduct part of our operations in mainland China primarily through a series of contractual arrangements entered into among our subsidiaries and the respective shareholders of the variable interest entities in mainland China. As a result of these contractual arrangements, we are considered the primary beneficiary of the variable interest entities and consolidate each of their operating results in our financial statements under U.S. GAAP. All of the equity (net assets) or deficit (net liabilities) and net income (loss) of the variable interest entities are attributed to us. For a detailed description of these contractual arrangements, see “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements.” However, as we are a Cayman Islands holding company with no equity ownership in the variable interest entities, investors in our ADSs or the common shares thus are not purchasing equity interest in the variable interest entities but instead are purchasing equity interest in a Cayman Islands holding company. The Foreign Investment Law, which promulgated by the Standing Committee of the National People’s Congress on March 15, 2019 and became effective on January 1, 2020, does not explicitly stipulate the contractual arrangements under the “variable interest equity” structures as a form of foreign investment. Nevertheless, we cannot assure you that there will not be any further changes in the regulatory regime in the future. For more information, please see “—Risks Related to Doing Business in Jurisdictions We Operate—Substantial uncertainties exist with respect to the interpretation and implementation of the Foreign Investment Law and how it may impact the viability of our current corporate structure, corporate governance and business operations.” If the mainland China’s government deems that our contractual arrangements with the variable interest entities do not comply with mainland China’s regulatory restrictions on foreign investment in the relevant industries, or if these regulations or the interpretation of existing regulations change or are interpreted differently in the future, we could be subject to severe penalties or be forced to relinquish our interests in those operations in mainland China. We may not be able to fully repay the notes and other indebtedness, and our shares may decline significantly in value, if we are unable to assert our contractual control rights over the assets of the variable interest entities. Our holding company in the Cayman Islands, the variable interest entities, and investors of our company face uncertainty about potential future actions by the mainland China’s government that could affect the enforceability of the contractual arrangements with the variable interest entities and, consequently, significantly affect the financial performance of the variable interest entities and our company as a group.

Based on understanding of current laws, rules and regulations of mainland China of our PRC counsel, Fangda Partners, our current ownership structure for our business operations, the ownership structure of our subsidiaries in mainland China and the variable interest entities, the contractual arrangements among our subsidiaries in mainland China, the variable interest entities and their shareholders, as described in this annual report on Form 20-F, are in compliance with existing laws, rules and regulations of mainland China. However, we were further advised by Fangda Partners that there is substantial uncertainty regarding the interpretation and application of current or future laws and regulations of mainland China and these laws or regulations or interpretations of these laws or regulations may change in the future. Furthermore, the relevant government authorities have broad discretion in interpreting these laws and regulations. Accordingly, we cannot assure you that mainland China’s government authorities will not ultimately take a view contrary to the opinion of our PRC counsel.

If our ownership structure, contractual arrangements and businesses of our company, our subsidiaries in mainland China or the variable interest entities are found to be in violation of any existing or future laws or regulations of mainland China, the relevant governmental authorities would have broad discretion in dealing with such violation, including levying fines, confiscating our income or the income of our subsidiaries in mainland China or the variable interest entities, revoking or suspending the business licenses or operating licenses of our subsidiaries in mainland China or the variable interest entities, shutting down our servers or blocking our platforms, discontinuing or placing restrictions or onerous conditions on our operations, requiring us to discontinue our operations in mainland China, requiring us to undergo a costly and disruptive restructuring, restricting or prohibiting our use of proceeds from our initial public offering to finance our business and operations in mainland China, and taking other regulatory or enforcement actions that could be harmful to our business. Any of these actions could cause significant disruption to our business operations in mainland China and severely damage our reputation, which would in turn materially and adversely affect our business, financial condition and results of operations. In addition, if the imposition of any of these penalties causes us to lose the rights to direct the activities of the variable interest entities or our right to receive their economic benefits, we would no longer be able to consolidate such entities.

***We rely on contractual arrangements with the variable interest entities and their shareholders for some of our operation in mainland China, which may not be as effective as direct ownership. If the variable interest entities and their shareholders fail to perform their obligations under these contractual arrangements, we may have to resort to litigation or other legal proceedings to enforce our rights, which may be time-consuming, unpredictable, expensive and damaging to our operations and reputation.***

Because of the restrictions on foreign ownership of internet-based businesses in mainland China, we depend on contractual arrangements with the variable interest entities in which we have no ownership interest to conduct some of our business in mainland China. These contractual arrangements are intended to provide us with the ability to direct the operations of these entities and allow us to obtain economic benefits from them. For additional details on these ownership interests, see “—Risks Related to Our Business and Industry—Our business depends substantially on the continuing efforts of our executive officers and key employees, and our business operations may be severely disrupted if we lose their services” and “Item 4. Information on the Company—A. History and Development of the Company.” However, these contractual arrangements may not be as effective in providing control as direct ownership. For example, each of the variable interest entities and their shareholders could breach their contractual arrangements with us by, among other things, failing to operate our business currently operated in mainland China in an acceptable manner or taking other actions that are detrimental to our interests. If we were the controlling shareholder of these variable interest entities with direct ownership, we would be able to exercise our rights as shareholders to effect changes to their board of directors, which in turn could implement changes at the management and operational level. However, under the current contractual arrangements, as a legal matter, if the variable interest entities or their shareholders fail to perform their obligations under these contractual arrangements, we may have to incur substantial costs to enforce such arrangements, and rely on legal remedies under laws of mainland China, including contract remedies, which may not be sufficient or effective. In particular, the contractual arrangements provide that any dispute arising from these arrangements will be submitted to the China International Economic and Trade Arbitration Commission for arbitration in Beijing, Beijing Arbitration Commission or Guangzhou Arbitration Commission as applicable, the ruling of which will be final and binding. The legal framework and system in mainland China, particularly those relating to arbitration proceedings, is not as developed as other jurisdictions such as the United States. As a result, significant uncertainties relating to the enforcement of legal rights through arbitration, litigation and other legal proceedings remain in mainland China, which could limit our ability to enforce these contractual arrangements and exert effective control over the variable interest entities. Meanwhile, there are very few precedents and little formal guidance as to how contractual arrangements in the context of a variable interest entity should be interpreted or enforced under law of mainland China. Significant uncertainties remain regarding the ultimate outcome of such arbitration should legal action become necessary. In addition, under law of mainland China, rulings by arbitrators are final, parties cannot appeal the arbitration results in courts, and if the losing parties fail to carry out the arbitration awards within a prescribed time limit, the prevailing parties may only enforce the arbitration awards in courts of mainland China through arbitration award recognition proceedings, which would require additional expenses and delay. If we are unable to enforce these contractual arrangements, or if we suffer significant delay or other obstacles in the process of enforcing these contractual arrangements, our business and operations in mainland China could be severely disrupted, which could materially and adversely affect our results of operations and damage our reputation. See “—Risks Related to Doing Business in Jurisdictions We Operate—Uncertainties in the interpretation and enforcement of laws and regulations of mainland China could limit the legal protections available to you and us.”

***The shareholders of the variable interest entities may have potential conflicts of interest with us, and if any such conflicts of interest are not resolved in our favor, our business may be materially and adversely affected.***

Certain selected individuals, who are PRC citizens, from our senior management team are nominee shareholders of the variable interest entities in essence. The interests of such nominated individuals as the controlling shareholders of the variable interest entities may differ from the interests of our company as a whole, as what is in the best interests of the variable interest entities may not be in the best interests of our company. We cannot assure you that when conflicts of interest arise, the shareholders of the variable interest entities will act in the best interests of our company or that conflicts of interests will be resolved in our favor. In addition, the shareholders of the variable interest entities may breach or cause the consolidated variable entities and their respective subsidiaries to breach or refuse to renew the existing contractual arrangements with us. Currently, we do not have existing arrangements to address potential conflicts of interest the shareholders of the variable interest entities may encounter in his/her capacity as a shareholder or director of the variable interest entities, on the one hand, and as a beneficial owner or director of our company, on the other hand; provided that we could, at all times, exercise our option under the exclusive option agreement with the shareholders of the variable interest entities to cause them to transfer all of his equity ownership in the consolidated variable interest entities to an entity or individual in mainland China designated by us, and this new shareholder of the consolidated variable entities could then appoint a new director of the consolidated variable entities to replace the existing directors. In addition, if such conflicts of interest arise, our wholly owned subsidiaries in mainland China, could also, in the capacity of attorney-in-fact for the shareholders of the variable interest entities as provided under the relevant powers of attorney, directly appoint a new director of the consolidated variable entities to replace the existing directors. However, the legal frameworks of mainland China and the Cayman Islands do not provide guidance on resolving conflicts in the event of a conflict with another corporate governance regime. If we cannot resolve any conflicts of interest or disputes between us and the shareholders and the nominated individuals of the variable interest entities, we would have to rely on legal proceedings, which could result in disruption of our business in mainland China and subject us to substantial uncertainty as to the outcome of any such legal proceedings.

***We may lose the ability to use and enjoy assets held by the variable interest entities that are important to the operation of our business if such entities go bankrupt or become subject to a dissolution or liquidation proceeding.***

As part of our contractual arrangements with the variable interest entities, such entities hold certain assets, such as patents for the proprietary technologies that are essential to the operations of our platforms and important to the operation of our business. If any one of the variable interest entities goes bankrupt and all or part of its assets become subject to liens or rights of third-party creditors, we may be unable to continue some or all of our business activities, which could materially and adversely affect our business, financial condition and results of operations. If any one of the variable interest entities undergoes a voluntary or involuntary liquidation proceeding, the unrelated third-party creditors may claim rights to some or all of these assets, thereby hindering our ability to operate our business, which could materially and adversely affect our business, financial condition and results of operations.

***Our ability to enforce the equity pledge agreements between us and the variable interest entities' shareholders may be subject to limitations based on laws and regulations of mainland China.***

Pursuant to the equity interest pledge agreements between our wholly owned subsidiaries in mainland China, and the shareholders of the variable interest entities, each shareholder of each variable interest entity agrees to pledge its equity interests in the VIE to our subsidiary to secure the relevant VIE's performance of their obligations under the relevant contractual arrangements. The equity interest pledges of shareholders of VIEs under these equity pledge agreements have been registered with the relevant local branch of the SAMR, except that (i) the equity interest pledged by Mr. Wenzhi Cai of his equity interests in Guangzhou AnSiChuang Information Technology Co., Ltd., or Guangzhou AnSiChuang, (ii) the equity interest pledged by the shareholders of Beijing Tuda Technology Co., Ltd., or Beijing Tuda, of their equity interest in Beijing Tuda, (iii) the equity interest pledged by the shareholder of Chengdu Yunbu Internet Technology Co., Ltd., or the Chengdu Yunbu, of its equity interest in Chengdu Yunbu, (iv) the equity interest pledged by the shareholder of Chengdu Luota Internet Technology Co., Ltd., or the Chengdu Luota, of its equity interest in Chengdu Luota, and (v) the equity interest pledged by the shareholder of Chengdu Jiyue Internet Technology Co., Ltd., or the Chengdu Jiyue, of its equity interest in Chengdu Jiyue have not been registered. The equity interest pledge agreements with each of the VIEs' shareholders provide that the pledged equity interest shall constitute continuing security for any and all of the indebtedness, obligations and liabilities under all of the principal service agreements and the scope of pledge which are not limited by the amount of the registered capital of that VIE. However, it is possible that a court in mainland China may take the position that the amount listed on the equity pledge registration forms represents the full amount of the collateral that has been registered and perfected. If this is the case, the obligations that are supposed to be secured in the equity interest pledge agreements in excess of the amount listed on the equity pledge registration forms could be determined by the court in mainland China as unsecured debt, which takes last priority among creditors.

***Our contractual arrangements with the variable interest entities may result in adverse tax consequences to us.***

As a result of our corporate structure and the contractual arrangements among our subsidiaries in mainland China, the variable interest entities and their shareholders, we are effectively subject to PRC turnover tax on revenues generated by our subsidiaries from our contractual arrangements with the variable interest entities. Such tax generally includes the PRC value added tax, or the VAT, along with related surcharges. The applicable turnover tax is determined by the nature of the transaction generating the revenues subject to taxation. The PRC enterprise income tax law requires every enterprise in mainland China to submit its annual enterprise income tax return together with a report on transactions with its affiliates or related parties to the relevant tax authorities. These transactions may be subject to audit or challenge by the mainland China's tax authorities within ten years after the taxable year during which the transactions are conducted. We may be subject to adverse tax consequences if the mainland China's tax authorities were to determine that the contracts between us and the variable interest entities were not on an arm's length basis and therefore constitute a favorable transfer pricing arrangements. If this occurs, the mainland China's tax authorities could request that either of the variable interest entities adjust its taxable income upward for tax purposes in mainland China. Such a pricing adjustment could adversely affect us by reducing expense deductions recorded by either of the variable interest entities and thereby increasing these entities' tax liabilities, which could subject these entities to late payment fees and other penalties for the underpayment of taxes. Our consolidated net income may be materially and adversely affected if the variable interest entities' tax liabilities increase or if it becomes subject to late payment fees or other penalties.

***If the variable interest entities fail to obtain and maintain the requisite licenses and approvals required under the complex regulatory environment for internet-based businesses in mainland China, our business, financial condition and results of operations in mainland China may be adversely affected.***

With the sale of YY Live being substantially completed with certain matters, including necessary regulatory approvals from government authorities, remaining to be completed in the future, we believe the majority of our business, especially our global platforms that operated outside mainland China, is not subject to the regulations of mainland China that require us to obtain and maintain certain licenses and approvals through the variable interest entities as we used to be. Yet as we maintain some our audio and video capabilities and functions in mainland China, we will need to obtain additional qualifications, permits, approvals or licenses. In addition, with respect to specific services offered online, we or the service or content providers may be subject to additional separate qualifications, permits, approvals or licenses. We cannot assure you that we or the service or content providers will be granted such qualifications, permits, approvals or licenses in a timely manner or at all. Prior to the receipt of such qualifications, permits, approvals or licenses, we may be deemed as being in violation of relevant laws or regulations and be subject to penalties.

As the internet industry in mainland China is still at a relatively early stage of development, new laws and regulations may be adopted from time to time to address new issues that come to the authorities' attention. In the interpretation and implementation of existing and future laws and regulations governing our business activities, considerable uncertainties still exist. We cannot assure you that we will not be found in violation of any future laws and regulations or any of the laws and regulations currently in effect due to changes in the relevant authorities' interpretation of these laws and regulations. In addition, we may be required to obtain additional license or approvals, and we cannot assure you that we will be able to timely obtain or maintain all the required licenses or approvals or make all the necessary filings in the future. If we fail to obtain or maintain any of the required licenses or approvals or make the necessary filings, we may be subject to various penalties, such as confiscation of the net revenues that were generated through the unlicensed internet activities, the imposition of fines and the discontinuation or restriction of our operations in mainland China. Any such penalties may disrupt our business operations in mainland China and adversely affect our business, financial condition and results of operations.

***Substantial uncertainties exist with respect to the interpretation and implementation of the Foreign Investment Law and how it may impact the viability of our current corporate structure, corporate governance and business operations in mainland China.***

On March 15, 2019, the Standing Committee of the National People's Congress promulgated the Foreign Investment Law, or the Foreign Investment Law, which came into effect on January 1, 2020, and on December 12, 2019, the Implementation Regulations of Foreign Investment Law was promulgated by the State Council, which simultaneously came into effect on January 1, 2020. The Foreign Investment Law, together with the Implementation Regulations of Foreign Investment Law, replaced the trio of existing laws regulating foreign investment in mainland China, namely, the Sino-foreign Equity Joint Venture Enterprise Law, the Sino-foreign Cooperative Joint Venture Enterprise Law and the Wholly Foreign-invested Enterprise Law, together with their implementation rules and ancillary regulations. This law is the legal foundation for foreign investment in mainland China. The Foreign Investment Law embodies an expected regulatory trend in mainland China to rationalize its foreign investment regulatory regime in line with prevailing international practice and the legislative efforts to unify the corporate legal requirements for both foreign and domestic investments. The Implementation Regulations of Foreign Investment Law provide detailed rules for the principles of investment protection, promotion and management set forth in the Foreign Investment Law.

The Foreign Investment Law stipulates three forms of foreign investment, but does not explicitly stipulate the contractual arrangements under the “variable interest equity” structures as a form of foreign investment. The Foreign Investment Law further stipulates that foreign investment includes “foreign investors invest in mainland China through any other methods under laws, administrative regulations, or provisions prescribed by the State Council.” Therefore, it is possible that future laws, administrative regulations or provisions of the State Council may stipulate contractual arrangements as a form of foreign investment, and then whether the contractual arrangements will be recognized as a foreign investment, whether the contractual arrangements will be deemed to be in violation of the access requirements of foreign investment and how the contractual arrangements will be interpreted and handled remain uncertain. Conversely, if contractual arrangements are then incorporated as a form of foreign investment, it may materially impact our corporate governance practice and increase our compliance costs.

***Implementation of the labor laws and regulations in mainland China may adversely affect our business and results of operations in the region.***

Because we have a certain number of employees in mainland China, we are subject to labor laws and regulations in mainland China and any changes to the applicable laws and regulations. Pursuant to the labor contract law that took effect in January 2008 and was amended on July 1, 2013 and its implementation rules that took effect in September 2008, employers are subject to stricter requirements in terms of signing labor contracts, minimum wages, paying remuneration, determining the term of employees’ probation and unilaterally terminating labor contracts. Due to lack of detailed interpretative rules and uniform implementation practices and broad discretion of the local competent authorities, it is uncertain as to how the labor contract law and its implementation rules will affect our current employment policies and practices. Our employment policies and practices may violate the labor contract law or its implementation rules, and we may thus be subject to related penalties, fines or legal fees. Compliance with the labor contract law and its implementation rules may increase our operating expenses, in particular our personnel expenses. In the event that we decide to terminate some of our employees’ employment or otherwise change our employment or labor practices, the labor contract law and its implementation rules may also limit our ability to effect those changes in a desirable or cost-effective manner, which could adversely affect our business and results of operations. On October 28, 2010, the Standing Committee of the National People’s Congress promulgated the PRC Social Insurance Law, or the Social Insurance Law, which became effective on July 1, 2011 and was amended on December 29, 2018. According to the Social Insurance Law, employees must participate in pension insurance, work-related injury insurance, medical insurance, unemployment insurance and maternity insurance and the employers must, together with their employees or separately, pay the social insurance premiums for such employees. On July 20, 2018, General Office of the Communist Party of China and the State Council promulgated the Reform Plan for Collection and Management System of National and Local Taxes, or the Tax Reform Plan, which became effective on the same day. According to the Tax Reform Plan, all social insurance premiums, such as basic pension insurance premium, basic medical insurance premium, unemployment insurance premium, work-related injury insurance premium and maternity insurance premium, shall be collected uniformly by the relevant tax authorities starting from January 1, 2019.

***Compliance with the laws or regulations governing virtual currency may cause us to obtain additional approvals or licenses or change our current business model.***

The issuance and use of “virtual currency” in mainland China has been regulated since 2007 in response to the growth of the online game industry in mainland China. On January 25, 2007, the Ministry of Public Security, the MOC, the MIIT and the GAPP jointly issued a circular regarding online gambling which has implications for the use of virtual currency. The circular bans the conversion of virtual currency into real currency or property.

We issue virtual currency to users on our platforms currently operated in mainland China for them to purchase various items to be used in channels, including music channels. We are in the process of adjusting the content of our platforms currently operated in mainland China but we cannot assure you that our adjustments will be sufficient to comply with the relevant laws. Moreover, although we believe we do not offer virtual currency transaction services, we cannot assure you that the mainland China’s regulatory authorities will not take a view contrary to ours. In that event, we may be required to cease either our virtual currency issuance activities or such deemed “transaction service” activities and may be subject to certain penalties, including mandatory corrective measures and fines. The occurrence of any of the foregoing could have an adverse effect on our business, financial condition and results of operations in mainland China.

***We face risks related to geopolitical events, natural disasters, health epidemics, and other outbreaks, which could significantly disrupt our operations.***

Our business could be adversely affected by the effects of epidemics. In recent years, there have been outbreaks of epidemics globally. Our business operations could be disrupted if one of our employees is suspected of having contracted the H1N1 flu, avian flu, Ebola, COVID-19 or another epidemic, since it could require our employees to be quarantined and/or our offices to be disinfected. Our results of operations could be adversely affected to the extent that the outbreak has any negative impact on the global economy in general and the global mobile internet and gaming industries in particular.

We are also vulnerable to natural disasters and other calamities. It is possible that we may be unable to recover certain data in the event of a server failure. We cannot assure you that any backup systems will be adequate to protect us from the effects of fire, floods, typhoons, earthquakes, power loss, telecommunications failures, break-ins, war, riots, terrorist attacks or similar events. Any of the foregoing events may give rise to server interruptions, breakdowns, system failures, technology platform failures or internet failures, which could cause the loss or corruption of data or malfunctions of software or hardware as well as adversely affect our ability to provide services on our platform.

***Non-compliance on the part of third parties with which we conduct business could restrict our ability to maintain or increase our number of users or the level of traffic to our platforms.***

Our business partners may be subject to regulatory penalties or punishments because of their regulatory compliance failures, which may disrupt our business. Although we conduct a rigid review of legal formalities and certifications before entering into contractual relationship with other businesses such as third-party game developers, e-commerce merchants and landlords, we cannot be certain whether such third party has or will infringe any third parties' legal rights or violate any regulatory requirements. We regularly identify irregularities or non-compliance in the business practices of any parties with whom we pursue existing or future cooperation and we cannot assure you that any of these irregularities will be corrected in a prompt and proper manner. The legal liabilities and regulatory actions on our commercial partners may affect our business activities and reputation and in turn, our results of operations. For example, according to regulations of mainland China, all lease agreements are required to be registered with the local housing authorities. Currently, certain of our offices in mainland China for daily operations and certain other properties serving as dormitories and canteens in mainland China are on leased premises, and the landlords of some of these properties are still completing the registration of their ownership rights or the registration of our leases with the relevant authorities. Some of our lessors have not provided us with appropriate title certificates, which may adversely affect the validity of the leases if the lessors do not have proper title. We cannot assure you that such certificates or registration will be obtained in a timely manner or at all, and in case of failures, we may be subject to monetary fines, have to relocate our offices and suffer economic losses. We may also be adversely affected for intellectual property infringement, product related claims, consumer protection deficiencies, or regulatory violations resulting from e-commerce merchants who use our e-commerce services.

In addition, we allow providers of some online services, such as online education and financial services, to establish channels on our platforms. The online service providers and the producers of content on our platforms may be required to meet specific qualifying standards, evidenced by approvals, permits or certificates, and to comply with various requirements when conducting business. We cannot predict if any non-compliance on the part of such commercial partners may cause potential liabilities to us and in turn disrupt our operations.

## Risks Related to Our ADSs

### ***The trading prices of our ADSs are likely to be volatile, which could result in substantial losses to investors.***

The trading prices of our ADSs ranged from US\$21.38 to US\$55.14 in 2022. The trading prices of our ADSs are likely to be volatile and could fluctuate widely due to factors beyond our control. This may happen because of broad market and industry factors, like the performance and fluctuation in the market prices or the underperformance or deteriorating financial results of other companies in the global online entertainment or smart commerce solution industry or with business operations located mainly in the same markets as ours. The sale of a significant number of the ADSs, common shares or other equity securities in the public market, or the perception that such sales may occur, could also materially and adversely affect the market price of our ADSs. The securities of some of these companies have experienced significant volatility since their initial public offerings, including, in some cases, substantial price declines in the trading prices of their securities. The trading performances of certain companies' securities after their offerings, including companies in internet, social networking or smart commerce solution businesses, may affect the attitudes of investors toward other companies listed in the United States in the same sector, which consequently may impact the trading performance of our ADSs, regardless of our actual operating performance. In addition, any negative news or perceptions about inadequate corporate governance practices or fraudulent accounting or other practices at other companies may also negatively affect the attitudes of investors towards companies in the same sector or in the same market in general, including us, regardless of whether we have engaged in such practices. Furthermore, the stock market in general has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of companies like us. These broad market and industry fluctuations may adversely affect the market price of our ADSs.

In addition to market and industry factors, the price and trading volume for our ADSs may be highly volatile due to specific factors, including the following:

- variations in our net revenues, earnings and cash flow;
- guidance or other projections we may provide to the public, including any changes or failure to meet any guidance or other projections;
- announcements of new investments, acquisitions, strategic partnerships, or joint ventures;
- announcements of new services and expansions by us or our competitors;
- changes in financial estimates by securities analysts;
- downgrades, suspension or termination of coverage by industry or securities analysts that publish research or reports on us;
- changes in the number of our registered or active users;
- fluctuations in the number of paying users, merchants or other operating metrics;
- failure on our part to realize monetization opportunities as expected;
- additions or departures of key personnel;
- dilution of the ownership interests of our ADS holders due to conversions of our convertible senior notes due 2025 or 2026, or from the unwinding of capped call transactions in connection with our convertible senior notes due 2025 or 2026;
- release of lock-up or other transfer restrictions on our outstanding equity securities or sales of additional equity securities or the perception that such sales may occur;
- detrimental negative publicity about us, our competitors or our industry;
- potential litigation, government actions, or regulatory proceedings or changes;

- volatility in the stock market.
- changing trends in the economy, interest rate hikes or other interest rate-related decisions; and
- general political, economic, or market conditions, or other events or factors, including those resulting from war, incidents of terrorism, pandemics, and other disruptive external events, or responses to those events.

Any of these factors may result in large and sudden changes in the volume and price at which our ADSs will trade.

***We may be named as a defendant in putative shareholder class action lawsuits and may be subject to the SEC or third-party investigations which could have a material adverse impact on our business, financial condition, results of operation, cash flows and reputation.***

We were defending against a putative shareholder class action lawsuit described in “Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal Proceedings,” including any appeals of such lawsuit. On March 9, 2022, the court granted the defendants’ motion to dismiss and dismissed the operative complaint in its entirety with prejudice. On April 8, 2022, the co-lead plaintiffs filed a notice of appeal. The court heard oral argument on April 21, 2023 and took the case under submission. We are currently unable to estimate the possible loss or possible range of loss, if any, associated with the final resolution of this lawsuit, and there might be other class actions or regulatory enforcement actions in connection with such allegations. Any adverse outcome of this case, including any plaintiff’s appeal of the judgment in this case, could have a material adverse effect on our business, financial condition, results of operation, cash flows and reputation. In addition, there can be no assurance that our insurance carriers will cover all or part of the defense costs, or any liabilities that may arise from these matters. Even if the allegations against us may ultimately be proven to be groundless, we may have to utilize a significant portion of our cash resources and divert management’s attention from the day-to-day operations of our company, all of which could harm our business. We also may be subject to claims for indemnification related to these matters, and we cannot predict the impact that indemnification claims may have on our business or financial results. In addition, in response to the Short Report, we may be subject to further due diligence and investigations conducted by competent third-party advisors or regulatory authorities. We cannot predict or provide any assurance as to the timing, outcome or consequences of such reviews and investigations, and we have incurred and may continue to incur significant expenses related to legal, accounting, and other professional services in connection with matters relating to or arising from the such reviews and investigations.

***We believe that we were a passive foreign investment company, or PFIC, for United States federal income tax purposes for the taxable year ended December 31, 2022, which could subject United States holders of our ADSs or Class A common shares to significant adverse United States income tax consequences.***

We will be classified as a “passive foreign investment company,” or “PFIC” for United States federal income tax purposes for any taxable year, if either (a) 75% or more of our gross income for such year consists of certain types of “passive” income or (b) 50% or more of the value of our assets (generally determined on the basis of a quarterly average) during such year produce or are held for the production of passive income. Although the law in this regard is unclear, we treat the variable interest entities as being owned by us for United States federal income tax purposes, not only because we exercise effective control over the operation of such entities but also because we are entitled to substantially all of their economic benefits, and, as a result, we consolidate their operating results in our consolidated financial statements.

Based on the market price of our ADSs and the nature and composition of our assets (in particular the retention of substantial amounts of cash, deposits and investments), we believe that we were a PFIC for United States federal income tax purposes for the taxable year ended December 31, 2022, and we will likely be a PFIC for our current taxable year unless the market price of our ADSs increases and/or we invest a substantial amount of the cash and other passive assets we hold in assets that produce or are held for the production of active income.

If we are classified as a PFIC in any taxable year, a U.S. holder (as defined in “Item 10. Additional Information—E. Taxation—United States Federal Income Tax Considerations”) will generally be subject to reporting requirements and may incur significantly increased United States income tax on gain recognized on the sale or other disposition of the ADSs or Class A common shares and on the receipt of distributions on the ADSs or Class A common shares to the extent such gain or distribution is treated as an “excess distribution” under the United States federal income tax rules. Further, if we are classified as a PFIC for any year during which a U.S. holder holds our ADSs or Class A common shares, we generally will continue to be treated as a PFIC for all succeeding years during which such U.S. holder holds our ADSs or Class A common shares. Alternatively, U.S. holders of PFIC shares can sometimes avoid the rules described above by making certain elections, including a “mark-to-market” election or electing to treat a PFIC as a “qualified electing fund.” However, U.S. holders will not be able to make an election to treat us as a “qualified electing fund” because, even if we were to be or become a PFIC, we do not intend to comply with the requirements necessary to permit U.S. holders to make such election. Each U.S. holder is urged to consult its tax advisor concerning the United States federal income tax considerations relating to the ownership and disposition of our ADSs or Class A common shares if we are treated as a PFIC for our current taxable year or any future taxable year (including the possibility of making a “mark-to-market” election and the unavailability of an election to treat us as a qualified electing fund). For more information see “Item 10. Additional Information—E. Taxation—United States Federal Income Tax Considerations—Passive Foreign Investment Company Rules.”

***Our dual class common share structure with different voting rights will limit your ability to influence corporate matters and could discourage others from pursuing any change of control transactions that holders of our Class A common shares and ADSs may view as beneficial.***

Our common shares are divided into Class A common shares and Class B common shares. Holders of Class A common shares are entitled to one vote per share, while holders of Class B common shares are entitled to ten votes per share, voting together as one class on all matters requiring a shareholders’ vote and which are voted upon by way of a poll. Each Class B common share is convertible into one Class A common share at any time by the holder thereof. Class A common shares are not convertible into Class B common shares under any circumstances. Upon any sale, pledge, transfer or assignment or disposition of Class B common shares by a holder thereof to any person or entity that is not an affiliate of such holder, such Class B common shares will be automatically and immediately converted into an equal number of Class A common shares. In addition, if at any time, Messrs. David Xueling Li, Jun Lei and their affiliates collectively own less than 5% of the total number of the issued and outstanding Class B common shares, each issued and outstanding Class B common share will be automatically and immediately converted into one Class A common share, and we will not issue any Class B common shares thereafter. Furthermore, if at any time more than 50% of the ultimate beneficial ownership of any holder of Class B common shares (other than our founders or our founders’ affiliates) changes, each such Class B common share will be automatically and immediately converted into one Class A common share.

Due to the disparate voting powers attached to these two classes of common shares, as of March 31, 2023, Mr. David Xueling Li and his respective affiliates, held 79.4% of the total voting power of our company and have considerable influence over all matters requiring a shareholders’ vote, including election of directors and significant corporate transactions, such as a merger or sale of our company or our assets. This concentrated control will limit your ability to influence corporate matters and could discourage others from pursuing any potential merger, takeover or other change of control transactions that holders of Class A common shares and ADSs may view as beneficial.

***Our existing shareholders have substantial influence over our company and their interests may not be aligned with the interests of our other shareholders, which may discourage, delay or prevent a change in control of our company, which could deprive our shareholders of an opportunity to receive a premium for their securities.***

As of March 31, 2023, Mr. David Xueling Li, our co-founder, chairman and chief executive officer, and his affiliates, held 79.4% of the total voting power. Mr. David Xueling Li has substantial influence over our business, including decisions regarding mergers, consolidations and the sale of all or substantially all of our assets, election of directors and other significant corporate actions. This concentration of ownership may discourage, delay or prevent a change in control of our company, which could deprive our shareholders of an opportunity to receive a premium for their shares as part of any contemplated sale of our company and may reduce the price of our ADSs. In addition, Mr. Li could violate the terms of his non-compete or employment agreements with us or his legal duties by diverting business opportunities from us, resulting in our loss of corporate opportunities. These actions may take place even if they are opposed by our other shareholders.

Additionally, Mr. Jun Lei, our major shareholder who beneficially owned 8.9% of our outstanding shares as of March 31, 2023, has delegated the voting rights of the shares that he holds in our company to Mr. Li. Mr. Lei is active in making investments in internet companies in mainland China and currently holds direct and indirect interests in Xiaomi and other entities that may have businesses competing with ours. Xiaomi Corporation (HKEX: 1810) is an internet company with smartphones and smart hardware connected by an IoT platform at its core, which also offer online performance and live broadcasting services. Mr. Lei may, in the future, acquire additional interests in businesses that directly or indirectly compete with some of our lines of business or that are our suppliers or customers. Furthermore, Mr. Lei may pursue acquisitions or make further investments in our industries which may conflict with our interests. For more information regarding the beneficial ownership of our company by our principal shareholders, see “Item 6. Directors, Senior management and Employees—E. Share Ownership.”

***Our reputation and the trading price of our ADSs may be negatively affected by adverse publicity or detrimental conduct against us.***

Adverse publicity concerning the alleged fraudulence on our reported user metrics and authenticity on our revenues and cash balances could harm our reputation and cause the trading price of our ADSs to decline and fluctuate significantly. For example, after the Short Report containing various allegations against us was released on November 18, 2020, the trading price of our ADSs declined sharply. The negative publicity and the resulting decline of the trading price of our ADSs also led to the filing of a shareholder class action lawsuits against us and certain of our directors and officers.

Although we have publicly refuted the erroneous and misleading statements regarding us in the Short Report, we may still continue to be the target of adverse publicity and detrimental conduct against us, including complaints, anonymous or otherwise, to regulatory agencies regarding our operations, accounting, revenues and regulatory compliance. Additionally, allegations against us may be posted on the Internet by any person or entity which identifies itself or on an anonymous basis. We may be subject to government or regulatory investigation or inquiries, or shareholder lawsuits, as a result of such third-party conduct and may be required to incur significant time and substantial costs to defend ourselves. There is no assurance that we will be able to conclusively refute each of the allegations in connection with the Short Report within a reasonable period of time or at all. Our reputation may also be negatively affected as a result of the public dissemination of allegations or malicious statements about us, which in turn may materially and adversely affect the trading price of our ADSs.

***Techniques employed by short sellers may drive down the market price of our listed securities.***

Short selling is the practice of selling securities that a seller does not own but rather has borrowed from a third party with the intention of buying identical securities back at a later date to return to the lender. Short sellers hope to profit from a decline in the value of the securities between the sale of the borrowed securities and the purchase of the replacement shares, as short sellers expect to pay less in that purchase than they received in the sale. As it is in short sellers’ interest for the price of the security to decline, many short sellers publish, or arrange for the publication of, negative opinions and allegations regarding the relevant issuer and its business prospects in order to create negative market momentum and generate profits for themselves after selling a security short. These short attacks have, in the past, led to selling of shares in the market.

Much of the scrutiny and negative publicity on the target companies has centered on allegations of lack of effective internal control over financial reporting resulting in financial and accounting irregularities and mistakes, inadequate corporate governance policies or a lack of adherence thereto and, in many cases, allegations of fraud. As a result, many of these companies are now conducting internal and external investigations into the allegations and, in the interim, are subject to shareholder lawsuits and/or SEC enforcement actions.

We were, and may in the future be, the subject of unfavorable allegations made by short sellers. On November 18, 2020, Muddy Waters Capital LLC, an entity unrelated to us, issued the Muddy Water short seller report, or the Short Report, containing certain allegations against us. Our audit committee has conducted an independent review of the allegations raised in the Short Report related to our YY Live business, with the assistance of independent counsel, working with a team of experienced forensic auditors and data analytics experts. Our announcement dated February 8, 2021 disclosed the conclusion of the independent review, which concluded that the allegations raised and conclusions reached in the Short Report about our YY Live business were not substantiated. On March 26, 2021, our audit committee also concluded its work as to the handful of claims in the Short Report unrelated to the YY Live business (concerning BIGO) and likewise found the short seller allegations unsubstantiated. Any such allegations may be followed by periods of instability in the market price of our common shares and ADSs and negative publicity. If and when we become the subject of any unfavorable allegations, whether such allegations are proven to be true or untrue, we may have to utilize a significant portion of our resources to investigate such allegations and/or defend ourselves, including in connection with class actions or regulatory enforcement actions derivative of such allegations. While we would strongly defend against any such short seller attacks, we may be constrained in the manner in which we can proceed against the relevant short sellers by principles of freedom of speech, applicable federal or state law or issues of commercial confidentiality. Such a situation could be costly and time-consuming and could divert management's attention from the day-to-day operations of our Company. Even if such allegations are ultimately proven to be groundless, allegations against us could severely impact the market price of our securities and our business operations.

***If securities or industry analysts do not publish research or reports about our business, or if they adversely change their recommendations regarding our ADSs, the market price for our ADSs and trading volume could decline.***

The trading market for our ADSs will be influenced by research or reports that industry or securities analysts publish about our business. If one or more analysts who cover us downgrade our ADSs, the market price for our ADSs would likely decline. If one or more of these analysts cease to cover us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which, in turn, could cause the market price or trading volume for our ADSs to decline.

***Provisions of our convertible senior notes could discourage an acquisition of us by a third party.***

In June, 2019, we completed the offering of US\$500 million in aggregate principal amount of convertible senior notes due 2025 and US\$500 million in aggregate principal amount of convertible senior notes due 2026. Certain provisions of our convertible senior notes could make it more difficult or more expensive for a third party to acquire us. The indentures for the convertible senior notes define a "fundamental change" to include, among other things and subject to certain qualifications specified therein: (i) any person or group becoming a direct or indirect beneficial owner of our company's common share capital (including common share capital held in the form of ADSs) representing more than 50% of the voting power of our common share capital, or Lei Jun, Top Brand Holdings Limited, David Xueling Li and YYME Limited and their affiliates collectively becoming the direct or indirect beneficial owner of Class A common shares representing more than 50% of the number of outstanding Class A common shares; (ii) any recapitalization, reclassification or change of our Class A common shares or ADSs as a result of which these securities would be converted into, or exchanged for, stock, other securities, other property or assets or any share exchange, consolidation or merger of our company pursuant to which our Class A common shares or ADSs will be converted into cash, securities or other property or any sale, lease or other transfer in one transaction or a series of transaction of all or substantially all of our consolidated assets, taken as a whole, to any person other than one of our subsidiaries; (iii) the approval of any plan or proposal for the liquidation or dissolution of our company by our shareholders; (iv) our ADSs ceasing to be listed or quoted on any of The New York Stock Exchange, The NASDAQ Global Select Market or The NASDAQ Global Market (or any of their respective successors); or (v) any change in or amendment to the laws, regulations and rules in China or the official interpretation or official application thereof that prohibits us from operating substantially all of our business operations and prevents us from continuing to derive substantially all of the economic benefits from our business operations. Upon the occurrence of a fundamental change, holders of these notes will have the right, at their option, to require us to repurchase all of their notes or any portion of the principal amount of such notes in principal amounts of US\$1,000 or integral multiples thereof. In the event of a fundamental change, we may also be required to issue additional ADSs upon conversion of our convertible notes.

***The sale or availability for sale, or perceived sale or availability for sale, of substantial amounts of our ADSs could adversely affect their market price.***

Sales of substantial amounts of our ADSs in the public market, or the perception that these sales could occur, could adversely affect the market price of our ADSs and could materially impair our ability to raise capital through equity offerings in the future. Our ADSs are freely tradable by persons other than our affiliates without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act, and shares held by our existing shareholders may also be sold in the public market in the future subject to the restrictions in Rule 144 and Rule 701 under the Securities Act. In addition, common shares subject to our outstanding share-based awards, including options, restricted shares and restricted share units, are eligible for sale in the public market to the extent permitted by the provisions of various vesting agreements, Rules 144 and 701 under the Securities Act. We may also issue additional options in the future which may be exercised for additional common shares and additional restricted shares and restricted share units which may vest. As of March 31, 2023, we had 1,046,018,977 Class A common shares (excluding 250,327,847 outstanding restricted shares and treasury Class A common shares held by entities controlled by us) and 326,509,555 Class B common shares outstanding. We cannot predict what effect, if any, market sales of securities held by our significant shareholders or any other shareholder or the availability of these securities for future sale will have on the market price of our ADSs.

***Our articles of association contain anti-takeover provisions that could have a material adverse effect on the rights of holders of our common shares and ADSs.***

Our articles of association contain provisions to limit the ability of others to acquire control of our company or cause us to engage in change-of-control transactions. These provisions could have the effect of depriving our shareholders of an opportunity to sell their shares at a premium over prevailing market prices by discouraging third parties from seeking to obtain control of our company in a tender offer or similar transaction. For example, our board of directors has the authority, without further action by our shareholders, to issue preferred shares in one or more series and to fix their designations, powers, preferences, privileges, and relative participating, optional or special rights and the qualifications, limitations or restrictions, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights associated with our common shares, in the form of ADSs or otherwise. Preferred shares could be issued quickly with terms calculated to delay or prevent a change in control of our company or make removal of management more difficult. If our board of directors decides to issue preferred shares, the price of our ADSs may fall and the voting and other rights of the holders of our common shares and ADSs may be materially and adversely affected.

***Our currently effective memorandum and articles of association provide that the United States District Court for the Southern District of New York (or, if the United States District Court for the Southern District of New York lacks subject matter jurisdiction over a particular dispute, the state courts in New York County, New York) is the exclusive judicial forum within the U.S. for the resolution of any complaint asserting a cause of action arising out of or relating in any way to the federal securities laws of the United States, which could limit the ability of holders of our Class A common shares, the ADSs or other securities to obtain a favorable judicial forum for disputes with us, our directors and officers, the depositary, and potentially others.***

Our currently effective memorandum and articles of association provide that the United States District Court for the Southern District of New York (or, if the United States District Court for the Southern District of New York lacks subject matter jurisdiction over a particular dispute, the state courts in New York County, New York) is the exclusive forum within the United States for the resolution of any complaint asserting a cause of action arising out of or relating in any way to the federal securities laws of the United States, regardless of whether such legal suit, action, or proceeding also involves parties other than our company. The enforceability of similar federal court choice of forum provisions in other companies' organizational documents has been challenged in legal proceedings in the United States, and it is possible that a court could find this type of provision to be inapplicable or unenforceable. If a court were to find the federal choice of forum provision contained in our currently effective memorandum and articles of association to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions. If upheld, the forum selection clause in our currently effective memorandum and articles of association may limit a security-holder's ability to bring a claim against us, our directors and officers, the depositary, and potentially others in his or her preferred judicial forum, and this limitation may discourage such lawsuits. Holders of our shares or the ADSs will not be deemed to have waived our compliance with the federal securities laws and the regulations promulgated thereunder pursuant to the exclusive forum provision in the currently effective memorandum and articles of association.

***You may face difficulties in protecting your interests, and your ability to protect your rights through U.S. courts may be limited, because we are incorporated under Cayman Islands law.***

We are an exempted company incorporated under the laws of the Cayman Islands with limited liability. Our corporate affairs are governed by our amended and restated memorandum and articles of association, the Companies Act (As Revised) of the Cayman Islands and the common law of the Cayman Islands. The rights of shareholders to take action against the directors, actions by minority shareholders and the fiduciary responsibilities of our directors to us under Cayman Islands law are to a large extent governed by the common law of the Cayman Islands. The common law of the Cayman Islands is derived in part from comparatively limited judicial precedent in the Cayman Islands as well as from the common law of England, the decisions of whose courts are of persuasive authority, but are not binding, on a court in the Cayman Islands. The rights of our shareholders and the fiduciary responsibilities of our directors under Cayman Islands law are not as clearly established as they would be under statutes or judicial precedent in some jurisdictions in the United States. In particular, the Cayman Islands has a less developed body of securities laws than the United States. Some U.S. states, such as Delaware, have more fully developed and judicially interpreted bodies of corporate law than the Cayman Islands. In addition, shareholders of a Cayman Islands company may not have standing to initiate a shareholder derivative action in a federal court of the United States.

Unlike many jurisdictions in the United States, Cayman Islands law does not generally provide for shareholder appraisal rights on an approved arrangement and reconstruction of a company. This may make it more difficult for you to assess the value of any consideration you may receive in a merger or consolidation or to require that the offeror gives you additional consideration if you believe the consideration offered is insufficient. Moreover, holders of our ADSs are not entitled to appraisal rights under Cayman Islands law. ADS holders that wish to exercise their appraisal or dissent rights must convert their ADSs into our Class A common shares by surrendering their ADSs to the depository and paying the ADS depository fee.

Shareholders of Cayman Islands exempted companies like us have no general rights under Cayman Islands law to inspect corporate records (except our memorandum and articles of association, special resolutions passed by our shareholders, and our register of mortgages and charges) or to obtain copies of lists of shareholders of these companies. Our directors have discretion under our existing articles of association to determine whether or not, and under what conditions, our corporate records may be inspected by our shareholders, but are not obliged to make them available to our shareholders. This may make it more difficult for you to obtain the information needed to establish any facts necessary for a shareholder motion or to solicit proxies from other shareholders in connection with a proxy contest.

As a result of all of the above, public shareholders may have more difficulty in protecting their interests in the face of actions taken by management, members of the board of directors or controlling shareholders than they would as public shareholders of a company incorporated in the United States.

***Judgments obtained against us by our shareholders may not be enforceable in our home jurisdiction.***

We are a Cayman Islands exempted company and a majority of our assets are located outside of the United States. In addition, a significant majority of our current directors and officers are nationals and residents of countries other than the United States and most of their assets are located outside the United States. As a result, it may be difficult or impossible for you to bring an action against us or against these individuals in the United States in the event that you believe that your rights have been infringed under the United States federal securities laws or otherwise. Even if you are successful in bringing an action of this kind, the laws of the Cayman Islands and of mainland China may render you unable to enforce a judgment against our assets or the assets of our directors and officers.

The Cayman Islands courts are unlikely:

- to recognize or enforce against us or our directors or officers judgments of courts of the United States based upon the civil liability provisions of U.S. securities laws; and

- in original actions brought in the Cayman Islands to impose liabilities against us or our directors or officers, that are predicated on certain civil liability provisions of U.S. securities laws so far as the liabilities imposed by those provisions are penal in nature. Although there is no statutory recognition in the Cayman Islands of judgments obtained in the United States, the courts of the Cayman Islands will, at common law, recognize and enforce a foreign money judgment of a foreign court of competent jurisdiction without reexamination of the merits of the underlying disputes based on the principle that a judgment of a competent foreign court imposes upon the judgment debtor an obligation to pay the liquidated sum for which such judgment has been given, provided that such judgment (i) is given by a foreign court of competent jurisdiction, (ii) imposes on the judgment debtor a liability to pay a liquidated sum for which the judgment has been given, (iii) is final and conclusive, (iv) is not in respect of taxes, a fine or penalty; (v) is not inconsistent with a Cayman Islands judgment in respect of the same matter, (vi) is not impeachable on the grounds of fraud and was not obtained in a manner and is not of a kind the enforcement of which is contrary to natural justice or the public policy of the Cayman Islands.

However, the Cayman Islands courts are unlikely to enforce a judgment obtained from the United States courts under the civil liability provisions of the securities laws if such judgment is determined by the courts of the Cayman Islands to give rise to obligations to make payments that are penal or punitive in nature. A Cayman Islands court may stay enforcement proceedings if concurrent proceedings are being brought elsewhere.

***We are a foreign private issuer within the meaning of the rules under the Exchange Act, and as such we are exempt from certain provisions applicable to United States domestic public companies.***

Because we qualify as a foreign private issuer under the Exchange Act, we are exempt from certain provisions of the securities rules and regulations in the United States that are applicable to U.S. domestic issuers, including:

- the rules under the Exchange Act requiring the filing with the SEC of quarterly reports on Form 10-Q or current reports on Form 8-K;
- the sections of the Exchange Act regulating the solicitation of proxies, consents, or authorizations in respect of a security registered under the Exchange Act;
- the sections of the Exchange Act requiring insiders to file public reports of their share ownership and trading activities and liability for insiders who profit from trades made in a short period of time;
- the selective disclosure rules by issuers of material nonpublic information under Regulation FD; and
- certain audit committee independence requirements in Rule 10A-3 of the Exchange Act.

We are required to file an annual report on Form 20-F within four months of the end of each fiscal year. In addition, we publish our results on a quarterly basis as press releases, distributed pursuant to the rules and regulations of the Nasdaq Global Select Market. Press releases relating to financial results and material events are also be furnished to the SEC on Form 6-K. However, the information we are required to file with or furnish to the SEC are less extensive and less timely as compared to that required to be filed with the SEC by United States domestic issuers. As a Cayman Islands company listed on the Nasdaq Global Select Market, we are subject to the Nasdaq Global Select Market corporate governance requirements. However, the Nasdaq Global Select Market permit a foreign private issuer like us to follow certain corporate governance practices of its home country. Certain corporate governance practices in the Cayman Islands, which is our home country, may differ significantly from the Nasdaq Global Select Market corporate governance requirements.

We relied on the exemption available to foreign private issuers to the requirement that each member of the compensation committee and the corporate governance and nominating committee be an independent director. Currently, Mr. David Xueling Li and Mr. Qin Liu, who serves on our compensation committee and corporate governance and nominating committee, respectively, are not independent directors. We also relied on home country practice exemption and did not hold an annual general meeting of shareholders within one year after the end of our fiscal year-end or solicit proxies or provide proxy statements for all meetings of shareholders and provide copies of proxy solicitation to Nasdaq. See “Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers—Share Incentive Plans” for more information. If we continue to rely on the above and other exemptions available to foreign private issuers in the future, our shareholders may be afforded less protection than they otherwise would under the Nasdaq Global Select Market corporate governance requirements applicable to U.S. domestic issuers. As a result, you may not be afforded the same protections or information, which would be made available to you, were you investing in a United States domestic issuer.

***The voting rights of holders of ADSs are limited by the terms of the deposit agreement, and you may not be able to exercise your right to direct how the Class A common shares which are represented by your ADSs are voted.***

Holders of ADSs do not have the same rights as our registered shareholders. As a holder of our ADSs, you do not have any direct right to attend general meetings of our shareholders or to cast any votes at such meetings. You are only able to exercise the voting rights which are carried by the underlying Class A common shares represented by your ADSs indirectly by giving voting instructions to the depositary in accordance with the provisions of the deposit agreement. Under the deposit agreement, you may vote only by giving voting instructions to the depositary. Upon receipt of your voting instructions, the depositary will vote the underlying Class A common shares represented by your ADSs in accordance with your instructions. You are not able to directly exercise your right to vote with respect to the underlying Class A common shares represented by your ADSs unless you withdraw the shares from the depositary and become the registered holder of such shares prior to the record date for the general meeting. Under our memorandum and articles of association, the minimum notice period required for convening a general meeting is at least ten clear days. When a general meeting is convened, you may not receive sufficient advance notice of the meeting to withdraw the underlying Class A common shares underlying represented by your ADSs and become the registered holder of such shares to allow you to attend the general meeting and to vote directly with respect to any specific matter or resolution to be considered and voted upon at the general meeting. In addition, under our articles of association, our directors may close our register of members (subject to compliance with Nasdaq Global Select Market rules) or, for the purposes of determining those shareholders who are entitled to attend and vote at any general meeting, fix in advance a record date for such meeting, and such closure of our register of members or the setting of such a record date may prevent you from withdrawing the Class A common shares underlying your ADSs and becoming the registered holder of such shares prior to the record date, so that you would not be able to attend the general meeting or to vote directly. If we ask for your instructions, the depositary will notify you of the upcoming vote and will arrange to deliver our voting materials to you. We cannot assure you that you will receive the voting materials in time to ensure that you can instruct the depositary to vote the underlying Class A common shares represented by your ADSs. In addition, the depositary and its agents are not responsible for failing to carry out voting instructions or for their manner of carrying out your voting instructions. This means that you may not be able to exercise your right to direct how the shares underlying your ADSs are to be voted and you may have no legal remedy if the underlying Class A common shares underlying represented by your ADSs are not voted as you requested. The depositary for our ADSs will give us a discretionary proxy to vote our Class A common shares represented by your ADSs if you do not vote at shareholders' meetings, except in limited circumstances, which could adversely affect your interests.

Under the deposit agreement for the ADSs, if you do not vote, the depositary will give us a discretionary proxy to vote our Class A common shares represented by your ADSs at shareholders' meetings unless:

- we have failed to timely provide the depositary with notice of meeting and related voting materials;
- we have instructed the depositary that we do not wish a discretionary proxy to be given;
- we have informed the depositary that there is substantial opposition as to a matter to be voted on at the meeting;
- a matter to be voted on at the meeting would have a material adverse impact on shareholders; or
- the voting at the meeting is to be made on a show of hands.

The effect of this discretionary proxy is that if you do not vote at shareholders' meetings, you cannot prevent our Class A common shares represented by your ADSs from being voted, except under the circumstances described above. This may make it more difficult for shareholders to influence the management of our company. Holders of our common shares are not subject to this discretionary proxy.

***You may not receive dividends or other distributions on our common shares and you may not receive any value for them, if it is illegal or impractical to make them available to you.***

The depository of our ADSs has agreed to pay to you the cash dividends or other distributions it or the custodian receives on Class A common shares or other deposited securities underlying our ADSs, after deducting its fees and expenses. You will receive these distributions in proportion to the number of Class A common shares your ADSs represent. However, the depository is not responsible if it decides that it is unlawful or impractical to make a distribution available to any holders of ADSs. For example, it would be unlawful to make a distribution to a holder of ADSs if it consists of securities that require registration under the Securities Act but that are not properly registered or distributed under an applicable exemption from registration. The depository may also determine that it is not feasible to distribute certain property through the mail. Additionally, the value of certain distributions may be less than the cost of mailing them. In these cases, the depository may determine not to distribute such property. We have no obligation to register under U.S. securities laws any ADSs, common shares, rights or other securities received through such distributions. We also have no obligation to take any other action to permit the distribution of ADSs, common shares, rights or anything else to holders of ADSs. This means that you may not receive distributions we make on our common shares or any value for them if it is illegal or impractical for us to make them available to you. These restrictions may cause a material decline in the value of our ADSs.

***You may be subject to limitations on transfer of your ADSs.***

Your ADSs are transferable on the books of the depository. However, the depository may close its books at any time or from time to time when it deems expedient in connection with the performance of its duties. The depository may close its books from time to time for a number of reasons, including in connection with corporate events such as a rights offering, during which time the depository needs to maintain an exact number of ADS holders on its books for a specified period. The depository may also close its books in emergencies, and on weekends and public holidays. The depository may refuse to deliver, transfer or register transfers of our ADSs generally when our share register or the books of the depository are closed, or at any time if we or the depository thinks that it is advisable to do so because of any requirement of law or of any government or governmental body, or under any provision of the deposit agreement, or for any other reason in accordance with the terms of the deposit agreement. As a result, you may be unable to transfer your ADSs when you wish to.

#### **ITEM 4. INFORMATION ON THE COMPANY**

##### **A. History and Development of the Company**

We commenced operations in April 2005 with the establishment of Guangzhou Huaduo in mainland China. In July 2011, we established an exempted company with limited liability in the Cayman Islands, YY Inc., as our holding company. On November 21, 2012, our ADSs were listed on The Nasdaq Stock Market under the symbol “YY.” Effective December 20, 2019, we changed our corporate name from “YY Inc.” to “JOYY Inc.” We began trading under the new corporate name on December 30, 2019. Historically, we have successfully incubated, developed and monetized several social entertainment products and platforms. Our expertise in building and operating vibrant social entertainment platforms was tested and proven first in mainland China. In 2014, foreseeing the massive global opportunities, we began our global expansion by investing in BIGO, followed by the internationalization of Hago in 2018, and the acquisition of BIGO in March 2019. In the third quarter of 2022, we further expanded our global operations in the smart commerce sector by consolidating Shoptline through further investments.

Currently, we mainly operate our global business through the following significant subsidiaries:

- Bigo Technology Pte. Ltd.;
- Likeme Pte. Ltd.;
- PageBites, Inc.;
- Guangzhou BaiGuoYuan Information Technology Co., Ltd.; and
- Guangzhou Huanju Shidai Information Technology Co., Ltd.

We also conduct part of our business in mainland China primarily through the following significant variable interest entities and some of their subsidiaries:

- Guangzhou Huaduo Network Technology Co., Ltd.; and
- Guangzhou BaiGuoYuan Network Technology Co., Ltd.

In 2017, we established HUYA Inc., Huya Limited, a wholly owned subsidiary of HUYA Inc. in Hong Kong and Guangzhou Huya Technology Co., Ltd., or Huya Technology, wholly-owned by Huya Limited. In July 2017, HUYA Inc. issued series A shares to a group of investors for an aggregate amount of US\$75 million. In March 2018, HUYA Inc. issued 64,488,235 shares of Series B-2 redeemable convertible preferred shares at a price of US\$7.16 per share for a cash consideration of US\$461.6 million to Linen Investment Limited, a wholly owned subsidiary of Tencent Holdings Limited. Pursuant to the agreements entered into in this series B-2 financing transaction, Tencent has a right, exercisable between March 8, 2020 and March 8, 2021, to purchase at the then fair market price additional shares to reach 50.10% of the voting powers in HUYA Inc. As part of the Series B-2 financing transaction, Tencent and HUYA Inc., through their respective affiliated entities in mainland China, entered into a business cooperation agreement, which became effective on March 8, 2018. Pursuant to this business cooperation agreement, the parties agreed to establish strategic cooperation in various aspects regarding game live streaming business and other game related business. On May 11, 2018, HUYA Inc.'s ADSs commenced trading on the NYSE under the symbol "HUYA." On April 3, 2020, we transferred 16,523,819 Class B ordinary shares of HUYA Inc. to Linen Investment Limited, a wholly-owned subsidiary of Tencent for an aggregate purchase price of approximately US\$262.6 million in cash, pursuant to Tencent's exercise of its option to purchase additional shares of Huya from us. As a result of the closing of the share transfer, we no longer consolidate the operating results of Huya since then and the financial information of Huya has been presented in discontinued operations, rather than a separate segment. On August 10, 2020, we entered into a definitive share transfer agreement with Linen Investment Limited, pursuant to which we transferred 30,000,000 Class B ordinary shares of Huya to Tencent for an aggregate purchase price of US\$810.0 million in cash. As of the date of this annual report, we held 38,374,463 Class B ordinary shares of Huya, representing 24.1% of the total voting power calculated based on the total issued and outstanding shares of Huya.

In June 2018, we invested US\$272 million in the Series D round of financing of Bigo Inc as the lead investor. We were then an existing shareholder of Bigo Inc and had become its largest shareholder after the Series D financing.

In March 2019, we completed the acquisition of the remaining 68.3% of equity interest in Bigo Inc from the other shareholders of Bigo Inc, including Mr. David Xueling Li, our chairman of the board of directors and chief executive officer. We paid US\$343.1 million in cash to the selling shareholders of Bigo Inc, and resulted in issuance of 38,326,579 Class B common shares to Mr. David Xueling Li and 305,127,046 outstanding Class A common shares to Mr. David Xueling Li and other selling shareholders of Bigo Inc. As a result of the closing of the acquisition, we wholly own Bigo Inc.

In June 2019, we completed the offering of US\$500 million in aggregate principal amount of convertible senior notes due 2025, or the 2025 Notes, and US\$500 million in aggregate principal amount of convertible senior notes due 2026, or the 2026 Notes, which included the exercise in full by the initial purchasers of their option to purchase an additional US\$75 million in aggregate principal amount of the 2025 Notes and US\$75 million in aggregate principal amount of the 2026 Notes. We collectively refer to the 2025 Notes and the 2026 Notes as the Notes in this annual report. The Notes have been offered in the United States to qualified institutional buyers pursuant to Rule 144A and to non-U.S. persons outside the United States in reliance on Regulation S under the Securities Act. As of the date of this annual report, the current conversion rate of the 2025 Notes and the 2026 Notes is 11.7649 ADSs per US\$1,000 principal amount. The relevant conversion rate for each series of the Notes is subject to adjustment upon the occurrence of certain events. The 2025 Notes bear interest at a rate of 0.75% per year, and the 2026 Notes bear interest at a rate of 1.375% per year. Interest on the both the 2025 Notes and 2026 Notes will accrue from, and including, June 24, 2019 and will be payable semiannually in arrears on June 15 and December 15 of each year, beginning on December 15, 2019. The 2025 Notes will mature on June 15, 2025 and the 2026 Notes will mature on June 15, 2026, unless repurchased, redeemed or converted in accordance with their terms prior to such date. We may not redeem the Notes prior to maturity, unless certain tax-related events occur. The holders may require us to repurchase all or part of their Notes in cash on June 15, 2023, in the case of the 2025 Notes, and June 15, 2024, in the case of the 2026 Notes, or in the event of certain fundamental changes. In connection with the offering of the 2025 Notes and the 2026 Notes, we have entered into capped call transactions with certain counterparties. The cap price of the capped call transactions is initially US\$127.87 per ADS and is subject to adjustment under the terms of the capped call transactions.

On November 16, 2020, we entered into definitive agreements with Baidu, and made certain amendments to the share purchase agreement on February 7, 2021, pursuant to which Baidu would acquire our video-based entertainment live streaming business in mainland China, or YY Live, including the YY mobile app, YY.com website, and PC YY, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. The acquisition has been substantially completed, with certain matters remaining to be completed in the future, including necessary regulatory approvals from government authorities. In April 2022, we and Baidu have agreed to extend the long stop date, which is the closing deadline of the proposed acquisition, indefinitely until the extension is terminated by either party. As of the date of this annual report, Baidu has paid an aggregate amount of US\$1.9 billion to us in our designated escrow account, and deposited an aggregate of US\$1.6 billion into Baidu's escrow accounts, in accordance with the terms and schedule set forth in the share purchase agreement.

In August 2022, our subsidiary, Duowan Entertainment Corporation, together with other investors, entered into a definitive agreement with Shoptline Corporation Limited, or Shoptline, a company that operates the smart commerce platform "Shoptline." Pursuant to the agreement, we subscribed for certain number of series B preferred shares of Shoptline for an aggregate cash consideration of US\$182.9 million. Prior to the transaction, Shoptline had been an investee of ours since 2020. As a result of the closing of the transaction, we started to consolidate the financial results of Shoptline from September 6, 2022.

Our principal executive offices locate at 30 Pasir Panjang Road #15-31A Mapletree Business City, Singapore 117440. Our registered office in the Cayman Islands is located at Conyers Trust Company (Cayman) Limited of Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman, KYI-1111, Cayman Islands.

SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC on [www.sec.gov](http://www.sec.gov). You can also find information on our website <http://ir.joyy.com>. The information contained on our website is not a part of this annual report.

## **B. Business Overview**

### **Overview**

We are a global technology company with a mission to enrich lives through technology. We operate leading online social entertainment platforms that offer live streaming, short-form videos, instant messaging, casual games and beyond. We also operate a global smart commerce platform that enables merchants to easily build their brand online and sell their products to customers around the world.

We operate in a number of markets across the globe, including North America, Europe, the Middle East, Southeast Asia, Eastern Pacific regions and others. The number of global monthly active users on our social entertainment platforms reached 267.9 million in the fourth quarter of 2022.

JOYY operates several key platforms, including:

- Live streaming platform—*Bigo Live*: *Bigo Live* is a leading global social live streaming platform. Bigo Live provides an interactive online stage for global users to host and watch live streaming sessions, share their life moments, showcase their talents and interact with people across the world. Bigo Live has extensive presence in North America, Europe, the Middle East, Southeast Asia and Eastern Pacific regions, among others.
- Short-form video platform—*Likee*: *Likee* is a leading global short-form video social platform. Likee empowers its users to easily discover create and share short videos, with the easy, all-in-one and powerful video creation tools as well as the personalized feeds. Likee is committed to building a long-term relationship with content creators, which in turn increases user engagement and boost connectivity. Likee has extensive presence in Southeast Asia, the Middle East and Europe.
- Multiuser social networking platform—*Hago*: *Hago* is a multiuser social networking platform. It provides over 400 casual games, integrating social features such as audio and video multiuser chatrooms and 3D virtual interactive party games, which encourages users to connect and have fun. Hago has extensive presence in Southeast Asia, the Middle East and South America.

- Instant Messenger—*imo*: *imo* is a global instant messenger that provides audio and video communication services. It offers frictionless audio and video calls and other communication tools such as group calls and document sharing, among others, fulfilling a variety of personal and business communication needs. It has attracted a massive and highly engaged user base in South Asia and the Middle East.
- Smart Commerce Solution Provider—*Shopline*: *Shopline* is a global smart commerce enabler that provides an integrated omnichannel platform for merchants to create and grow their brands online and reach customers worldwide. Shopline provides merchants with various services to optimize their business, such as inventory and sales management, logistics, payment, marketing and data analytics. Shopline has helped over 500,000 merchants to launch and scale up their online businesses.

In the past, we also operated a live streaming platform (our discontinued business in mainland China)—YY Live. YY Live was an interactive and comprehensive video-based entertainment live streaming social media platform, offering content such as music and dance shows, talk shows, outdoor activities, sports and anime. On November 16, 2020, we entered into definitive agreements with Baidu, and made certain amendments to the share purchase agreement on February 7, 2021, pursuant to which Baidu would acquire our video-based entertainment live streaming business in mainland China, or YY Live, including the YY mobile app, YY.com website, and PC YY, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. The acquisition has been substantially completed, with certain matters remaining to be completed in the future, including necessary regulatory approvals from government authorities. In April 2022, we and Baidu have agreed to extend the long stop date, which is the closing deadline of the proposed acquisition, indefinitely until the extension is terminated by either party. As of the date of this annual report, Baidu has paid an aggregate amount of US\$1.9 billion to us in our designated escrow account, and deposited an aggregate of US\$1.6 billion into Baidu's escrow accounts, in accordance with the terms and schedule set forth in the share purchase agreement.

Since our inception in 2005, we have successfully incubated, developed and monetized several social entertainment products and platforms. Our expertise in building and operating vibrant social entertainment platforms was tested and proven first in mainland China. In 2014, foreseeing the massive global opportunities, we began our global expansion by investing in BIGO, followed by the internationalization of Hago in 2018, and the acquisition of BIGO in March 2019. In 2022, we consolidated Shopline through further equity investments, diversifying our product offerings and expanding our global footprint.

Currently, we monetize our products and services mainly through virtual tips for live streaming, as well as advertising, e-commerce and subscription. Over the past three years, our global business has grown rapidly and our profitability has improved steadily. Our total revenue increased from US\$1.9 billion in 2020 to US\$2.6 billion in 2021 and US\$2.4 billion in 2022. Our net operating losses decreased from US\$406.8 million in 2020 to US\$106.7 million in 2021, and we realized net operating profit of US\$50.7 million in 2022.

Artificial intelligence (AI) technology is the backbone of our business success and integrated to all critical aspects of our services and broader business operations. Our AI technology empowers product features and services such as visual and voice recognition, personalized content recommendation and distribution, as well as automated product beta testing and critical corporate decision-making, such as budgeting, which not only improved user experience and enhanced our operational and managerial efficiency.

Localization is essential for our global success. That's why we have built an extensive global operational network with over 30 regional offices and over 6,600 local staff worldwide. We designed our social products, cultivated local content and launched online marketing campaigns tailored to the local cultures and preferences of our target markets. Such localized appeal resonates with users from different cultural backgrounds and differentiates our products from others platforms.

With our diverse offerings, extensive global operational network and effective monetization capabilities, we believe we are well positioned to further grow our global presence and seize new growth opportunities.

## **Our Platforms and Products**

### ***Bigo Live***

Bigo Live is a leading global social live streaming platform. Bigo Live enables its users to share their life moments, showcase their talents, socialize and connect with other users from all around the world through live streaming. Launched in 2016, Bigo Live currently has a strong presence in North America, Europe, the Middle East, Southeast Asia and Eastern Pacific regions, among others. Bigo Live is available in 22 languages and around 150 countries.

Bigo Live has built an engaged, interactive and diverse community. Bigo Live's users come from different cultural backgrounds and have distinctive social needs. Bigo Live has been attracting more content creators and offering more localized content in various categories, such as music, dance, comedy, gaming and lifestyle, through cross-industry partnerships and localized activities.

Bigo Live has also been innovating its product features to enhance the quality and efficiency of users' social experience. In 2022, Bigo Live launched a Virtual Live feature that enables users to create customized 3D digital avatars and enjoy live streaming using their virtual identities. Bigo Live also launched a Community feature that allows users to form and join different interest groups and quickly connect with like-minded people. In the fourth quarter of 2022, the average mobile monthly active users of Bigo Live reached 36.8 million, increasing by 14.3% from the same period in 2021.

Bigo Live currently monetizes its user base mainly through virtual tips for livestreaming. Users can purchase in-app virtual items and send them as virtual gifts to their favorite hosts to show appreciation and provide them with monetary rewards.

Among the various platforms operated by us, Bigo Live is currently the largest revenue contributor. Bigo Live was ranked the second as the World's Top Social Apps in terms of consumer spending in 2022, according to the data from Data.AI (formerly known as App Annie).

### **Likee**

Likee is a leading global short-form video social platform. Likee enables users to easily discover, create and share short-form videos, empowered by its easy and all-in-one video creation tools, such as filters and special effects, and AI-backed personalized feed. Launched in 2017, Likee has a strong presence in Southeast Asia, the Middle East and Europe. In the fourth quarter of 2022, the average mobile monthly active users of Likee was 45.3 million.

In the past years, Likee has been dedicating its efforts to cultivate a localized and diverse content community. Likee has facilitated a large volume of user generated content to be produced and shared on a daily basis. Likee offers comprehensive creator support programs, providing creators across various genres with user traffic, creation tools, professional guidance, and diverse monetization methods to pave a path for their long-term personal growth and career development.

In 2022, Likee launched a community feature called "Loop" that helps users with similar interests connect with one another, which has in turned boosted user interaction and content quality within the interest groups.

Likee started monetizing its user base in 2020. Leveraging on Bigo Live's local operational capabilities and successful monetization experience, Likee currently monetizes its user base mainly through virtual tips for live streaming, and it is also exploring other monetization opportunities, such as advertisements. It has made some preliminary progress on brand advertisements, helping brands to promote their businesses or products on Likee, via advertisements displayed on the app opening page and video feeds.

### **Hago**

Hago is a multiuser social networking platform which encourage users to connect and have fun. Launched in 2018, Hago has presence mainly in Southeast Asia, the Middle East and South America. In the fourth quarter of 2022, the average mobile monthly active users of Hago was 6.7 million.

Following some strategic upgrades in the past two years, Hago has evolved from a platform primarily focused on casual games to a social platform that offers a variety of tools for engaging interactions. Users can make new acquaintances by playing multiplayer casual games (approximately 400 casual games are now available on Hago), join video & audio chat rooms based on their interests, create and customize their 3D avatars in Hago Space and join Groups or Families with like-minded people for more frequent communication.

Hago currently monetizes its user base mainly through virtual tips for live streaming, and is also exploring other monetization opportunities, such as pay-to-play games, advertisements and virtual items.

### **imo**

imo is a global instant messenger which provides audio and video communication service to its users. It offers smooth and stable international video calls and other features such as group calls and document sharing, fulfilling a variety of personal and business communication needs. It has a large and engaged user base in South Asia and the Middle East. In the fourth quarter of 2022, the average mobile monthly active users of imo reached 179.1 million.

In 2021, imo launched a new feature called VoiceClub, which is an online real-time voice chat communication space, enabling users to establish connections with users beyond their existing network. VoiceClub also enables users to send virtual gifts to their friends to express their support and appreciation.

imo currently monetizes its users mainly through advertisement and livestreaming. imo will continue to improve its communication experience and explore other monetization opportunities.

### **Shopline**

Shopline is a global smart commerce enabler that provides an integrated omnichannel platform for merchants to create and grow their brands online and reach customers worldwide. Shopline provides merchants with various services to optimize their business, such as inventory and sales management, logistics, payment, marketing and data analytics, among others. Shopline has helped over 500,000 merchants to launch and scale their online businesses.

Shopline currently generates revenues through the sale of different subscription plans of its software solutions, and the ancillary fees and commissions from provision of related value-added solutions.

### **YY Live (Discontinued)**

In the past, we also operated a live streaming platform (our discontinued business in mainland China)—YY Live. YY Live is an interactive and comprehensive video-based entertainment live streaming social media platform, offering content such as music and dance shows, talk shows, outdoor activities, sports and anime. On November 16, 2020, we entered into definitive binding agreements with Baidu and made certain amendments on February 7, 2021, pursuant to which our video-based entertainment live streaming business in mainland China, or YY Live, would be acquired by Baidu, which includes YY mobile app, YY.com website and PC YY, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. The acquisition has been substantially completed, with certain matters remaining to be completed in the future, including necessary regulatory approvals from government authorities. As a result, the historical financial results of YY Live are reflected in our consolidated financial statements as discontinued operations, and accordingly, we ceased consolidation of YY Live business since February 8, 2021. We and Baidu have agreed to extend the long stop date, which is the closing deadline of the proposed acquisition, indefinitely until the extension is terminated by either party. As of the date of this annual report, Baidu has paid an aggregate amount of US\$1.9 billion to us in our designated escrow account, and deposited an aggregate of US\$1.6 billion into Baidu's escrow accounts, in accordance with the terms and schedule set forth in the share purchase agreement. The necessary regulatory approval with respect to the proposed acquisitions has not been obtained yet.

## **Global Branding and Marketing**

### **Branding Strategy**

With our growing global presence and our diverse product offerings, we position ourself as a global technology company with an elevated group mission to “enriching lives through technology.” This latest strategy offers us greater flexibility to unleash the respective potential and power of our various products and services targeting different demographics of users and customers globally, as well as their diverse needs. Our global brands, including Bigo Live, Likee, imo, Hago and Shopline, enable us to reach the full spectrum of coveted user and customer bases around the world.

### **Marketing Activities**

We devise and execute a variety of marketing plans tailored for our respective business and markets. For our social entertainment business, we mainly employ performance-based advertising, social network marketing campaigns, as well as promotion through search engines and web portals, with an emphasis on efficiency and delivering measurable results. Furthermore, we cooperate with application distributors, hardware manufacturers and other industry partners to attract user traffic. We are also exploring innovative ways to enhance our user acquisition through various marketing activities, such as partnering with TV programs, online entertainment variety shows and dramas and others. For our smart commerce business, we undertake both online and offline marketing efforts to maximize our brand awareness and attract new merchants and ecosystem partners. We organize product marketing and awareness-driven campaigns aimed to inspire entrepreneurship and commerce digitalization. By attending offline exhibitions and industry summits, hosting global events and customer meetings and promoting our digital community (Shopline Blog) and other educational materials, we intend to expand our customer reach and educate more small and medium-sized businesses on how to improve operating efficiency and achieve business success with Shopline.

## **Seasonality**

Our results of operations of various products and services are subject to seasonal fluctuations, many of which are outside our control. For a discussion of the factors that may contribute to fluctuations of our quarterly results, see “Item 3. Key information—D. Risk Factors—Risks Related to Our Business and Industry—Our results of operations are subject to substantial quarterly and annual fluctuations due to seasonality.”

## **Competition**

We face competition in various aspects of our business. We directly compete with companies that provide online live streaming and short-form video businesses. In addition, we compete with other social networking and entertainment platforms in terms of user traffic and user time spent. In relation to our global business, our competitors primarily include global short-form video platforms such as TikTok, and livestreaming platforms such as Twitch in certain regions. We also face competition from companies that provide smart commerce solutions for merchants, such as Shopify.

## **Technology**

Our proprietary technologies are the backbone of our products and services. We enhance our user experience through a variety of advanced technology, including our AI-based content recommendation technology, to accurately and efficiently identify and deliver tailored short-form video clips and live streaming content to our users. As a leading provider of large-scale multi-user voice and video-enabled online service, we continually improve our technologies. Our capability to provide superior user experience is further supported by our highly scalable infrastructure, proprietary algorithms and software, and tailored devices for optimal live broadcasting performance, which help enable low latency, low jitter and low loss rates in delivering voice and video data even with weak internet connection.

### ***Artificial intelligence (AI) and algorithms technologies***

AI and algorithms technologies are embedded into our technology DNA. For example, we leverage our sophisticated machine learning models to enhance the effectiveness of our content tagging functions. We have also implemented our AI-powered visual recognition technology into our content distribution engine so that it can, with the assistance from our large-scale deep neural network and various search-related technology, automatically tag and accurately recommend the most relevant short-form video clips and live streaming shows to our users. The vast amount of users’ behavior data that we have accumulated helps us to construct data models of the underlying relations between our users, content and creators, thereby gaining a deeper understanding of their tendencies and preferences. Through those efforts, we were able to create an optimal experience for our users by ensuring that we distribute the video content to the different audience groups.

In addition, we are also empowered by our cutting-edge computer vision (CV) and augmented reality (AR) technology to help our content creators in combining real life’s moments with virtual scenes to produce innovative and engaging video content. We have launched Likee’s FaceMagic after years of R&D efforts in CV, which is able to help millions of creators on the platform to participate in virtual shows and share the astonishing moments with their fans.

### ***QoS for online multi-media communications***

Quality of Service, or QoS, assurance is a key element of any high-quality delivery of voice and video data over the internet. For live voice- or video-enabled communications, any data packet loss and jitter, or delay in transmission, is often immediately noticeable to users. We devote significant resources to maintain and develop a creative combination of multiple voice and voice-over internet protocol, or VOIP, quality assurance mechanisms to minimize data loss and jitter. The mechanisms we employ include, but are not limited to, cloud-based intelligence routing, low-bitrate redundant solution, upstream-forward error correction and adaptive jitter. A special intelligent routing algorithm we designed automatically seeks optimal ways of delivering voice and video data across our cloud-based network, enabling us to provide better QoS even when the QoS levels are lower on certain routes.

We employ computer programs and design and implement a standardized set of measurements to help monitor our service quality. Our system periodically collects, and our team of experts analyzes, data from each of our data centers to evaluate the voice and video-quality for each user using a systematic standard. We have set up formal procedures to handle different levels of server breakdowns and network-related emergencies, and our team can remotely discover issues and access any server to promptly resolve issues. Positioned to offer top-quality audio and video experience to our users worldwide, we developed a series of media technologies and revamped our streaming framework, which enable multimodal information to be synthetically utilized to provide highly flexible and customizable services.

Our adaptive audio and video encoding, transmission and decoding algorithms are conducive to delivering superior audio and video experience based on users' local setup, including locations, devices, network condition and personal preference, optimizing both fluency and latency at the same time.

### ***Large, dedicated cloud-based network infrastructure***

In 2022, we continued to develop and expand our global data center network, to provide top-quality, real-time video and audio services to our users worldwide. Our infrastructure provides seamless integration and is highly customized for supporting our services with significant flexibility. Our team of experts developed a cloud-based network infrastructure specifically designed to handle multi-party voice and video-enabled real-time online interactions. We own over 27,000 servers which are hosted in the data centers we lease from third parties across the world as of December 31, 2022. Our cloud-based network infrastructure provides quality data delivery and enable many users to interact online from anywhere with ease and speed.

Our system is designed for scalability and reliability to support growth in our user base. The number of our servers contributes significantly to our fast streaming speed and reliable services, and can be expanded with comparative ease and relatively lower cost, given the flexibility of renting data centers to host additional servers in any high traffic regions in our network. We believe that our current network facilities and broadband capacity provide us with sufficient capacity to carry out our current operations, and can be expanded to meet additional capacity relatively quickly. The amount of bandwidth we lease is continually expanded to reflect increased peak concurrent user numbers. We have been developing and expanding our data centers network around the world, focusing on Asia, Europe and the Americas. Our data centers' key technological mechanisms include optimized data access, automated switch of servers, and intelligent routing, which help ensure the quality of data transmission for our users globally. In response to poor connection situations, we are able to provide precise connection estimation, adaptive transcoding, segmentation-based coding and other advanced mechanisms to help users enjoy high-quality audio and video experience.

### ***Proprietary data-driven platform***

Significant time and efforts are required to build and operate an infrastructure such as ours. The technological difficulties which a platform that hosts 10,000 concurrent users faces differ greatly from the difficulties a platform with 100,000 and 1,000,000 concurrent users faces, including many issues to be considered when programming for the platform and planning the infrastructure. Over the years, we have gradually developed an effective system to identify, study and resolve issues that we encounter every day. In addition, our team members have been trained over the years to anticipate and resolve any issues, having gained significant knowledge from building and maintaining our platforms over time.

### **Safeguarding User Privacy**

We dedicate significant resources to strengthening the user privacy functions of our platforms, promoting a safe online environment for our users. For example, we provide our users with adequate notice as to what data are being collected, and have implemented a variety of mechanisms and policies to prevent the unauthorized use, loss or leak of collected user data. In addition, our data security technologies empower us to protect user data. For our external interfaces, we utilize firewalls to protect against potential attacks or unauthorized access. Our dedicated team of privacy professionals conducts regular reviews of our data security practices.

### **Content Moderation**

Our live streaming, short-form video and video communication platforms and other products enable users to exchange information, generate and distribute content, advertise products and services, conduct business and engage in various other online activities. A team within our data security department helps in enforcing our internal procedures to ensure that the content in our system is in compliance with applicable laws and regulations. They are aided by a program designed to sweep our platforms in real time and the data being conveyed in our system for sensitive key words or questionable materials. Content that contains certain keywords are automatically filtered by our program and cannot be successfully posted on our platforms. Thus we are able to minimize offending materials on our platforms and to remove such materials promptly after they are discovered. Our Hago platform has deployed deep learning-based voice recognition technology, which helps us to detect and delete prohibited content and deal with the relevant distributors in a timely fashion. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—We may face significant risks related to the content, information, communications and other activities on our platforms."

We have been continually localizing our content moderation efforts. In particular, we have deployed approximately 1,000 dedicated content moderation personnel with local language proficiency and cultural understanding in a number of countries worldwide, including, but not limited to, Egypt, Indonesia, Thailand and Vietnam.

### **Our IT Professionals**

We believe that our ability to develop internet and mobile online applications and services tailored to respond to the needs of our user base has been a key factor for the success of our business. As of December 31, 2022, our research and development team consisted of 2,852 members. All of our service programs are designed and developed internally, including various interactive technologies. Our research and development team currently works on both back-end and front-end development of our products and services, including (a) the continuous improvement of our core audio and video data processing and streaming technologies, (b) the enhancement of network and server structures, data distribution and transfer technologies to achieve lower latency and reduce interruptions, and (c) the creation of new features and functions to meet the demand of our users in various business lines, including, but not limited to, PC-desktop, web and mobile applications, channel templates and virtual items. We also build a team of experienced engineers who help us address challenges such as recommendation engines, big data and artificial intelligence, particularly in the areas of computer vision, national language processing, automatic speech recognition and speech synthesis.

We have technicians who are dedicated to monitoring and maintaining our network infrastructure. Our operation and maintenance team checks the voice and video data quality received by various users, the quality of users' experience on our platforms and the proper functioning of our server equipment in our network, as well as contacting internet data center hosts to fix any issues located through such checks. Having launched more diversified and complex products and services for an increasing number of users, we raised new challenges to our operation and maintenance team, and rely on them to continue to provide video content services and online real-time interactions to our users.

### **Intellectual Property**

We regard our patents, trademarks, domain names, copyrights, trade secrets, proprietary technologies and similar intellectual property as critical to our success. We seek to protect our intellectual property rights through a combination of patent, trademark, copyright and trade secret protection laws in mainland China and other jurisdictions, as well as through confidentiality agreements and procedures with our employees, partners and others.

### ***BIGO and Others***

As of December 31, 2022, we held 1,244 registered domain names, including joyy.com, joyy.sg, Bigo.TV, Duowan.com, bigolive.sg, likee.com, 52ohello.com, 746 software copyrights and other copyrights, 1,190 patents and 2,103 trademarks and service marks. In addition, as of December 31, 2022, we had filed 3,277 patent applications, covering certain of our proprietary technologies, and 4,266 trademark applications. For the avoidance of confusion, the above numbers exclude intellectual property rights which will be transferred to Baidu following the full completion of the sale of YY Live to Baidu, which was substantially completed with certain matters remaining to be completed in the future.

### **Corporate Social Responsibility**

JOYY's mission is to enrich lives through technology. We endeavor to build trusted and safe social platforms for users of different backgrounds, and empower users to find their own voice and show their talents and content to a global audience. We also aim to lower the barriers to entrepreneurship via our integrated smart commerce solution platform and help entrepreneurs achieve business success.

The evolvement of our business and ecosystem have created increasing economic opportunity for individuals, businesses and communities. By providing creator-friendly video creation tools and monetization features, and cultivating a community that empowers and encourages our creators to speak up, BIGO has established a creator-centric ecosystem that enables a large number of creators to showcase their talents in front of a global audience and enjoy promising economic returns at the same time, creating job opportunities in local communities. Supported by our global operations team, BIGO has rolled out a variety of online activities tailored to local users' evolving needs, empowering our creators to gain exposure both locally and internationally, and enabling them to realize new levels of personal and professional success. In addition to that, Shopline's integrated smart commerce solutions and education campaigns have equipped small and medium-sized businesses with the tools essential to start and grow a business, lowering the barriers to commerce and unlocking economic value in the region.

In the meanwhile, we are embedding social responsibility into our daily operations and partnering with communities on initiatives that create lasting positive impacts. Set forth below are some examples:

- In June 2019, BIGO established a S\$500,000 Scholarship Fund with Nanyang Technological University, specifically for the cultivation and development of AI talents in the region. As a longstanding fund, it will finance two graduating students with a sum of S\$10,000 each every year starting from 2020.
- In March 2022, Shipline entered into a partnership program with Nanyang Polytechnic in Singapore. Under the program, Shipline would provide internship opportunities and mentorship to the students, and be involved in the co-development and delivery of courses and industry projects. The collaboration aims to equip the next generation of entrepreneurs with the essential skills and knowledge, and help develop a pool of e-commerce talents with the specialized skillsets to strive in this dynamic and exciting industry.
- In April and May 2022, BIGO hosted several Ramadan campaigns and raised proceeds to support Health and Education Programs of UNICEF and SOS Children’s Village in the Middle East and North Africa region.
- In August 2022, we established Shipline Scholarship with a total contribution of S\$250,000 at the Singapore Management University, to motivate outstanding talents and to spur them on to greater heights of academic excellence.
- In September 2022, BIGO made donations to the California Latino Legislative Caucus Foundation as a scholarship fund to support local students in achieving their educational and professional goals.

We devote substantial efforts to cultivate diversity and inclusion in our operations. As we operate in a number of markets across the globe, our users are from different backgrounds and have distinctive needs. We strive to design our social products and cultivate local content echoing with the diverse local cultures and user interests. In 2022, BIGO partnered with a variety of non-profit organizations and launched a variety of online campaigns to honor diversity and promote inclusion on the platform.

We value and care for our employees. We are committed to building an open and inclusive working environment where we can grow alongside our employees. In line with the development of our global operations, we have recruited top talents all over the world. We provide comprehensive training programs to facilitate our employee’s pursuit of career development, including onboard training for new employees, special training for business departments, leadership training for newly-promoted managers and other training sessions on a variety of topics such as integrity, compliance, technology trends, available for all employees. We also have an internal online training system where employees could access and complete the training process online. In addition to providing a safe working environment, we provide our employees with access to a variety of programs and facilities designed to promote sustainable wellness for our employees, such as gym, health talks and fitness sessions.

### **Regulations in Multiple Jurisdictions Where We Operate**

As our globalized operations evolve, we may, from time to time, be subject to government regulations. As the live streaming, short-form video and smart commerce businesses are still at an early stage of development in the jurisdictions where we have presence, new laws and regulations may be adopted from time to time to require new licenses and permits in addition to those we currently have. This section sets forth the most important laws and regulations that govern our current business activities in multiple jurisdictions across the globe, including European Union, India, Singapore, Indonesia, Malaysia and Vietnam.

## **Regulations on Data Privacy and Protection**

### *General Data Protection Regulation–European Union*

The General Data Protection Regulation, or GDPR, regulates the collection and use of personal data in the EU. The GDPR covers any business, regardless of its location, that provides goods or services to residents in the EU and, thus, could incorporate our activities in EU member states. The GDPR imposes strict requirements on controllers and processors of personal data, including special protections for “sensitive information,” which includes health and genetic information of individuals residing in the EU. GDPR grants individuals the opportunity to object to the processing of their personal information, allows them to request deletion of personal information in certain circumstances, and provides the individual with an express right to seek legal remedies in the event the individual believes his or her rights have been violated. Further, the GDPR imposes strict rules on the transfer of personal data out of the EU to regions that have not been deemed to offer “adequate” privacy protections. Failure to comply with the requirements of the GDPR and the related national data protection laws of the EU member states, which may deviate slightly from the GDPR, may result in warning letters, mandatory audits and financial penalties, including fines of up to 4 percent of global revenues, or €20,000,000, whichever is greater. As a result of the implementation of the GDPR, we may be required to put in place additional mechanisms ensuring compliance with the new data protection rules.

There is significant uncertainty related to the manner in which data protection authorities will seek to enforce compliance with GDPR. For example, it is unclear whether the authorities will conduct random audits of companies doing business in the EU, or act solely after complaints are filed claiming a violation of the GDPR. The lack of compliance standards and precedent, enforcement uncertainty and the costs associated with ensuring GDPR compliance may be onerous and adversely affect our business, financial condition, results of operations and prospects.

### *California Consumer Privacy Act-California, United States*

The California Consumer Privacy Act, or CCPA, went into effect on January 1, 2020. The CCPA creates new transparency rules and individual privacy rights for consumers (as that word is broadly defined in the law) and places increased privacy and security obligations on entities handling personal data of consumers or households. The CCPA requires covered companies to provide new disclosures to California consumers, and provides such consumers new ways to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase the likelihood and cost of data breach litigation. The potential effects of this legislation are far-reaching and may require us to modify our data processing practices and policies and incur substantial costs and expenses in compliance and potential litigation efforts. As some other state and federal legislative and regulatory bodies are considering similar legislation on how to handle personal data, some observers have noted that the CCPA could mark the beginning of a trend toward more stringent privacy legislation in the United States, which could increase our potential liability and adversely affect our business.

### *Online Collection of Information from Children*

The Children’s Online Privacy Protection Act of 1998, or COPPA, governs the online collection of personal information from children under the age of 13. Under COPPA, a website or online service that knowingly collects information from children under 13 years old, or that in whole or in part is directed to children under 13 years old, must obtain verifiable parental consent before collecting, using and/or disclosing personal information from any child (including, but not limited to, first and last name, home address, email address, telephone number, Social Security number, image or likeness, mobile device identifier or other persistent identifier that would permit the physical or online contacting of a specific individual).

Websites or online services subject to COPPA must therefore obtain verifiable parental consent before engaging in online advertising that involves tracking of children under the age of 13. The website operator must also post and obtain parental consent to a clear online privacy policy that provides notice of what information is collected from children, how the information is used, and a list of third parties with which the operator may share or sell the child's information. The privacy policy must give parents the choice to determine whether the child's information can be shared with third parties, provide parents access to the child's information, and offer parents the opportunity to delete any collected information. If the company permits third-party advertising networks to use persistent identifiers to serve advertisements, those advertising networks must be informed that the site or service is directed towards children and the company must ensure that parental consent covers such collection, sharing, and use. Moreover, the operator must establish and maintain reasonable procedures to protect the confidentiality, security and integrity of any personal information collected from children under 13 years of age. COPPA also prohibits conditioning a child's participation in a game on the child disclosing more personal information than is reasonably necessary to participate in such activity. COPPA authorizes the FTC and the State Attorneys General to bring actions against website operators to enforce the statute, and provides for penalties of up to US\$42,530 per violation.

#### *Information Technology Act 2000–India*

Information Technology Act 2000, or the IT Act, governs the data privacy regulations in India. The IT Act contains three provisions on data protection and privacy. Section 43A provides that we are subject to civil liability to compensate for wrongful loss or gain to any person arising from negligence in implementing and maintaining reasonable security practices and procedures with respect to sensitive personal data or information that we possess, deal with or handle in our computer systems, networks, databases and software. Section 72A provides for criminal punishment if, in the course of performing a contract, a service provider discloses personal information without the consent of the person concerned or in breach of a lawful contract and he or she does so with the intention to cause, or knowing he or she is likely to cause, wrongful loss or wrongful gain. Section 72 prescribes criminal punishment if a government official discloses records and information accessed by him or her in the course of his or her duties without the consent of the concerned person or unless permitted by other laws. Section 79 provides safe harbor protection to internet service providers from being held liable for third-party information or data made available by such internet service providers that they have no knowledge of or that they had exercised all due diligence to prevent. India has also implemented privacy laws, including (i) the Information Technology (Reasonable Security Practices and Procedures and Sensitive Personal Data or Information) Rules, 2011, which impose limitations and restrictions on the collection, use and disclosure of personal information, and (ii) the Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021, which provides for checks and balances on social media companies by setting timelines for removal of unlawful content.

#### *Personal Data Protection Act 2012–Singapore*

An organization collecting, using or disclosing personal data is subject to the Personal Data Protection Act 2012 of Singapore, as amended from time to time, or the Singapore PDPA. Any information, whether true or not, that may be used to identify a natural person either directly from the data, or from the data and other information that the organization has access to, is considered "personal data." Examples may include an individual's name, date of birth, identity card number, passport number, residential address, characteristics and fingerprints, among others. The personal data that is protected under the Singapore PDPA excludes personal data that is publicly available and personal data that is disclosed under any written law. The Singapore PDPA also does not apply to business contact information, such as an individual's name, title, business address, business telephone number, and business e-mail address.

When an organization collects personal data, it must procure the individual's consent to the collection, use and disclosure of his/her personal data. Therefore, the individual should be notified of the purposes for which his personal data is collected, used or disclosed. There are certain exceptions to the consent requirement, which include the collection, use and disclosure of personal data for vital interests of individuals, matters affecting the public, legitimate interests of the organization, business asset transactions, business improvement and research.

Under the Singapore PDPA, individuals have clearly defined rights, such as the right to access their personal data, request information on how their personal data has been used, and correct any inaccuracies in the personal data held by the organization. The organization should designate a Data Protection Officer for this purpose. The organization must take reasonable steps to ensure the accuracy of the personal data recorded and put security arrangements in place to protect the personal data.

Furthermore, when transferring personal data outside of Singapore, care must be taken to ensure that the recipient organization is bound by legally enforceable obligations or specified certifications to afford the personal data with a standard of protection that is comparable to that established by the Singapore PDPA. Legally enforceable obligations may be imposed via the applicable law, a contract, binding corporate rules or any other legally binding instrument.

Where a breach of personal data has occurred, the organization is required to take reasonable and expeditious steps to assess the data breach. In some cases, the organization may be required to report the data breach to the Personal Data Protection Commission, and the affected individuals. Where the organization is acting as a data intermediary that is processing the personal data for another organization, the data intermediary is required to notify the organization of any data breaches in a timely manner.

#### *Personal Data Protection–Indonesia*

On October 17, 2022, Law No. 27 of 2022 on Personal Data Protection (the “PDP Law”) was enacted and came into effect, providing a new framework for personal data protection in Indonesia. To the extent provisions in existing and separate regulations relating to privacy and/or personal data protection in Indonesia such as MOCIT Regulation No. 20 of 2016 on Personal Data Protection in Electronic Systems and Government Regulation No. 71 of 2019 on the Provision of Electronic System and Transactions (collectively, “General Data Protection Regulations”), do not conflict with the PDP Law, the non-conflicting provisions in these General Data Protection Regulations remain valid. These General Data Protection Regulations set out the rules governing the protection of personal data that are stored in electronic form while PDP Law governs protection of personal data that are stored both in electronic and non-electronic forms. The PDP Law introduces the definitions of “Personal Data Controllers” and “Personal Data Processors,” which were previously limited to “electronic system provider” under the General Data Protection Regulations. The Personal Data Controllers, either individually or jointly with other parties, determine the purpose and control the processing of personal data, while the Personal Data Processors, either individually or jointly with other parties, act on behalf of the Personal Data Controllers to process personal data. The PDP Law requires any action taken in relation to the processing of personal data by either Personal Data Controllers and Personal Data Processors, including acquisition and collection, processing and analysis, storage, correction and updates, display, announcement, transfer, dissemination, disclosure, and deletion or destruction, to be subject to provisions of the PDP Law, such as requiring prior consent of the owner of such personal data. Further, under the PDP Law, the Personal Data Controllers and Personal Data Processors are imposed with a comprehensive set of obligations, including: (i) adoption of internal data protection and security policies, (ii) performing an impact assessment for any high-risk personal data processing, (iii) providing access to the personal data that is processed along with the track record of the processing in accordance with the storage period, (iv) appointment of a data protection officer by Personal Data Controllers or Personal Data Processors to carry out personal data protection functions, and (v) for overseas transfer of personal data, ensuring the recipient country has an equal or higher personal data protection governance than the PDP Law, or otherwise, ensuring that there is adequate and binding protection, or if the foregoing is not available, consent from the personal data subjects.

The General Data Protection Regulations clarify the data localization requirement by specifying that such requirement applies only to “public electronic systems providers” (i.e., central and regional executive, legislative, judicative bodies and any other bodies established pursuant to a statutory mandate, and entities appointed by the public bodies to operate electronic systems on their behalf). Meanwhile, a private provider can choose whether to process and/or host its electronic systems and data onshore or offshore. Regardless of the location, such provider must ensure that its electronic systems and data are accessible to the authority. However, this flexibility does not apply to private operators in the banking and financial services sectors.

In the event of a data breach, the PDP Law requires the Personal Data Controllers to deliver written notification no later than 72 hours to the personal data subjects and to the personal data protection authority. If the Personal Data Controllers or the Personal Data Processors fail to comply with the PDP Law, they may be subject to sanctions in the form of warnings or written reprimands, temporary suspensions of personal data processing activities, forced deletion or destruction of personal data, and administrative fines of up to 2% of annual revenue and income of the Personal Data Controller or the Personal Data Processor may be imposed. If corporations fail to comply with PDP Law, they may be subject to criminal fines as well as license revocation and liquidation.

#### *Personal Data Protection–Vietnam*

Until April 17, 2023, Vietnam did not have a single comprehensive data protection legal document. Instead, data protection provisions were prescribed across various laws and their corresponding guiding Decrees and Circulars, such as the Constitution, the Civil Code, the Law on Protection of Consumers’ Rights, the Law on Information Technology, etc., which regulate on different aspects of the data protection matter. In particular, the Constitution and the Civil Code provides basic principles on the right to privacy of individuals, while the Law on Protection of Consumers’ Rights and Decree 52/2013/ND-CP on E-commerce regulate on the consumer protection aspect, the Law on Information Technology stipulates requirements for collecting, processing and using personal information on the Internet, etc. The laws in Vietnam are all adopted by the National Assembly of Vietnam, while the Decrees and Circulars are issued by lower-level authority, which are respectively the Government and relevant Ministries.

On November 19, 2015, the Vietnam National Assembly passed the Law on Cyber Information Security, which sets forth regulations on cyber information security. Accordingly, individuals and companies must implement measures to assure the security of cyber information. For example, entities providing information technology services must comply with regulations on the storage and use of personal information, apply blocking and handling measures upon receipt of a notice that sending such information is illegal, and implement measures to allow recipients to refuse the receipt of information. Moreover, the owners of the personal information (i.e., the data subjects) are also provided the right to request for updating, alteration and cancellation of the personal information by the data processor. On the other hand, the Law on Cyber Information Security and its guiding document also provided certain requirements regarding notification of a data breach and other cyber information security incidents.

On June 12, 2018, the Vietnam National Assembly passed the Law on Cybersecurity which regulates that any foreign service provider in certain fields such as e-payment, e-commerce, online games is required to have a commercial presence in Vietnam (such as branch, representative office) and to localize the user's data in Vietnam. Then, the government issued Decree No. 53/2022/ND-CP on August 15, 2022 to provide further details on a number of articles of the Law on Cybersecurity. Accordingly, it clarifies that foreign cyberspaces service providers engaged in (a) telecommunications services; (b) storing and sharing data in cyberspace; (c) providing national or international domain names to service users in Vietnam; (d) e-commerce; (e) online payment; (f) payment intermediary services; (g) transport connection services through cyberspace; (h) social networks and social media; (i) online video games; and (k) services that provide, manage, or operate other information on cyberspace in the form of messages, voice calls, video calls, e-mails, online chats must store such data in Vietnam for at least 24 months and set up a branch or representative office in Vietnam if requested in writing by Minister of the Ministry of Public Security.

On April 17, 2023, the Vietnam Government issued Decree 13/2013/ND-CP on Personal Data Protection (the "Decree 13")—the first comprehensive legal document on personal data protection in Vietnam, and will come into effect on July 1, 2023. Unlike other decrees which are to clarify and provide further guidelines on provisions of the relevant law, the Decree 13 provides new and independent requirements on personal data protection, in harmony with similar provisions under the current legal framework. In particular, the Decree 13 provides a unified definition of personal data, which is defined as "*information in the form of symbols, letters, numbers, images, sounds or similar on an electronic environment that is associated with a particular person or helps to identify a particular person. Personal data include basic personal data and sensitive personal data.*" "*Information that helps to identify a specific person*" is further clarified as "*information formed from the activities of an individual that, when combined with other data and stored information, can identify a specific person.*" Apart from unifying previous concepts regulated in various legal documents, the Decree 13 has also adopted certain contents from the well-known General Data Protection Regulations from the EU, which provided new concepts and stricter requirements not yet been regulated in previous legal documents on personal data protection such as: basic personal data, sensitive personal data, data controller, data protection impact assessment, processing personal data obtained through public recordings and filming, processing personal data in advertising and so on. On the other hand, the Decree 13 also requires entities (both foreign and Vietnam-based) relating to personal data processing activities to notify the Department of Cyber Security and Hi-tech Crime Prevention under the Ministry of Public Security upon (i) occurrence of a violation of personal data protection (i.e., a data breach); and (ii) conducting a cross-border personal data transfer. Furthermore, data subject rights and obligations, specific responsibilities of data controllers, data processors and third parties are also specified under this document.

#### *Personal Data Protection—Malaysia*

The Personal Data Protection Act 2010 (the "Malaysia PDPA") regulates the processing of personal data in commercial transactions. The Malaysia PDPA applies insofar as the personal data of a customer is processed (for example, name, identification card number, address, phone number, email address). The definition of "personal data" under the Malaysia PDPA includes any information in respect of commercial transactions, which relates directly or indirectly to a data subject, who is identified or identifiable from that information or from that and other information in the possession of a data user, including any sensitive personal data and expression of opinion about the data subject. The Malaysia PDPA sets out seven (7) personal data protection principles to be complied with: General Principle, Notice and Choice Principle, Disclosure Principle, Security Principle, Retention Principle, Data Integrity Principle, and Access Principle. Additionally, the Personal Data Protection Regulations 2013 and the Personal Data Protection Standard 2015 set out in detail the requirements to be complied with in respect of the seven (7) principles.

The General Code of Practice of Personal Data Protection ("General CoP") sets out the best practices for data users in meeting the Malaysia PDPA requirements when undertaking commercial transactions, by further elaborating the seven (7) principles enumerated in the Malaysia PDPA. In particular, the General CoP clarifies the manner in which consent obtained from data subjects can be recorded and maintained. Such consent can be obtained in various forms, including through a clickable box, by conduct or performance, or verbally. The relevant data users are required to develop and implement appropriate compliance policies and procedures to ensure compliance with the General GoP and the Malaysia PDPA.

The Personal Data Protection Code of Practice for Licensees under the Communications and Multimedia Act 1998 (“CMA PDPA CoP”) outlines guidelines for the communications sector in Malaysia to comply with the Malaysia PDPA. In addition to the seven (7) principles enumerated in the Malaysia PDPA, the CMA PDPA CoP covers best practices for data management in the communications sector, including the use of clear and concise privacy notices, the implementation of access controls and data retention policies, and the use of encryption and other security measures to protect personal data. In addition, the CMA PDPA CoP outlines the requirements for cross-border data transfers, which involve the transfer of personal data outside of Malaysia, which include obtaining consent from data subjects, ensuring that the receiving country provides an adequate level of protection for personal data and implementing appropriate contractual and technical safeguards to protect personal data during the transfer process.

The General Consumer Code of Practice for the Communications and Multimedia Industry Malaysia (“Consumer CoP”) sets out the obligations in relation to the protection of personal information and sets out the rules in respect of the protection of consumer information policy and principles on notice, disclosure, consent, choice, data security, data quality and access. Accordingly, a service provider may collect and maintain necessary data / information of consumers for tracking practices, provided that the collection and maintenance of such data / information shall be fairly and lawfully collected and processed, processed for limited purposes, adequate, relevant and not excessive, accurate, not kept longer than necessary, processed in accordance with the data subject’s rights, secure and not transferred to any party without the consumer’s prior approval. Consumers must also be given the opportunity to exercise their choice in respect of how individually identifiable information collected from them may be used.

### ***Regulations on Intellectual Property***

#### *Copyright Act, 1957–India*

Copyright law in India is governed by the Copyright Act, 1957, which has been amended six times, with the last amendment in 2012. It is a comprehensive set of statutes providing for legal protection to copyright, moral rights and neighboring rights. Under the fair use provisions of the Act, section 52(1)(b) provides that transient or incidental storage of a work or performance purely in the technical process of electronic transmission or communication to the public does not constitute infringement of copyright. This provision provides safe harbor to internet service providers that may have incidentally stored infringing copies of a work for the purpose of transmission of data.

#### *Regulations on Intellectual Property–Singapore*

Singapore provides a comprehensive legal framework and supporting infrastructure for protecting patents, copyrights, trademarks and industrial designs.

Singapore protects inventive designs and processes through the Patents Act 1994 (as amended from time to time), which is based on the United Kingdom’s Patents Act of 1977. Singapore patents are protected internationally under the Patent Cooperation Treaty (PCT). A patent in Singapore is valid for 20 years, so long as the owner pays the annual renewal fees. Once registered, the owner can use, sell or license the patent. The criteria Singapore uses in granting a patent is that the process or design: (i) is new (i.e., should not be publicly known anywhere in the world), (ii) it must be an improvement that would not be obvious to someone with technical skill or knowledge in that field and (iii) should have practical application, which is generally in line with the criterion in the United Kingdom and the United States.

If a product or process is found to infringe a registered patent, the court can order damages and an injunction on the use of the infringing product or process.

Singapore’s Copyright Act 2011 (as amended from time to time, the “CA”) protects original works such as novels, computer programs, videos and performances, but does not include ideas, procedures, methods or discoveries because these are considered expressions of the underlying idea or discovery. There is no registration process for copyrighting in Singapore, and the copyright begins when the work is created- the author must take steps to show that he or she created the copyrighted work first in order to establish ownership. The author, or owner, of copyrighted material has the exclusive right to publish, perform, broadcast or adapt the work, and can assign or license all or part of the rights to others. An assignment of copyright needs to be in writing; a license need not be in writing and can be exclusive or non-exclusive. The protections Singapore affords through copyright and the length of those protections varies by the type of work it is.

Copyright infringement may be classified as: (i) primary infringement, covering direct unauthorized usage of the copyrighted work and (ii) secondary infringement, such as import, sale or exhibition of items which the infringer know or should have known was made without the copyright owner’s consent, false attribution of the authorship of a copyrighted work and false removal or alteration of rights management information electronically attached to a copyrighted work.

Subject to the general exception for “fair use,” a copyright owner can look to civil remedies for infringement include damages, an injunction and destruction of the infringing work, or “statutory damages” of not more than S\$10,000 per work and S\$200,000 in the aggregate. A person who infringes a copyright in Singapore can also be subject to criminal penalties. A person convicted of “primary infringement” may be punished with a fine of up to S\$20,000 and/or a jail term of up to six months. A person convicted of “secondary infringement” may be punished with a fine of up to S\$10,000 per work and S\$100,000 in the aggregate and/or the jail term cannot exceed five years.

Singapore protects trademarks through the Trade Marks Act (Cap 332, 2005 Rev Ed) as amended from time to time (the “Singapore TMA”) as well as under common law (mutually independent of each other). Protection under the Singapore TMA is conditional upon registration of the trademark with the Registry of Trade Marks within the Intellectual Property Office of Singapore (“IPOS”), with the exception of special protection granted under the Singapore TMA to ‘well known’ trademarks, and such protection is valid for 10 years from the date of registration and renewable for further periods of 10 years. Registration may be obtained through (i) a domestic application filed with the Registry of Trade Marks or (ii) an international application filed under the Madrid Protocol designating Singapore as a country where protection is sought, and a person who has earlier filed an application for registration in a Paris Convention/WTO country may, if he files for registration in Singapore within six months from the date of such application, claim a right of priority. Singapore follows the Nice Agreement Concerning the International Classification of Goods and Services for the Purposes of the Registration of Marks.

A registered trade mark may be assigned or licensed by the registered proprietor, and such assignment or licensing should be registered with the Registry of Trade Marks in order to be effective against a person acquiring a conflicting interest in the trade mark unaware of such assignment or license.

A registered proprietor of trademarks can look to a range of civil remedies for infringement, such as injunctions, either damages or an account of profits, or an order for delivery up and/or disposal of infringing articles in relation to the registered design. Where the infringement involves the use of a counterfeit trademark, the court may even award statutory damages of up to S\$1 million without proof of actual loss. Aside from these civil remedies, the registered proprietor may also enforce his trademark rights in criminal proceedings for infringing activities such as (i) counterfeiting a registered trademark, (ii) falsely applying a registered trade mark to goods or services, (iii) making or possessing articles for such infringement offence and (iv) importing or selling goods with falsely applied trademark. Conviction for any of these offences attracts a fine of up to S\$100,000 and/or imprisonment for a maximum term of five years.

#### Industrial Designs

Protection of industrial designs is available under the Registered Designs Act (Cap 266, 2005 Rev Ed), as amended from time to time (the “RDA”). This Act is modelled on the UK Registered Designs Act 1949 (as amended in 1988). Registration may be obtained through (i) a domestic application filed with the Registry of Designs within IPOS or (ii) an international application filed under the Geneva Act of the Hague Agreement Concerning the International Registration of Industrial Designs designating Singapore as a country where protection is sought, and a person who has earlier filed an application for registration in a Paris Convention/WTO country may, if he files for registration in Singapore within six months from the date of such application, claim a right of priority. The maximum duration of the protection conferred by registration is 15 years from the date of registration. Singapore follows the specification and classification determined by the Locarno Agreement Establishing an International Classification for Industrial Designs.

A registered design may be assigned or licensed by the registered owner, and such assignment or licensing should be registered with the Registry of Designs in order to be effective against a person acquiring a conflicting interest in the design unaware of such assignment or license.

A registered owner can look to a range of remedies for infringement such as injunctions, either damages or an account of profits, an order for delivery up and/or disposal of infringing articles in relation to the registered design. However, if the registered owner fails in its claim of infringement, it may be liable for a counterclaim for making groundless threats of design infringement. The remedies in such a counterclaim can include an injunction against the continuance of the threats, damages as well as a declaration that the threats are unjustifiable.

Where a registered design qualifies for protection under the RDA as well as the CA, there is no cumulative protection under registered design and copyright law: protection is available under the RDA only. Also, if a design is registrable under the RDA but has not been registered, the design will neither be covered by the registered design nor the copyright regime.

### *Copyrights–Indonesia*

Copyrights in Indonesia are regulated under Law No. 28 of 2014 on Copyrights (the “Indonesia Copyright Law”). Indonesia adopts the declarative system of copyright protection whereby a copyright is an exclusive right of a creator of content which arises automatically after a creation appears in a concrete form. The Indonesia Copyright Law protects creations in the field of science, arts and literature, which includes, among others, computer programs, video games, photography, songs or music with or without lyrics, and all forms of art.

### *Regulations on Intellectual Property–Vietnam*

Intellectual property rights in Vietnam are mainly governed by the Law on Intellectual Property, its guiding documents such as Decree 103/2016/ND-CP, Decree 100/2006/ND-CP, etc., together with certain international agreements to which Vietnam is a signatory.

In order for certain intellectual property rights to be recognized and enforceable in Vietnam, intellectual property owners must register those rights. Copyrights may be registered with the Department of Copyright of Vietnam but the registration is not compulsory. As a member of the Berne Convention, all copyrights will be protected automatically. Industrial property, such as patents, trademarks (except for well-known trademarks) and industrial design, must be registered with the Intellectual Property Office of Vietnam (the “VNIPPO”) in order to be protected in Vietnam, although unregistered rights may be protectable under the laws of unfair competition or passing off. A well-known trademark may be protected based on its use without registration and a trademark license is not required to be registered with the VNIPPO in order to have validity against a third party.

### *Regulations on Intellectual Property–Malaysia*

#### Trademark

Trademarks in Malaysia are governed by the Trademarks Act 2019, and the Trademarks Regulations 2019. Once a trademark is registered, the registered proprietor of the trademark has the exclusive rights to use the trademark and to authorize other persons to use the trademark, in relation to the goods or services for which the trademark is registered. Registered trademarks are valid for ten (10) years from the date of filing of the application and are renewable for subsequent periods of ten (10) years each. Subject to limited exceptions, no person or enterprise other than the registered proprietor or persons authorized by the registered proprietor may use the trademark, otherwise infringement actions may be taken against such person or enterprise.

#### Copyrights

The main governing legislation for copyright law in Malaysia is the Copyright Act 1987. Pursuant to the Copyright Act 1987, authors of protected works enjoy various exclusive rights, including the rights of reproduction in any material forms, communication to the public, performance, showing or playing to the public, and distribution of copies to the public by sale or other transfer of ownership. Literary works, musical works and artistic works are eligible for copyright protection if sufficient effort has been made to make the works original in character; and the works have been written down, recorded or otherwise reduced to a material form. There is no formal system for registration of copyright in Malaysia. Copyright is conferred automatically on a work once all statutory requirements have been met. That said, copyright owners can claim ownership by way of a Statutory Declaration or by filing a Voluntary Notification at the Intellectual Property Corporation of Malaysia (MyIPO). Online games and computer programs are eligible for copyright protection in Malaysia.

#### Patents

The Patents Act 1983 (the “Malaysia PA”) and the Patents Regulations 1986 govern the protection of inventions in Malaysia. An invention is eligible for patent protection if it is new, involves an inventive step, is industrially applicable, and is not explicitly excluded by the Malaysia PA. Examples of excluded items include discoveries, rules, and methods for doing business or playing games. Once granted, a patent is valid for a maximum of twenty (20) years from the date of filing, subject to yearly renewal. The owner of a patent is granted exclusive rights to exploit the patented invention, assign or transfer the patent, enter into licensee contracts, and deal with the patent as the subject of a security interest. Anyone seeking to deal with a patent exclusively owned by someone else must obtain prior consent. Infringement of a patent occurs when a person performs any of the acts under the exclusive control of the patent owner without authorization. Such acts include the manufacture, importation, offer for sale, sale, or use of the patented product or process.

### ***Mainland China Regulations***

Certain areas related to the internet, such as telecommunications, internet information services, connections to the international information networks, internet information security and censorship and cross-border smart commerce solution services, are covered extensively by a number of existing laws and regulations issued by various governmental authorities of mainland China. With the sale of YY Live being substantially completed with certain matters remaining to be completed in the future, including necessary regulatory approvals from government authorities, we believe the majority of our business, especially our global platforms that we operate outside mainland China, is not subject to the above regulations. Yet as we maintained some of our audio and video capabilities and functions and cross-border smart commerce solution services in mainland China, our remaining business operations in mainland China are subject to regulations issued by the below authorities, including:

- the Ministry of Industry and Information Technology, or the MIIT;
- the Ministry of Culture, or the MOC, which currently known as the Ministry of Culture and Tourism;
- the General Administration of Press and Publication, or the GAPP;
- the State Administration for Radio, Film and Television, or the SARFT;
- State Administration of Press, Publication, Radio, Film and Television of the People’s Republic of China, or the SAPPRFT;
- the National Copyright Administration, or the NCA;
- the State Administration for Industry and Commerce, or the SAIC, which currently known as the State Administration for Market Regulation, or the SAMR;
- the State Council Information Office, or the SCIO;
- the Ministry of Commerce, or the MOFCOM;
- the Bureau of Protection of State Secrets;
- the Ministry of Public Security; and
- the State Administration of Foreign Exchange, or the SAFE.

As the online social platform and cross-border smart commerce solution services are still at an early stage of development in mainland China, new laws and regulations may be adopted from time to time to require new licenses and permits in addition to those we currently have. There are substantial uncertainties on the interpretation and implementation of any current and future Chinese laws and regulations, including those applicable to the online social platform industries and cross-border smart commerce solution services. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Uncertainties in the interpretation and enforcement of laws and regulations of mainland China could limit the legal protections available to you and us.” This section sets forth the most important laws and regulations that govern our current business activities in mainland China and that affect the dividends payment to our shareholders.

### ***Regulations on Overseas Listing by Domestic Companies***

On August 8, 2006, six governmental agencies in mainland China jointly promulgated the Regulations on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors, or the M&A Rules, which became effective on September 8, 2006, and amended on June 22, 2009. The M&A Rules require offshore special purpose vehicles formed to pursue overseas listing of equity interests in companies in mainland China and controlled directly or indirectly by companies or individuals in mainland China to obtain the approval of the CSRC, prior to the listing and trading of such special purpose vehicle’s securities on any stock exchange overseas.

The application of the M&A Rules remains unclear. Based on the understanding of our PRC counsel, Fangda Partners, on the current laws, rules and regulations in mainland China and the M&A Rules, prior approval from the CSRC is not required under the M&A Rules for the listing and trading of our ADSs on the Nasdaq Global Select Market because (a) our subsidiaries in mainland China, Beijing Huanju Shidai and Guangzhou Huanju Shidai, are foreign-invested enterprises established by foreign enterprises, (b) we did not acquire any equity interest or assets of a domestic company in mainland China owned by companies or individuals in mainland China as defined under the M&A Rules, and (c) there is no provision that clearly classifies the contractual arrangements among our subsidiary in mainland China, Beijing Huanju Shidai, the variable interest entities and their shareholders as a transaction regulated by the M&A Rules. However, as there has been no official interpretation or clarification of the M&A Rules, we are also advised by our PRC counsel that there is uncertainty as to how this regulation will be interpreted or implemented.

Considering the uncertainties that exist with respect to the issuance of new laws, regulations or interpretation and implementing rules, the opinion of Fangda Partners summarized above is subject to change. If the CSRC or another mainland China's regulatory agency subsequently determines that prior CSRC approval was required, we may face regulatory actions or other sanctions from the CSRC or other mainland China's regulatory agencies.

On July 6, 2021, the relevant mainland China's governments promulgated the Opinions on Strictly Cracking Down on Illegal Securities Activities According to Law, within which, it is mentioned that the administration and supervision of overseas-listed companies based in mainland China will be strengthened, and the special provisions of the State Council on overseas issuance and listing of shares by such companies will be revised, clarifying the responsibilities of domestic industry competent authorities and regulatory authorities.

On February 17, 2023, the CSRC promulgated the Trial Administrative Measures of the Overseas Securities Offering and Listing by Domestic companies, or the Overseas Listing Trial Measures, and relevant five guidelines, which came into effect on March 31, 2023. According to the Overseas Listing Trial Measures, domestic companies in mainland China that seek to offer and list securities in overseas markets, including secondary listing and follow-on offerings, either directly or indirectly, are required to fulfill the filing procedure with the CSRC and report relevant information. The Overseas Listing Trial Measures provides that if the issuer meets both of the following criteria, the overseas securities offering and listing conducted by such issuer would be deemed as an indirect overseas offering subject to the filing procedure set forth under the Overseas Listing Trial Measures: (i) any of the operating revenue, total profit, total assets or net assets of domestic companies in mainland China for the most recent fiscal year accounts for 50% or more of the corresponding item as recorded in issuer's audited consolidated financial statements; and (ii) the issuer's business activities are substantially conducted in mainland China, or its principal place of business are located in mainland China, or the senior managers in charge of its business operations and management are mostly Chinese citizens or domiciled in mainland China. The Overseas Listing Trial Measures also provides that the determination for indirect overseas offering shall follow the "substance-over-formality" principle. Meanwhile, the guidelines of the Overseas Listing Trial Measures provides that even if the issuer does not meet such criteria, the issuer may still be subject to the filing procedures with the CSRC following the "substance-over-formality" principle, which takes a variety of other factors into consideration such as the issuer's filer status and disclosure in the offering documents.

In addition, the Overseas Listing Trial Measures provide that an overseas listing or offering is explicitly prohibited under any of the following circumstances: (i) such securities offering and listing is explicitly prohibited by provisions in laws, administrative regulations and relevant state rules; (ii) the intended securities offering and listing may endanger national security as reviewed and determined by competent authorities under the State Council in accordance with law; (iii) the domestic company intending to make the securities offering and listing, or its controlling shareholder and the actual controller, have committed relevant crimes such as corruption, bribery, embezzlement, misappropriation of property or undermining the order of the socialist market economy during the latest three years; (iv) the domestic company intending to make the securities offering and listing is currently under investigations for suspicion of criminal offenses or major violations of laws and regulations, and no conclusion has yet been made thereof; or (v) there are material ownership disputes over equity held by the domestic company's controlling shareholder or by other shareholder that are controlled by the controlling shareholder and/or actual controller.

In addition, pursuant to a press conference held by CSRC for the release of the Overseas Listing Trial Measures and the issuance of the Notice on Administration for the Filing of Overseas Offering and Listing by Domestic Companies, published on the same day, domestic companies in mainland China who had already completed the overseas securities offering and listing before the effective date of the Overseas Listing Trial Measures are not required to file with CSRC immediately but shall file with CSRC in due course in case of any activities such as follow-on financing in the future that shall be filed with CSRC according to the Overseas Listing Trial Measures.

Given the uncertainty of the interpretation and implementation of the Overseas Listing Trial Measures and our global operations, substantial uncertainties remain and we could not rule out the possibility that we may be required to file the relevant documents with the CSRC in connection with our proposed offerings and listings outside mainland China in the future.

On February 24, 2023, the CSRC, the Ministry of Finance, the National Administration of State Secrets Protection and the National Archives Administration jointly issued the Provisions on Strengthening Confidentiality and Archives Administration of Overseas Securities Offering and Listing by Domestic Companies, or the Confidentiality and Archives Provisions, which came into effect on March 31, 2023. The Confidentiality and Archives Provisions specify that during the overseas issuance of securities and listing activities of domestic enterprises, domestic enterprises and securities companies and securities service institutions that provide relevant securities services shall, by strictly abiding by the relevant laws and regulations of mainland China and the requirements therein, establish sound confidentiality and archives management systems, take necessary measures to implement confidentiality and archives management responsibilities, and shall not leak national secrets, work secrets of governmental agencies and undermine national and public interests. Work manuscripts generated in mainland China by securities companies and securities service institutions that provide relevant securities services for overseas issuance and listing of securities by domestic enterprises shall be kept in mainland China. Without the approval of relevant competent authorities, it shall not be transferred overseas. Where archives or copies need to be transferred outside mainland China, it shall be subject to the approval procedures in accordance with relevant regulations in mainland China.

In addition, on December 28, 2021, the CAC, together with 12 other government authorities, jointly issued the Cybersecurity Review Measures, which became effective on February 15, 2022. According to the Cybersecurity Review Measures, among others, (i) a “network platform operator” holding over one million users’ personal information shall apply for a cybersecurity review when listing their securities “in a foreign country” (ii) a critical information infrastructure operator, or a CIIO, that intends to purchase internet products and services that affect or may affect national security should apply for a cybersecurity review, and (iii) a “network platform operator” carrying out data processing activities that affect or may affect national security should apply for a cybersecurity review. Since the Cybersecurity Review Measures are relatively new, significant uncertainties remain in relation to their interpretation and implementation. Additionally, the Cybersecurity Review Measures do not provide the exact scope of “network platform operator” or the criteria for determining which circumstance falls within the definition of “holding over one million users’ personal information.” Furthermore, on November 14, 2021, the CAC commenced to publicly solicit comments on the Regulations on the Administration of Cyber Data Security (Draft for Comments), or the Draft Cyber Data Security Regulation, which regulates the specific requirements in respect of the data processing activities conducted by data processors through internet in the view of personal data protection, security of important data, data cross-border security management and obligations of internet platform operators. The Draft Cyber Data Security Regulation provides that, data processors conducting the following activities must apply for cybersecurity review: (i) merger, reorganization, or division of internet platform operators that have acquired a large number of data resources related to national security, economic development, or public interests, which affects or may affect national security; (ii) a foreign listing by a data processor processing personal information of over one million users; (iii) a listing in Hong Kong which affects or may affect national security; or (iv) other data processing activities that affect or may affect national security. In addition, the Draft Cyber Data Security Regulations require that a data processor who processes important data or whose securities are listed outside the PRC shall carry out annual data security assessment either by itself or through a third-party data security service provider and submit the assessment report to a local agency of the CAC. The Draft Cyber Data Security Regulations provide for a broad definition of “data processing activities” which includes collection, storage, usage, processing, transfer, provision, publication, deletion and other activities, which covers the entire life cycle of data processing. The definition of a “data processor” is also quite broad as covering individuals and entities that may autonomously determine the purpose and the method of data processing activities. However, the Draft Cyber Data Security Regulations were released for public comment only and its operative provisions and the anticipated adoption or effective dates may be subject to change with substantial uncertainty.

Meanwhile, according to the 2021 Negative List, where a domestic enterprise engaging in the prohibited business in the 2021 Negative List issues and lists shares overseas for trading, it shall obtain the approval of the relevant competent department of the state, and the overseas investor shall not participate in the operation and management of the domestic enterprise, and its shareholding ratio shall be subject to the relevant provisions on the administration of domestic securities investment by overseas investors.

#### *Regulation on Telecommunications Services and Foreign Ownership Restrictions*

Investment activities in mainland China by foreign investors are mainly governed by the Special Administrative Measures (Negative List) for the Access of Foreign Investment (2021), or the 2021 Negative List, which was promulgated on December 27, 2021 and became effective on January 1, 2022. According to the 2021 Negative List, the foreign stake in a value-added telecommunications service (except e-commerce, domestic multi-party communication, store-and-forward, and call center services) may not exceed 50%.

On December 30, 2019, the MOC and the SAMR jointly promulgated the Measures for Reporting of Foreign Investment Information, which became effective on January 1, 2020. According to the Measures for the Reporting of Foreign Investment Information, where foreign investors carry out investment activities directly or indirectly within mainland China, foreign investors or foreign-invested enterprises shall report investment information to commerce departments in accordance with these Measures. A foreign investor who establishes a foreign-invested enterprise within mainland China shall submit an initial report through the enterprise registration system when undergoing formation registration of the foreign-invested enterprise. In the case of any modification of the information in the initial report, which involves the enterprise's modification registration (recordation), the foreign-invested enterprise shall submit the modification report through the enterprise registration system when undergoing the enterprise's modification registration (recordation).

According to the Telecommunications Regulations, which became effective on September 25, 2000 and have been subsequently amended respectively on July 29, 2014 and February 6, 2016, and the Catalog of Telecommunications Business (2015 Amendment), implemented on March 1, 2016 attached to the Telecommunications Regulations and amended on June 6, 2019, internet information services are deemed a type of value-added telecommunications services. The Telecommunications Regulations require the operators of value-added telecommunications services to obtain value-added telecommunications business operation licenses from MIIT or its provincial delegates prior to the commencement of such services. Under these regulations, if the value-added telecommunications services offered include mobile network information services, the operation license for value-added telecommunications business must include the provision of such services in its covered scope. We currently hold ICP licenses, a sub-category of the value-added telecommunications business operation license, through Guangzhou Huaduo and Guangzhou BaiGuoYuan, covering the provision of internet and mobile network information services, issued by the Guangdong branch of the MIIT, which were last updated on December 23, 2020 and March 21, 2018, respectively.

The Regulations for the Administration of Foreign-Invested Telecommunications Enterprises, or the FITE Regulations, which took effect on January 1, 2002 and were amended respectively on September 10, 2008, February 6, 2016 and May 1, 2022, are the key regulations that regulate foreign direct investment in telecommunications companies in mainland China. The FITE Regulations stipulate that unless otherwise stipulated, the foreign investor of a telecommunications enterprise is prohibited from holding more than 50% of the equity interest in a foreign-invested enterprise that provides value-added telecommunications services, including provision of internet content.

On July 13, 2006, the MIIT issued the Circular on Strengthening the Administration of Foreign Investment in Value-added Telecommunications Services, or the MIIT Circular 2006, which requires that (a) foreign investors can only operate a telecommunications business in mainland China through establishing a telecommunications enterprise with a valid telecommunications business operation license; (b) domestic license holders are prohibited from leasing, transferring or selling telecommunications business operation licenses to foreign investors in any form, or providing any resource, sites or facilities to foreign investors to facilitate the unlicensed operation of telecommunications business in mainland China; (c) value-added telecommunications service providers or their shareholders must directly own the domain names and registered trademarks they use in their daily operations; (d) each value-added telecommunications service provider must have the necessary sites and facilities for its approved business operations and maintain such sites and facilities in the geographic regions covered by its license; and (e) all value-added telecommunications service providers should improve network and information security, enact relevant information safety administration regulations and set up emergency plans to ensure network and information safety. Due to the lack of any additional interpretation from the regulatory authorities, it remains unclear what impact MIIT Circular 2006 will have on us or the other PRC internet companies with similar corporate and contractual structures.

To comply with such foreign ownership restrictions, we operate our online platform in mainland China through Guangzhou Huaduo in mainland China, a subsidiary of Guangzhou Tuyue. Guangzhou Tuyue is indirectly held by selected individuals from our senior management team who are PRC citizens, through limited partnership in mainland China jointly established by these individuals. See "Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements." Moreover, Guangzhou Huaduo is the registered holder of a majority of the domain names, trademarks and facilities necessary for daily operations in compliance with the MIIT Circular 2006. Based on our PRC counsel Fangda Partners' understanding of the current laws, rules and regulations of mainland China, our corporate structure complies with all existing laws and regulations of mainland China. However, we were further advised by our PRC counsel that there are substantial uncertainties with respect to the interpretation and application of existing or future laws and regulations of mainland China and thus there is no assurance that mainland China's governmental authorities would take a view consistent with the opinions of our PRC counsel.

### *Internet Information Services*

The Administrative Measures on Internet Information Services, or the ICP Measures, issued by the State Council on September 25, 2000 and amended on January 8, 2011, regulate the provision of internet information services. According to the ICP Measures, internet information commercial service providers shall obtain a value-added telecommunications business operation license (the “ICP license”), from the relevant local authorities before engaging in the providing of any commercial internet information services in mainland China, and the ICP license is subject to annual inspection within the first quarter of the next year according to the Administrative Measures for Telecommunications Business Operating Licensing, which was promulgated by the MIIT on March 5, 2009 and amended on July 3, 2017. In addition, if the internet information services involve provision of news, publication, education, medicine, health, pharmaceuticals, medical equipment and other services that statutorily require approvals from other additional governmental authorities, such approvals must be obtained before applying for the ICP license. Each of Guangzhou Huaduo and Guangzhou BaiGuoYuan presently holds the ICP licenses on internet and mobile network information services issued by the Guangdong branch of the MIIT.

Besides, the ICP Measures and other relevant measures also ban the internet activities that constitute publication of any content that propagates obscenity, pornography, gambling and violence, incite the commission of crimes or infringe upon the lawful rights and interests of third parties, among others. If an internet information service provider detects information transmitted on their system that falls within the specifically prohibited scope, such provider must terminate such transmission, delete such information immediately, keep records and report to the governmental authorities in charge. Any provider’s violation of these prescriptions will lead to the revocation of its ICP license and, in serious cases, the shutting down of its internet systems.

On January 8, 2021, the CAC promulgated the Internet Information Services Measures (Revised Draft for Comments), which sets forth detailed rules on the internet information service activities. As of the date of this annual report, the draft has not been formally adopted.

On June 27, 2022, the CAC promulgated the Administrative Provisions on Internet User Account Information, which took effect on August 1, 2022. The Provisions requires internet information service providers to assume their responsibilities as subjects in charge of internet user account information management, equip professional personnel and technical capabilities appropriate to the service scale, and establish, improve and strictly implement the management systems of real identity information authentication, account information verification, information content security, ecological governance, emergency response, and personal information protection.

On September 9, 2022, the CAC, the MIIT and SAMR jointly promulgated the Administrative Provisions on Internet Pop-Up Window Information Push Services, or the Pop-Up Window Provisions, which took effect on September 30, 2022. According to the Pop-Up Window Provisions, the Internet pop-up window information pushing service providers shall fulfill their responsibilities as subjects of information content administration, and establish and improve their management systems for information content review, ecological governance, data security and personal information protection and minor protection.

### *Regulations Related to Mobile Internet Applications Information Services*

The mobile internet applications, or the APPs, are specially regulated by the Administrative Provisions on Mobile Internet Applications Information Services, or the App Provisions, which were promulgated by the Cyberspace Administration of China, or CAC, on June 14, 2022 and became effective on August 1, 2022. The App Provisions set forth the relevant requirements on the APP information service providers. The CAC and local offices of cyberspace administration shall be responsible for the supervision and administration of nationwide and local APP information respectively.

The APP information service providers shall satisfy relevant qualifications required by laws and regulations, carry out the information security management responsibilities strictly and fulfill their obligations in various aspects relating to authentic identity information certification, protection of users' information, examination and management of information content, as follows: (i) shall authenticate the identity information of the registered users including their mobile phone number, identity card number, uniform social credit number and other identity information; (ii) shall fulfill data security protection obligations, establish and perfect the whole-process data security management, take technical measures and other security measures to ensure data security and strengthen risk monitoring and shall not harm national security and public interest or damage the legitimate rights and interests of others; (iii) while handling personal information, shall follow the principles of legality, legitimacy, necessity and integrity, have clear and reasonable purposes, disclose processing rules, comply with relevant provisions on the scope of necessary personal information, regulate personal information processing activities, and take necessary measures to protect the security of personal information, and shall not force users to agree on the processing of personal information for any reason or refuse users' use of its basic functions and services due to users' disagreement on providing non-essential personal information; (iv) shall establish and perfect the mechanism for the examination and management of information content, establish and perfect the management measures for user registration, account management, information examination, routine inspection, and emergency response, and have professionals and technical capabilities commensurate with the scale of services; (v) shall not induce users to download the APP by false publicity, bundled download, and other behavior, through automatic or manual ranking and views inflating, review control and other methods, or by using illegal and harmful information; (vi) shall immediately take remedial measures, notify users in a timely manner, and report to competent department according to the provisions when risks of the APP such as security defects and vulnerabilities has been found. (vii) shall insist on the principle that is most beneficial to minors, pay attention to the healthy growth of minors, fulfill various obligations of network protection for minors, and strictly implement the requirements for registration and login of minors' user accounts with real identity information according to the law, and shall not provide minor users with related products and services that induce their addiction in any form or produce, copy, publish, or spread any information containing content that harms the physical and mental health of minors; (viii) shall conduct security assessment in accordance with relevant provisions when new technologies, a new App, and new functions with public opinion attributes or social mobilization capabilities are launched; and (ix) shall, in accordance with the laws and regulations and the relevant rules of the state, develop and disclose management rules, and enter into service agreements with registered users to specify the relevant rights and obligations of both parties.

On June 13, 2022, The National Information Security Standardization Technical Committee promulgated the Information Security Technology - Guide to the Administration of Personal Information Processing Activities of App on the Mobile Intelligent Terminal (Draft for Comments), which provides the guidelines for personal information security function design and personal information security risk management by mobile intelligent terminal.

On November 28, 2019, the Secretary Bureau of the Cyberspace Administration of China, the MIIT, the Ministry of Public Security and the SAMR jointly promulgated the Measures for the Determination of the Collection and Use of Personal Information by APPs in Violation of Laws and Regulations, which came into effect on the same day. The Measures explicitly classify acts that may be determined as "failing to make public the collection and use rules," "failing to explicitly show the purposes, methods and scope of the collection and use of personal information," "failing to collect and using personal information with a user's consent," "collecting personal information unrelated to the services it provides against the necessary principle" and "providing personal information to others without consent."

#### *Real-name Registration System*

Pursuant to the Provisions on Administration over the Internet User Public Account Information Services, which was promulgated by the State Internet Information Office on September 7, 2017 and became effective on October 8, 2017 and amended on February 22, 2021, the network platforms providing the services of registration of the Internet user accounts shall conduct real identity verification over the registered users and require providing the identity information and mobile phone number. If a user fails to provide real identity information, the network platforms shall not provide the information release services to such user.

#### *Online Music and Entertainment*

On November 20, 2006, the MOC issued Several Suggestions of the MOC on the Development and Administration of Internet Music, or the Suggestions, which became effective on the same date. The Suggestions, among other things, reiterate the requirement for an internet service provider to obtain an Internet Culture Operation License to carry out any business relating to internet music products. In addition, foreign investors are prohibited from operating internet culture businesses. However, the laws and regulations on internet music products are still evolving, and there have not been any provisions clarifying whether music products will be regulated by the Suggestions or how such regulation would be carried out.

On October 23, 2015, the MOC promulgated the Notice on Further Strengthening and Improving the Content Management of Online Music, which stipulated that operating entities shall carry out self-examination in respect of the content management of online music, which shall be regulated by the cultural administration departments in process or afterwards.

Guangzhou Huaduo holds a valid Internet Culture Operation License covering our provision of online music. Most of the music offered on our websites is sung by grassroots performers along with recorded music. If any music provided through our platforms is found to lack necessary filings and/or approvals, we could be requested to cease providing such music or be subject to claims from third parties or penalties from the MOC or its local branches. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—If the variable interest entities fail to obtain and maintain the requisite licenses and approvals required under the complex regulatory environment for internet-based businesses in mainland China, our business, financial condition and results of operations in mainland China may be adversely affected.” Moreover, the unauthorized posting of online music on our platforms by third parties may expose us to the risk of administrative penalties and intellectual property infringement lawsuits. See “Item 3. Key Information—Item 3. D. Risk Factors—Risks Related to Our Business and Industry—We may face significant risks related to the content, information, communications and other activities on our platforms.” and “—Mainland China Regulations—Intellectual Property Rights—Copyright.”

In 2011, the MOC greatly intensified its regulation of the provision of online music products. According to the series of Notices on Clearing Online Music Products that are in Violation of Relevant Regulations promulgated by the MOC since January 7, 2011, entities that provide any of the following will be subject to relevant penalties or sanctions imposed by the MOC: (a) online music products or relevant services without obtaining corresponding qualifications, (b) imported online music products that have not passed the content review of the MOC or (c) domestically developed online music products that have not been filed with the MOC. Thus far, we believe that we have eliminated from our platforms any online music products that may fall into the scope of those prohibited online music products thereunder.

#### *Online Transmission of Audio-Visual Programs*

According to the Administrative Provisions on Private Network and Targeted Publication of Audio-Visual Programs Services, or the Audio-Visual Provisions, which was promulgated by the SAPPRFT on April 25, 2016 and put into effect on June 1, 2016 and amended on March 23, 2021, to engage in the transmission and distribution of audio-visual programs, a License for the Online Transmission of Audio-Visual Programs is required. Foreign invested enterprises are not allowed to carry out such business.

To further regulate the provision of audio-visual program services to the public via the internet, including through mobile networks, within the territory of the PRC, the SARFT and the MIIT jointly promulgated the Administrative Provisions on Internet Audio-Visual Program Service, or the Audio-Visual Program Provisions, on December 20, 2007, which came into effect on January 31, 2008 and subsequently amended on August 28, 2015. Providers of internet audio-visual program services are required to obtain a License for Online Transmission of Audio-Visual Programs issued by SARFT, or complete certain registration procedures with SARFT. In general, providers of internet audio-visual program services must be either state-owned or state-controlled entities, and the business to be carried out by such providers must satisfy the overall planning and guidance catalog for internet audio-visual program service determined by SARFT. On March 30, 2009, SARFT promulgated the Notice on Strengthening the Administration of the Content of Internet Audio-Visual Programs, which reiterates the pre-approval requirements for the audio-visual programs transmitted via the internet, including through mobile networks, where applicable, and prohibits certain types of internet audio-visual programs containing violence, pornography, gambling, terrorism, superstition or other similarly prohibited elements.

The Internet Audio-visual Program Services Categories (Provisional), or the Provisional Categories issued by the SARFT on March 17, 2010 and subsequently revised on March 10, 2017 classified internet audio-visual program services into four categories.

Administrative Measures for the Business Activities of Online Performances, or Online Performance Measures, was promulgated by the MOC on December 2, 2016 and became effective on January 1, 2017, regulating that the entity engaging in the operation of online performances shall establish content review system, and be staffed with qualified reviewers for self-censorship. Pursuant to Online Performance Measures, online performances shall not contain any illegal elements set forth in the Online Performance Measures. Once the online performances in violation of laws are found, the entity engaging in the operation of online performances shall immediately suspends the provision of such performance, and report relevant information to the authorized governmental departments.

Guangzhou Huaduo holds a valid License for Online Transmission of Audio-Visual Programs with the business classification of converging and play-on-demand service for certain kinds of audio-visual programs—literary, artistic and entertaining—as prescribed in the Provisional Categories.

#### *Regulation on Advertising Business and Conditions on Foreign Investment*

The SAMR is the primary governmental authority regulating advertising activities in mainland China. Regulations that apply to advertising business primarily include:

- Advertisement Law of the People’s Republic of China, promulgated by the Standing Committee of the National People’s Congress on October 27, 1994 and amended on April 24, 2015 which became effective since September 1, 2015, on October 26, 2018 and on April 29, 2021, respectively;
- Administrative Regulations for Advertising, promulgated by the State Council on October 26, 1987 and effective since December 1, 1987.

According to the above regulations, companies that engage in advertising activities must each obtain, from the SAMR or its local branches, a business license which specifically includes operating an advertising business in its business scope. An enterprise engaging in advertising business within the specifications in its business scope does not need to apply for an advertising operation license, provided that such enterprise is not a radio station, television station, newspaper or magazine publisher or any other entity otherwise specified in the relevant laws or administrative regulations. Enterprises conducting advertising activities without such license may be subject to penalties, including fines, confiscation of advertising income and orders to cease advertising operations. The business license of an advertising company is valid for the duration of its existence, unless the license is suspended or revoked due to a violation of any relevant laws or regulations.

Advertisers, advertising agencies, and advertising distributors are required to ensure that the content of the advertisements they prepare or distribute is true and in complete compliance with applicable laws. In providing advertising services, advertising operators and advertising distributors must review the supporting documents provided by advertisers for advertisements and verify that the content of the advertisements complies with applicable PRC laws and regulations. Prior to distributing advertisements that are subject to government censorship and approval, advertising distributors are obligated to verify that such censorship has been performed and approval has been obtained. Violation of these regulations may result in penalties, including fines, confiscation of advertising income, orders to cease dissemination of the advertisements and orders to publish an advertisement correcting the misleading information. Where serious violations occur, the SAMR or its local branches may revoke such offenders’ business licenses.

On February 25, 2023, the SAMR promulgated the Internet Advertisement Management Measures, which will come into effect on May 1, 2023. The Internet Advertisement Management Measures further enhances the oversight over internet advertising activities covering all commercial advertising activities within mainland China for direct or indirect introduction of products or services via websites, web pages, internet apps and other internet media in the form of text, pictures, audio, video or other forms.

#### *Regulation on Customs and Goods Export and Import*

The Customs Law of the PRC was promulgated by the SCNPC on January 22, 1987 and came into effect on July 1, 1987, as amended on July 8, 2000, June 29, 2013, December 28, 2013, November 7, 2016, November 4, 2017 and April 29, 2021. Pursuant to the Customs Law, unless otherwise provided, the import and export goods shall be declaration by consignees and consignors themselves, or by their entrusted customs clearance agencies. In addition, the consignor or consignee of the goods exported or imported and the customs declaration enterprise shall fulfil recordation formalities for customs declaration. Failure to apply for recordation with relevant authorities may result in fines by the Customs.

On November 19, 2021, the GAC promulgated the Provisions on the Administration of Recordation of Customs Declaration Entities of the PRC, or the Provisions of Recordation of Customs Declaration Entities, which came into effect on January 1, 2022. Provisions of Recordation of Customs Declaration Entities clarified that a consignee or consignor of imported or exported goods or a customs declaration enterprise which have been recorded with the customs, or the customs declaration entities, may operate the business of customs declaration within the customs territory of the PRC. To complete the recordation formalities, the relevant customs declaration entity shall be a qualified market entity and a consignee or consignor of imported or exported goods shall complete an additional foreign trade operator recordation. The recordation information shall be published through the “Credit Publicity Platform of Import and Export Business of Customs of the People’s Republic of China.” Pursuant to the Announcement of Including the Recordation of Customs Declaration Entities in the Certificates Integrating Reform promulgated jointly by the GAC and the SAMR in December 20, 2021 which came into effect on January 1, 2022, application for recordation of the customs declaration entity is incorporated into the business registration with the market administration authority. Enterprises are not required to file another recordation application to the customs.

In addition, according to the Measures for the Recordation and Registration of Foreign Trade Operators promulgated by the MOFCOM on June 25, 2004 and amended respectively on August 18, 2016, November 30, 2019, and May 10, 2021, a foreign trade operator who engages in the import and export of goods shall go through the formalities for recordation and registration with the MOFCOM or an authority authorized by the MOFCOM. If a foreign trade operator fails to go through the aforesaid formalities for recordation and registration, the customs shall refuse to handle the declaration and clearance procedures of its imports and exports.

### *Intellectual Property Rights*

#### Software

The State Council and the NCA have promulgated various rules and regulations relating to protection of software in mainland China. According to these rules and regulations, software owners, licensees and transferees may register their rights in software with the SCB or its local branches and obtain software copyright registration certificates. Although such registration is not mandatory under PRC law, software owners, licensees and transferees are encouraged to go through the registration process and registered software rights to be entitled to better protections. For the number of software programs for which we had registered rights as of December 31, 2022, see “Item 4. Information on the Company—B. Business Overview—Intellectual Property.”

#### Patents

The National People’s Congress adopted the Patent Law of the People’s Republic of China in 1984 and amended it in 1992, 2000, 2008 and 2020, respectively. The most recently amended Patent Law of the People’s Republic of China, or the 2020 Patent Law came into force on June 1, 2021. A patentable invention, utility model or design must meet three conditions: novelty, inventiveness and practical applicability. Patents cannot be granted for scientific discoveries, rules and methods for intellectual activities, methods used to diagnose or treat diseases, animal and plant breeds or substances obtained by means of nuclear transformation. The Patent Office under the State Intellectual Property Office is responsible for receiving, examining and approving patent applications. According to the 2020 Patent Law, a patent is valid for a twenty-year term for an invention, a ten-year term for a utility model and a fifteen-year term for design, starting from the application date. Except under certain specific circumstances provided by law, any third-party user must obtain consent or a proper license from the patent owner to use the patent, or else the use will constitute an infringement of the rights of the patent holder. For the number of patents we had and the number of patent applications we made as of December 31, 2022, see “Item 4. Information on the Company—B. Business Overview—Intellectual Property.”

## Copyright

The Copyright Law of the People's Republic of China, or the Copyright Law, promulgated in 1990 and amended in 2001, 2010 and 2020. The most recently amended Copyright Law, or 2020 Copyright Law, took effect on June 1, 2021. The Copyright Law and its related implementing regulations, promulgated on May 30, 1991, and amended on August 2, 2002, January 8, 2011 and on January 30, 2013, respectively, are the principal laws and regulations governing the copyright related matters. The amended Copyright law covers internet activities, products disseminated over the internet and software products, among the subjects entitled to copyright protections. Registration of copyright is voluntary, and is administrated by the China Copyright Protection Center.

To further clarify some key internet copyright issues, on December 17, 2012, the PRC Supreme People's Court promulgated the Regulation on Several Issues Concerning Applicable Laws on Trial of Civil Disputes over the Infringement of Information Network Transmission Right, or the Information Network Transmission Right Infringement Regulation. The Information Network Transmission Right Infringement Regulation took effect on January 1, 2013. The Information Network Transmission Right Infringement Regulation was amended on December 29, 2020 and came into effect on January 1, 2021. Under the Information Network Transmission Right Infringement Regulation, where an internet information service provider works in cooperation with others to jointly provide works, performances, audio and video products of which the right holders have information network transmission right, such behavior will constitute joint infringement of third parties' information network transmission right, and the PRC court shall order such internet information service provider to assume joint liability for such infringement. The PRC court shall determine whether an internet information service provider is liable for abetting or contributory infringement according to its findings on the degree of fault of the internet information service provider. The fault of the internet information service provider is determined according to various criteria, including situations where such provider knew or should have known of the network user's infringement against third party's information network transmission right. If an internet information service provider can prove that it has only provided network services through automatic access, automatic transmission, data storage space, search functions, links, document sharing technology, etc., and thereby argues that it has not been involved in any alleged joint infringement, the PRC court shall find in favor of such internet information service provider. If an internet information service provider fails to take necessary measures, the PRC court shall find that it acknowledges such infringement.

Under the 2020 Copyright Law and its implementation rules, anyone infringing upon the copyrights of others is subject to various civil liabilities, which include stopping the infringement, eliminating the damages, apologizing to the copyright owners and compensating the copyright owners for such owners' actual or the income received by the offender as a result of the copyright infringement; or if such actual loss or income is in itself difficult to calculate, the relevant PRC court may decide the amount of the actual loss up to RMB 5,000,000 for each infringement.

An internet information service operator may be subject to cease-and-desist orders and other administrative penalties such as confiscation of illegal income and fines, if it is clearly aware of a copyright infringement through the internet or, although not aware of such infringement, it fails to take measures to remove relevant content upon receipt of the copyright owner's notice of infringement and, as a result, damages public interests.

On May 18, 2006, the State Council issued the Protection of the Right of Communication through Information Network, which took effect on July 1, 2006 and amended on January 30, 2013. Under this regulation, an internet information service provider may be exempt from indemnification liabilities under the certain circumstances.

We have adopted measures to mitigate copyright infringement risks. For instance, we have established a routine reporting and registration system that is updated on a monthly basis, and we require performers, channel owners and users to acknowledge and agree that (a) they would not perform or upload copyrighted content without proper authorization and (b) that they will indemnify us for any relevant copyright infringement claims in relation to their activities on our platforms.

If, despite these precautions, such procedures fail to effectively prevent unauthorized posting or use of copyrighted content or the infringement of other third-party rights on our platforms, and the PRC courts find that certain safe harbor exemptions under PRC laws are not applicable to us because, for instance, a court finds that we knew or should have known about such infringement or that we have directly derived economic benefits from allowing such infringement activities on our platforms, we may be held jointly and severally liable with the performers, channel owners or other infringement parties in lawsuits initiated by the relevant third-party copyright holders or authorized users. See "Item 3. Key Information-D. Risk Factors—Risks Related to Our Business and Industry—We have been and may be subject to intellectual property infringement, misappropriation or other claims or allegations in multiple jurisdictions, which could result in our payment of substantial damages, penalties and fines, removal of relevant content from our website or seeking license arrangements which may not be available on commercially reasonable terms."

#### Domain Name

The Measures for Administration of Domain Names, or the Domain Name Measures, was promulgated by the MIIT on August 24, 2017 and became effective on November 1, 2017. The MIIT is the major regulatory authority responsible for the administration of the PRC Internet domain names. The registration of domain names in PRC is on a “first-apply-first-registration” basis. A domain name applicant will become the domain name holder upon the completion of the application procedure. For the number of domain names we registered as of December 31, 2022, see “Item 4. Information on the Company—B. Business Overview—Intellectual Property.”

#### Trademark

The PRC Trademark Law, adopted in 1982 and amended in 1993, 2001, 2013 and 2019, with its implementation rules adopted in 2002 and amended in 2014, protects registered trademarks. The Trademark Office of the SAIC (currently known as the Trademark Office of National Intellectual Property Administration) handles trademark registrations and grants a protection term of ten years to registered trademarks. Trademark license agreements must be filed with the Trademark Office for record. For the number of trademarks we had and trademark applications we had made as of December 31, 2022, see “Item 4. Information on the Company—B. Business Overview—Intellectual Property.”

#### *Internet Infringement*

On May 28, 2020, the National People’s Congress of the People’s Republic of China promulgated the PRC Civil Code, which became effective on January 1, 2021. Under the Civil Code, an internet user or an internet service provider that infringes upon the civil rights or interests of others through using the internet assumes tort liability. If an internet user infringes upon the civil rights or interests of another through using the internet, the person being infringed upon has the right to notify and request the internet service provider to take necessary measures including the deletion, blocking or disconnection of an internet link. If, after being notified, the internet service provider fails to take necessary measures in a timely manner to end the infringement, it will be jointly and severally liable for any additional harm caused by its failure to act.

#### *Regulation of Internet Content*

The PRC government has promulgated measures relating to internet content through a number of governmental agencies, including the MIIT, the MOC and the GAPP. These measures specifically prohibit internet activities that result in the publication of any content which is found to contain, among others, propagate obscenity, gambling or violence, instigate crimes, undermine public morality or the cultural traditions of the PRC, or compromise state security or secrets. If an ICP license holder violates these measures, its ICP license may be revoked and its websites may be shut down by the relevant government agencies.

On December 15, 2019, the Cyberspace Administration of China promulgated the Provisions of Ecological Governance of Internet Information Content, which came into effect on March 1, 2020. Under this Provisions, an internet information content platform shall set up the mechanism of ecological governance of internet information content, develop the detailed rules for ecological governance of the internet information content on the platform and improve the systems of user registration, account management, information release and examination, etc. The platform shall set up the person in charge of the ecological governance of internet information content, equip itself with the professional personnel commensurate with the business scope and service scale, strengthen training and examination and improve the quality of practitioners, set up convenient channels for filing complaints and reports in prominent places and publish the ways of filing complaints and reports, and compile an annual report on the ecological governance of network information content. If an internet information content platform violates the provisions, the cyberspace authorities shall hold interviews, give warnings, order it to suspend information update, take measures including restricting it from engaging in internet information services, and impose online behavior restrictions and industry bans.

#### *Information Security and Censorship*

Internet content in mainland China is regulated and restricted from a state security standpoint. The Decisions on Maintaining Internet Security which was enacted by the Standing Committee of the PRC National People’s Congress, or the SCNPC in December 2000 and amended in August 2009, may subject violators to criminal punishment in mainland China for any effort to: (i) gain improper entry into a computer or system of strategic importance; (ii) disseminate politically disruptive information; (iii) leak state secrets; (iv) spread false commercial information; or (v) infringe intellectual property rights.

Internet companies in mainland China are required to complete security filing procedures and regularly update information security and censorship systems for their websites with local public security bureau. The PRC Law on Preservation of State Secrets, which became effective on October 1, 2010 requires an internet information services providers to discontinue disseminating any information that may be deemed to be leaked state secrets and to report such incidents in a timely manner to the state security and public security authorities. Failure to do so in a timely and adequate manner may subject the internet information services providers to liability and certain penalties given by the Ministry of State Security, the Ministry of Public Security and/or the MIIT or their respective local branches.

On June 22, 2007, the Ministry of Public Security, the State Secrecy Bureau, the State Cipher Code Administration and the Information Office of the State Council jointly promulgated the Circular on Printing and Distributing the Administrative Measures for the Graded Protection of Information Security. According to the Circular, the security protection grade of an information system may be classified into five grades. To newly build an information system of Grade II or above, its operator or user shall, within 30 days after it is put into operation, handle the record-filing procedures at the local public security organ at the level of municipality divided into districts or above of its locality.

The Internet Security Law of the People's Republic of China, issued by the Standing Committee of the National People's Congress on November 7, 2016 and became effective on June 1, 2017, emphasizes the implementation of classified protection with respect to Internet security. According to the Internet Security Law, Internet operators shall fulfill relevant mandatory security protection obligations.

The Administration Measures on the Security Protection of Computer Information Network with Internationally Connections, which was issued by the Ministry of Public Security in December 1997, and amended on January 8, 2011, prohibits using the internet in ways which, among others, result in a leakage of state secrets or a spread of socially destabilizing content. The Ministry of Public Security has supervision and inspection powers in this regard, and relevant local security bureaus may also have jurisdiction. If an ICP license holder violates these measures, the PRC government may revoke its ICP license and shut down its websites.

On December 28, 2012, the Standing Committee of the National People's Congress reiterated relevant rules on the protection of internet information by issuing the Decision on Strengthening the Protection of Network Information, or the 2012 Decision. The 2012 Decision distinctly clarified certain relevant obligations of the internet information service provider. Once it discovers any transmission or disclosure of information prohibited by the relevant laws and regulations, the internet information service provider shall stop transmission of such information, take measures such as elimination, keeping relevant record, and reporting to relevant authorities.

On June 14, 2022, the CAC promulgated the Provisions on the Administration of Mobile Internet Applications Information Services, which came into effect on August 1, 2022. According to this provisions, mobile internet application providers and internet application distribution platforms shall not use mobile internet applications to carry out illegal activities that endanger national security, disturb public order, and infringe upon others' lawful rights and interests, shall perform the main responsibility for information content management, establish and improve management systems for information content security management, information content ecological governance, network data security, personal information protection, and minors protection to ensure information content security.

On July 12, 2021, the MIIT, the CAC and the Ministry of Public Security jointly issued the Notice on Issuing the Provisions on the Management of Security Vulnerabilities of Network Products, which requires that, among others, no organization or individual may use network product security vulnerabilities to engage in activities that endanger network security, and may not illegally collect, sell, or publish network product security vulnerability information, and network product providers, network operators and network product security vulnerability collection platforms shall establish and improve network product security vulnerability information receiving channels and keep them open, and keep network product security vulnerability information receiving logs for no less than six months.

The Opinions on Further Compacting the Main Responsibility of the Website Platform on Information Content Management, issued by the CAC on September 15, 2021, further regulates the content and quality of the information, further requires the website platform to improve the content review mechanism, and strictly prohibits websites and platforms from producing and disseminating illegal information and require websites and platforms be responsible for determining how information content is displayed and shall ensure the security of information content. In addition, the website platform shall improve the manual content review system, further expand the scope of manual review, refine the review standards, improve the review process and ensure the quality of review. A dynamic update mechanism for the sample database of illegal and non-compliant information and a hierarchical classification system shall be established and regularly enriched and expanded to improve the efficiency and quality of technical review.

On September 17, 2021, the CAC and several other administrations jointly promulgated the Guiding Opinions on Strengthening the Comprehensive Governance of Network Information Service Algorithms. According to these opinions, enterprises shall establish an algorithm security accountability system and a system for the review of scientific and technological ethics, enhance the organizational structure for algorithm security, intensify efforts in the prevention of risks and the handling of risks, and increase the capacity and level in handling algorithm security emergencies. Enterprises shall also raise their awareness of responsibility and assume primary responsibilities for outcomes caused by the application of algorithms. On December 31, 2021, the CAC, together with the MIIT, the Ministry of Public Security and the SAMR, jointly issued the Administrative Provisions on Algorithm Recommendation of Internet Information Services, with effect from March 1, 2022, which provides that algorithm recommendation service providers are not allowed to use algorithms to register false user accounts, block information, give excessive recommendations, and that users should be given the option to easily turn off algorithm recommendation services.

On December 8, 2022, the MIIT issued the Administrative Measures for Data Security in the Industry and Information Technology Field (Trial), which took effect on January 1, 2023. According to these measures, a data processor in the field of industry and information technology shall file its catalogue of important data and core data to the local industrial regulatory department for recordation. Where there is any material change of the filing, the data processor in the field of industry and information technology shall undergo the change filing procedures within three months of such change. Important data and core data collected and produced by a data processor in the field of industry and information technology within mainland China shall be stored within mainland China, and shall conduct the security assessment if the cross-border transfer of data is necessary.

To comply with the above laws and regulations, we have established an internet information security department to implement measures on information filtering. For example, we have adopted a voice monitor system, and installed on our platforms various alerts on sensitive words or abnormal activities of users, channels or groups. We also have a dedicated team that maintains 24-hour surveillance on the information posted on our platforms, with different categories for monitoring purposes, according to subject and content. We have also established and follow a strict review process and storage system of relevant records which, in combination with various information security measures, have effectively prevented the public dissemination of statutory prohibited information through our websites in the past. We intend to continue to further update our measurements and system and work closely with relevant authorities to avoid any violation of relevant laws and regulations in the future.

#### *Privacy Protection*

Pursuant to the Decision on Strengthening the Protection of Online Information and the Order for the Protection of Telecommunication and Internet User Personal Information issued by the MIIT on July 16, 2013 and became effective on September 1, 2013, any collection and use of user personal information must be subject to the consent of the user, abide by the principles of legality, rationality and necessity and be within the specified purposes, methods and scopes. An Internet information service provider must also keep such information strictly confidential, and is further prohibited from divulging, tampering or destroying any such information, or selling or providing such information to other parties. An Internet information service provider is required to take technical and other measures to prevent the collected personal information from any unauthorized disclosure, damage or loss. Any violation of these laws and regulations may subject the Internet information service provider to warnings, fines, confiscation of illegal gains, revocation of licenses, cancellation of filings, closedown of websites or even criminal liabilities.

Pursuant to the Interpretation of the Supreme People's Court and the Supreme People's Procuratorate on Several Issues regarding Legal Application in Criminal Cases Infringing upon the Personal Information of Citizens, which was issued on May 8, 2017 and took effect on June 1, 2017, the following activities may constitute the crime of infringing upon a citizen's personal information: (i) providing a citizen's personal information to specified persons or releasing a citizen's personal information online or through other methods in violation of relevant national provisions; (ii) providing legitimately collected information relating to a citizen to others without such citizen's consent (unless the information is processed, not traceable to a specific person and not recoverable); (iii) collecting a citizen's personal information in violation of applicable rules and regulations when performing a duty or providing services; or (iv) collecting a citizen's personal information by purchasing, accepting or exchanging such information in violation of applicable rules and regulations.

In addition, according to the General Provisions of the PRC Civil Code, promulgated by the National People's Congress of the People's Republic of China on May 28, 2020, which became effective on January 1, 2021, the personal information of a natural person shall be protected. Any organization or individual needing to obtain the personal information of others shall legally obtain and ensure the security of such information, and shall not illegally collect, use, process, or transmit the personal information of other persons, nor illegally buy, sell, provide, or publish the personal information of other persons.

Pursuant to the PRC Cyber Security Law issued by the SCNPC in November 2016, effective June 2017, personal information refers to all kinds of information recorded by electronic or otherwise that can be used to independently identify or be combined with other information to identify natural persons' personal information including, but not limited to, natural persons' names, dates of birth, ID numbers, biologically identified personal information, addresses and telephone numbers, etc. The Cyber Security Law also provides that: (i) to collect and use personal information, network operators shall follow the principles of legitimacy, rightfulness and necessity, disclose their rules of data collection and use, clearly express the purposes, means and scope of collecting and using the information, and obtain the consent of the persons whose data is gathered; (ii) network operators shall neither gather personal information unrelated to the services they provide, nor gather or use personal information in violation of the provisions of laws and administrative regulations or the scopes of consent given by the persons whose data is gathered; and shall dispose of personal information they have saved in accordance with the provisions of laws and administrative regulations and agreements reached with users; (iii) network operators shall not divulge, tamper with or damage the personal information they have collected, and shall not provide the personal information to others without the consent of the persons whose data is collected. However, if the information has been processed and cannot be recovered and thus it is impossible to match such information with specific persons, such circumstance is an exception. On September 12, 2022, the CAC proposed a series of draft amendments to the PRC Cyber Security Law, which impose more stringent legal liabilities for certain violations. As of the date of this annual report, such draft amendments have not been formally adopted.

On March 12, 2021, the CAC and other governmental authorities promulgated Necessary Personal Information Range Provisions of Common Types of Apps, effective on May 1, 2021, which specify the scope of necessary personal information for common types of mobile apps. On April 26, 2021, the MIIT promulgated Interim Provisions on the Administration of Personal Information Protection for Apps (Draft for Comments), which further stipulate the protection and management of the personal information on mobile apps. As of the date of this annual report, the Interim Provisions on the Administration of Personal Information Protection for Apps (Draft for Comments) has not been formally adopted.

In addition, the Identification Method of Illegal Collection and Use of Personal Information Through Apps jointly promulgated by the Secretary Bureau of the CAC, the General Office of the MIIT, the General Office of the Ministry of Public Security and the General Office of the SAMR in November 2019 provides guidance for the regulatory authorities to identify the illegal collection and use of personal information through mobile apps, and for the app operators to conduct self-examination and self-correction and for other participants to voluntarily monitor compliance. The Identification Method of Illegal Collection and Use of Personal Information Through Apps lists six types of acts conducted by app operators through app which may be identified as illegal, including, (i) failure to make public the rules of collection and use of personal information; (ii) failure to explicitly inform the purposes, methods and scope of collection and use of personal information; (iii) failure to obtain users' consent to collect and use their personal information; (iv) collection of personal information which is irrelevant to the services the app provides against the principle of necessity; (v) failure to obtain users' prior consent before providing users' personal information to the third parties; and (vi) failure to provide the function of deleting or correcting personal information in accordance with the laws and regulations, or failure to publish information such as ways for complaint and whistle-blowing.

On August 20, 2021, the SCNPC adopted the Personal Information Protection Law, which became effective on November 1, 2021. The Personal Information Protection Law reiterates the circumstances under which a personal information processor could process personal information and the requirements for such circumstances. The Personal Information Protection Law clarifies the scope of application, the definition of personal information and sensitive personal information, the legal basis of personal information processing and the basic requirements of notice and consent. According to the Personal Information Protection Law, where personal information is processed based on an individual's consent, such consent shall be voluntarily and explicitly given by the individual on a fully informed basis, and the individual shall have the right to withdraw his or her consent without affecting the effectiveness of personal information processing activities that have been conducted based on his or her consent before. Furthermore, the Personal Information Protection Law clarifies that personal information of minors under the age of fourteen is sensitive information, and such sensitive information may not be processed unless there are specific purposes and sufficient necessity and strict protection measures are taken.

On July 7, 2022, the CAC promulgated the Measures for Security Assessment of Cross-Border Data Transfer, which came into effect on September 1, 2022 and stipulates that data processors shall apply for security assessment for cross-border data transfer under certain circumstances and shall make self-assessment of the risks before applying for the security assessment. On August 31, the CAC further promulgated the Guidelines for the Security Assessment Application for Cross-border Data Transfer (first edition), which clarifies the application procedures and application materials required for the security assessment of cross-border data transfer under the Measures for Security Assessment of Cross-Border Data Transfer.

On November 14, 2021, the CAC published for public comment the Regulations on the Administration of Cyber Data Security (Draft for Comments), or the Draft Cyber Data Security Regulations, which applies to activities relating to the use of networks to carry out data processing activities within the territory of the PRC and the requirement of cyber security review, including in case of data processors who process personal information of more than one million people seeking for listing abroad. As the Measures for Security Assessment of Cross-Border Data Transfer is relatively new, significant uncertainties remain in relation to their interpretation and implementation. In addition, as of the date of this annual report, there are uncertainties as to whether the Draft Cyber Data Security Regulations would be further amended, revised or updated and substantial uncertainties exist with respect to the enactment timetable and final content of such drafts. On November 1, 2021, the MIIT published the Notice on the Implementation of Actions to Improve the Perception of Information and Communication Services, which stipulates that enterprises shall provide a list of personal information collected and a list of personal information shared with third parties, and shall display such lists in the second-level menu of the APP for users' access ("Dual Lists Obligation"). Furthermore, the Notice on the Implementation of Actions to Improve the Perception of Information and Communication Services requires certain enterprises as enumerated in its schedule to fulfill the Dual Lists Obligation by the end of 2021, but it does not provide a clear deadline for other enterprises.

On December 28, 2021, the CAC published the Revised Measures for Cyber Security Review, or the Revised CAC Measures, which became effective on February 15, 2022 and repeals the Measures for Cyber Security Review promulgated on April 13, 2020. The Revised CAC Measures provides that a CIO purchasing network products and services, and platform operators carrying out data processing activities, which affect or may affect national security, shall apply for cyber security review and that a platform operator with more than one million users' personal information aiming to list abroad must apply for cyber security review.

We require our users to accept a user agreement and privacy policy whereby they agree to provide certain personal information to us. PRC laws and regulations prohibit internet content providers from disclosing any information transmitted by users through their networks to any third parties without their authorization unless otherwise permitted by law. If an internet content provider violates these regulations, the MIIT or its local bureaus may impose penalties and the internet content provider may be liable for damages caused to its users.

#### *Anti-Monopoly Matters related to Internet Platform Companies*

The PRC Anti-monopoly Law, which took effect on August 1, 2008 and was amended on August 1, 2022, prohibits monopolistic conduct such as entering into monopoly agreements, abusing market dominance and concentration of undertakings that may have the effect of eliminating or restricting competition. On February 7, 2021, the Anti-monopoly Commission of the State Council officially promulgated the Guidelines to Anti-Monopoly in the Field of Internet Platforms, or the Anti-Monopoly Guidelines for Internet Platforms. Pursuant to an official interpretation from the Anti-monopoly Commission of the State Council, the Anti-Monopoly Guidelines for Internet Platforms mainly covers five aspects, including general provisions, monopoly agreements, abusing market dominance, concentration of undertakings, and abuse of administrative powers eliminating or restricting competition. The Anti-Monopoly Guidelines for Internet Platforms prohibits certain monopolistic acts of internet platforms operated in mainland China so as to protect market competition and safeguard interests of users and undertakings participating in internet platform economy, including, without limitation, prohibiting platforms with dominant position from abusing their market dominance (such as discriminating customers in terms of pricing and other transactional conditions using big data and analytics, coercing counterparties into exclusivity arrangements, using technology means to block competitors' interface, favorable positioning in search results of goods displays, using bundle services to sell services or products, compulsory collection of unnecessary user data). In addition, the Anti-monopoly Guidelines for Internet Platforms also reinforces antitrust merger review for internet platform related transactions to safeguard market competition.

#### *Regulation of Foreign Currency Exchange and Dividend Distribution*

**Foreign Currency Exchange.** The core regulations governing foreign currency exchange in mainland China are the Foreign Exchange Administration Regulations, as amended in August 2008, or the FEA Regulations. Under the FEA Regulations, the Renminbi is freely convertible for current account items, including the distribution of dividends, interest payments, trade and service-related foreign exchange transactions, but not for capital account items, such as direct investments, loans, repatriation of investments and investments in securities outside of mainland China, unless the prior approval of the SAFE is obtained and prior registration with the SAFE is made.

On March 30, 2015, SAFE issued the Circular on the Reforming of the Management Method of the Settlement of Foreign Currency Capital of Foreign-Invested Enterprises, or SAFE Circular 19, which took effect on June 1, 2015. Under SAFE Circular 19, a foreign-invested enterprise, within the scope of business, may also choose to convert its registered capital from foreign currency to RMB on a discretionary basis, and the RMB capital so converted can be used for equity investments within PRC, which will be regarded as the reinvestment of foreign-invested enterprise.

SAFE promulgated the Notice of the State Administration of Foreign Exchange on Reforming and Standardizing the Foreign Exchange Settlement Management Policy of Capital Account, or Circular 16, effective on June 9, 2016. Circular 16 provides that discretionary foreign exchange settlement applies to foreign exchange capital, foreign debt offering proceeds and remitted foreign listing proceeds, and the corresponding RMB capital converted from foreign exchange are not restricted from extending loans to related parties or repaying the inter-company loans (including advances by third parties).

In January 2017, SAFE promulgated the Circular on Further Improving Reform of Foreign Exchange Administration and Optimizing Genuineness and Compliance Verification, or the Circular 3, which stipulates several capital control measures with respect to the outbound remittance of profit from domestic entities to offshore entities, including (i) under the principle of genuine transaction, banks shall check board resolutions regarding profit distribution, the original version of tax filing records and audited financial statements; and (ii) domestic entities shall hold income to account for previous years' losses before remitting the profits. Moreover, pursuant to the Circular 3, domestic entities shall make detailed explanations of the sources of capital and utilization arrangements, and provide board resolutions, contracts and other proof when completing the registration procedures in connection with an outbound investment.

**Dividend Distribution.** The principal regulations governing distribution of dividends paid by wholly foreign-invested enterprises include the PRC Company Law, promulgated in 1993 and amended in 2004, 2005, 2013 and 2018, and the Foreign Investment Law and its Implementation Rules.

Under these regulations, a wholly foreign-invested enterprise in mainland China, or a WFOE, may pay dividends only out of its accumulated profits, if any, determined in accordance with PRC accounting standards and regulations. In addition, a WFOE is required to allocate at least 10% of its accumulated profits each year, if any, to statutory reserve funds unless its reserves have reached 50% of the registered capital of the enterprises. These reserves are not distributable as cash dividends. The proportional ratio for withdrawal of rewards and welfare funds for employees shall be determined at the discretion of the WFOE. Profits of a WFOE shall not be distributed before the losses thereof before the previous accounting years have been made up. Any undistributed profit for the previous accounting years may be distributed together with the distributable profit for the current accounting year.

**Circular 37.** Pursuant to SAFE's Notice on Relevant Issues Relating to Domestic Residents' Investment and Financing and Round-Trip Investment through Special Purpose Vehicles, or the SAFE Circular 37, issued and effective on July 4, 2014, and its appendices, PRC residents, including PRC institutions and individuals, must register with local branches of SAFE in connection with their direct establishment or indirect control of an offshore entity, for the purpose of overseas investment and financing, with such PRC residents' legally owned assets or equity interest in domestic enterprises or offshore assets or interests, referred to in the SAFE Circular 37 as a "special purpose vehicle." SAFE Circular 37 further requires amendment to the registration in the event of any significant changes with respect to the special purpose vehicle, such as increase or decrease of capital contributed by PRC individuals, share transfer or exchange, merger, division or other material event. SAFE promulgated the Notice on Further Simplifying and Improving the Administration of the Foreign Exchange Concerning Direct Investment in February 2015, which took effect on June 1, 2015, which amended SAFE Circular 37 requiring PRC residents or entities to register with qualified banks rather than SAFE or its local branch in connection with their establishment or control of an offshore entity established for the purpose of overseas investment or financing.

In the event that a PRC shareholder holding interests in a special purpose vehicle fails to fulfill the required SAFE registration, the PRC subsidiaries of that special purpose vehicle may be prohibited from making distributions of profit to the offshore parent and from carrying out subsequent cross-border foreign exchange activities and the special purpose vehicle may be restricted in their ability to contribute additional capital into its PRC subsidiary. Further, failure to comply with the various SAFE registration requirements described above could result in liability under PRC law for foreign exchange evasion. These regulations apply to our direct and indirect shareholders who are PRC residents and may apply to any offshore acquisitions and share transfer that we make in the future if our shares are issued to PRC residents. See "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate— Regulations of mainland China in relation to offshore investment activities by PRC residents may limit our PRC subsidiaries' ability to increase their registered capital or distribute profits to us or otherwise expose us to liability and penalties under PRC law."

We have completed the foreign exchange registration of PRC resident shareholders of Guangzhou Huaduo, as required by SAFE Circular 37, for our financings that were completed before the end of 2010. The SAFE Circular 37 registration in relation to the issuance of common shares to Tiger Global Six YY Holdings was completed on February 6, 2012. Our PRC resident shareholders further updated their SAFE Circular 37 registrations in March 2015 to reflect shareholding changes in our company resulting from our initial public offering.

**Stock Option Rules.** The Administration Measures on Individual Foreign Exchange Control were promulgated by the PBOC on December 25, 2006, and their Implementation Rules, issued by the SAFE on January 5, 2007, became effective on February 1, 2007 and amended on May 29, 2016. Under these regulations, all foreign exchange matters involved in employee stock ownership plans and stock option plans participated in by onshore individuals, among others, require approval from the SAFE or its authorized branch. Furthermore, the Notices on Issues concerning the Foreign Exchange Administration for Domestic Individuals Participating in Stock Incentive Plans of Overseas Publicly-Listed Companies, or the Stock Option Rules, were promulgated by SAFE on February 15, 2012, that replaced the Application Procedures of Foreign Exchange Administration for Domestic Individuals Participating in Employee Stock Ownership Plans or Stock Option Plans of Overseas Publicly-Listed Companies issued by SAFE on March 28, 2007. Pursuant to the Stock Option Rules, PRC residents who are granted shares or stock options by companies listed on overseas stock exchanges based on the stock incentive plans are required to register with SAFE or its local branches, and PRC residents participating in the stock incentive plans of overseas listed companies shall retain a qualified PRC agent, which could be a PRC subsidiary of such overseas publicly-listed company or another qualified institution selected by such PRC subsidiary, to conduct the SAFE registration and other procedures with respect to the stock incentive plans on behalf of these participants. Such participants must also retain an overseas entrusted institution to handle matters in connection with their exercise of stock options, purchase and sale of corresponding stocks or interests, and fund transfer. In addition, the PRC agents are required to amend the SAFE registration with respect to the stock incentive plan if there is any material change to the stock incentive plan, the PRC agents or the overseas entrusted institution or other material changes. The PRC agents shall, on behalf of the PRC residents who have the right to exercise the employee share options, apply to SAFE or its local branches for an annual quota for the payment of foreign currencies in connection with the PRC residents' exercise of the employee share options. The foreign exchange proceeds received by the PRC residents from the sale of shares under the stock incentive plans granted and dividends distributed by the overseas listed companies must be remitted into the bank accounts in the PRC opened by the PRC agents before distribution to such PRC residents. In addition, the PRC agents shall file each quarter the form for record-filing of information of the Domestic Individuals Participating in the Stock Incentive Plans of Overseas Listed Companies with SAFE or its local branches.

We and our PRC citizen employees who have been granted share options, restricted shares or restricted share units, or PRC optionees, are subject to the Stock Option Rules. If we or our PRC optionees fail to comply with the Individual Foreign Exchange Rule and the Stock Option Rules, we and/or our PRC optionees may be subject to fines and other legal sanctions. See “Item 3. Key Information-D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Regulations of mainland China in relation to offshore investment activities by PRC residents may limit our PRC subsidiaries' ability to increase their registered capital or distribute profits to us or otherwise expose us to liability and penalties under PRC law.”

In addition, the State Administration for Taxation has issued circulars concerning employee share options, under which our employees working in the PRC who exercise share options will be subject to PRC individual income tax. Our PRC subsidiaries have obligations to file documents related to employee share options with relevant tax authorities and to withhold individual income taxes of those employees who exercise their share options. If our employees fail to pay or if we fail to withhold their income taxes as required by relevant laws and regulations, we may face sanctions imposed by the PRC tax authorities or other PRC government authorities.

#### *Regulation on Tax*

##### PRC Enterprise Income Tax

The PRC enterprise income tax is calculated based on the taxable income determined under the applicable the PRC Enterprise Income Tax Law, or the EIT Law and its implementation rules. On March 16, 2007, the National People's Congress of China enacted the EIT Law, which became effective on January 1, 2008 and subsequently amended on February 24, 2017 and on December 29, 2018. On December 6, 2007, the State Council promulgated the implementation rules to the EIT Law, which also became effective on January 1, 2008 and amended on April 23, 2019. The EIT Law imposes a uniform enterprise income tax rate of 25% on all resident enterprises in mainland China, including foreign-invested enterprises and domestic enterprises, unless they qualify for certain exceptions, and terminates most of the tax exemptions, reductions and preferential treatment available under the previous tax laws and regulations. According to the EIT Law and relevant regulations, subject to the approval of competent tax authorities, the income tax of an enterprise that has been determined to be a high and new technology enterprise shall be reduced to a preferential rate of 15%.

Moreover, under the EIT Law, enterprises organized under the laws of jurisdictions outside mainland China with their “de facto management bodies” located within mainland China may be considered PRC resident enterprises and are therefore subject to PRC enterprise income tax at the rate of 25% on their worldwide income. Though the implementation rules of the EIT Law define “de facto management bodies” as “establishments that carry out substantial and overall management and control over the manufacturing and business operations, personnel, accounting, properties, etc. of an enterprise,” the main guidance currently available for the definition of “de facto management body” as well as the determination of offshore incorporated PRC tax resident status and its administration are set forth in the Notice Regarding the Determination of Chinese-Controlled Overseas Incorporated Enterprises as PRC Tax Resident Enterprise on the Basis of De Facto Management Bodies, or Circular 82, and the Administrative Measures for Enterprise Income Tax of Chinese-Controlled Offshore Incorporated Resident Enterprises (Trial) or SAT Bulletin No. 45, both issued by the SAT, which provide main guidance on the administration as well as determination of the tax residency status of a Chinese-controlled offshore-incorporated enterprise, defined as an enterprise that is incorporated under the law of a foreign country or territory and that has a PRC company or PRC corporate group as its primary controlling shareholder.

According to Circular 82, a Chinese-controlled offshore-incorporated enterprise will be regarded as a PRC tax resident by virtue of having its “de facto management body” in mainland China and will be subject to PRC enterprise income tax on its global income only if certain conditions set forth in Circular 82 are met.

In addition, Bulletin No. 45 provides clarification on the resident status determination, post-determination administration, and competent tax authorities. It also specifies that when provided with a copy of PRC resident determination certificate from a resident Chinese-controlled offshore-incorporated enterprise, the payer should not withhold 10% income tax when paying certain PRC-sourced income such as dividends, interest and royalties to the Chinese-controlled offshore-incorporated enterprise.

Although we do not believe that our company should be treated as a PRC resident enterprise for PRC tax purposes, uncertainty exists as to whether we will be deemed to be such by the relevant authorities. In the event that we are considered a PRC resident enterprise, we would be subject to the PRC enterprise income tax at the rate of 25% on our worldwide income. See “Item 3. Key Information-D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Under the PRC enterprise income tax law, we may be classified as a PRC “resident enterprise,” which could result in unfavorable tax consequences to us and our shareholders and have a material adverse effect on our results of operations and the value of your investment.”

In addition, although the EIT Law provides that dividend income between “qualified resident enterprises” is exempted income, and the Implementation Rules refer to “qualified resident enterprises” as enterprises with “direct equity interest,” it is unclear whether dividends we receive from our PRC subsidiaries are eligible for exemption.

According to the Notice on Strengthening Administration of Enterprise Income Tax for Share Transfers by Non-PRC Resident Enterprises issued by the PRC State Administration of Taxation on December 10, 2009, with retroactive effect from January 1, 2008, or SAT Circular 698, and the Notice on Several Issues Concerning Enterprise Income Tax for Indirect Share Transfer by Non-PRC Resident Enterprises, issued by the PRC State Administration of Taxation on February 3, 2015, or SAT Circular 7, an “indirect transfer” of assets of a PRC resident enterprise, including equity interests in a PRC resident enterprise, by non-PRC resident enterprises may be re-characterized and treated as a direct transfer of PRC taxable properties, if such transaction arrangement lacks of reasonable commercial purpose and was established for the purpose of reducing, avoiding or deferring PRC enterprise income tax. As a result, gains derived from such indirect transfer may be subject to PRC enterprise income tax, and tax filing or withholding obligations may be triggered, depending on the nature of the PRC taxable properties being transferred. In respect of an indirect offshore transfer of assets of a PRC establishment or place of business of a foreign enterprise, the resulting gain is to be included with the annual enterprise filing of the PRC establishment or place of business being transferred, and would consequently be subject to PRC enterprise income tax at a rate of 25%. Where the underlying transfer relates to PRC real properties or to equity investments in a PRC resident enterprise, which is not related to a PRC establishment or place of business of a non-resident enterprise, a PRC enterprise income tax at 10% would apply, subject to available preferential tax treatment under applicable tax treaties or similar arrangements, and the party who is obligated to make the transfer payments has the withholding obligation. Where the payor fails to withhold any or sufficient tax, the transferor shall declare and pay such tax to the competent tax authority by itself within the statutory time limit. Late payment of applicable tax will subject the transferor to default interest. Currently, neither SAT Circular 698 nor SAT Circular 7 applies to transactions of sale of shares by investors through a public stock exchange where such shares were acquired from a transaction through a public stock exchange. In October 2017, SAT issued the Announcement on Issues Relating to Withholding at Source of Income Tax of Nonresident Enterprises, or SAT Circular 37, effective December 2017, superseded the Non-resident Enterprises Measures and SAT Circular 698 as a whole and partially amended some provisions in SAT Circular 7. Specifically, SAT Circular 37 provides that where the transfer income subject to withholding at source is derived by a non-PRC resident enterprise in instalments, the instalments may first be treated as recovery of costs of previous investments. Upon recovery of all costs, the tax amount to be withheld must then be computed and withheld.

We cannot assure you that the PRC tax authorities will not, at their discretion, adjust any capital gains and impose tax return filing and withholding or tax payment obligations on the transferors and transferees, while our PRC subsidiaries may be requested to assist in the filing. Any PRC tax imposed on a transfer of our shares or any adjustment of such gains would cause us to incur additional costs and may have a negative impact on the value of your investment in us.

#### Value Added Tax

On January 1, 2012, the State Administration of Taxation officially launched a pilot VAT reform program (“Pilot Program”), applicable to businesses in selected industries. Taxable income derived from the businesses in the Pilot Program is subject to VAT in lieu of business tax. The Pilot Program initially applied only to transportation industry and “modern service industries” (“Pilot Industries”) in Shanghai in 2011 and expanded to eight trial regions (including Beijing and Guangdong province) and nationwide progressively from August to December 2012.

On March 23, 2016, the Ministry of Finance and the SAT issued the Notice of Taxation on Implementing the Pilot Program of Replacing Business Tax with Value-Added Tax in an All-round Manner, pursuant to which the pilot plan for the replacement of business tax with VAT was expanded to all regions and industries as of May 1, 2016.

#### Cultural Development Fee

According to applicable PRC tax regulations or rules, advertising service providers are generally required to pay a cultural development fee at the rate of 3% on the revenues (a) which are generated from providing advertising services and (b) which are also subject to VAT after the VAT reform program.

#### Dividends Withholding Tax

Pursuant to the EIT Law and its implementation rules, dividends generated after January 1, 2008 and distributed to us by our PRC subsidiaries are subject to withholding tax at a rate of 10%, unless otherwise exempted or reduced according to treaties or arrangements between the PRC central government and governments of other countries or regions where the non-mainland-China-resident holding enterprises are incorporated.

Although we do not believe that our company should be treated as a PRC resident enterprise for PRC tax purposes. As uncertainties remain regarding the interpretation and implementation of the EIT Law and its implementation rules, we cannot assure you that, if we are deemed a PRC resident enterprise, any dividends to be distributed by us to our non-PRC shareholders and ADS holders would not be subject to any PRC withholding tax. See “Item 3. Key Information-D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Under the PRC enterprise income tax law, we may be classified as a PRC “resident enterprise,” which could result in unfavorable tax consequences to us and our shareholders and have a material adverse effect on our results of operations and the value of your investment.”

#### Labor Laws and Social Insurance

The principal laws that govern employment include:

- Labor Law of the People’s Republic of China, promulgated by the Standing Committee of the National People’s Congress on July 5, 1994, effective since January 1, 1995 and amended on August 27, 2009 and on December 29, 2018, respectively; and
- Labor Contract Law of the People’s Republic of China, promulgated by the Standing Committee of the National People’s Congress on June 29, 2007 and amended on December 28, 2012.

According to the Labor Law and Labor Contract Law, employers must execute written labor contracts with full-time employees. All employers must compensate their employees with wages equal to at least the local minimum wage standards. All employers are required to establish a system for labor safety and sanitation, strictly comply with state rules and standards and provide employees with workplace safety training. Violations of the Labor Contract Law and the Labor Law may result in the imposition of fines and other administrative penalties. For serious violations, criminal liability may arise.

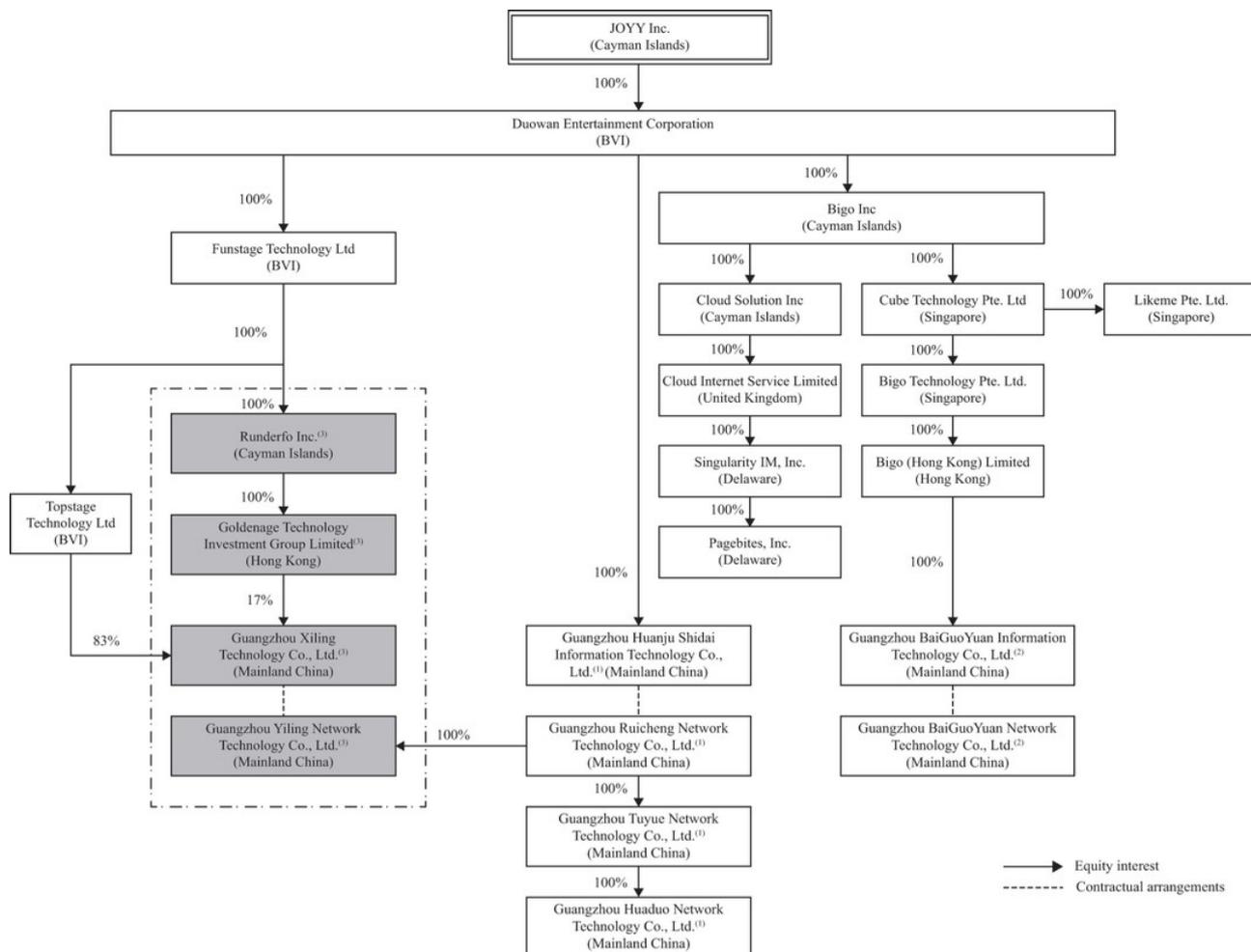
The Law on Social Insurance of the PRC, which was promulgated in October 28, 2010, effectively July 1, 2011 and amended on December 29, 2018, has consolidated pertinent provisions for basic pension insurance, unemployment insurance, maternity insurance, workplace injury insurance and basic medical insurance and has elaborated in detail the legal obligations and liabilities of employers who do not comply with relevant laws and regulations on social insurance. Pursuant to the Reform Plan for Collection and Management System of National and Local Taxes released by General Office of the Communist Party of China and the State Council on July 20, 2018, all social insurance premiums, such as basic pension insurance premium, basic medical insurance premium, unemployment insurance premium, work-related injury insurance premium and maternity insurance premium, shall be collected uniformly by the relevant tax authorities starting from January 1, 2019.

We have caused all of our full-time employees to enter into written labor contracts with us and have provided and currently provide our employees with the proper welfare and employment benefits.

## C. Organizational Structure

### Corporate Structure

The following diagram illustrates our corporate structure as of the date of this annual report, including our significant subsidiaries and the primary operating variable interest entities and their significant subsidiaries:



(1) Guangzhou Huaduo used to have contractual arrangements with our subsidiary in mainland China till April 1, 2022. Indirectly held through Guangzhou Tuyue, Guangzhou Huaduo is currently a wholly-owned subsidiary of Guangzhou Ruicheng, a variable interest entity with which we maintain contractual arrangements. Each of Guangzhou Yueyi Network Technology Partnership (LP) and Guangzhou Xuanyi Network Technology Partnership (LP) holds 50% of equity interest in Guangzhou Ruicheng. We also enter into contractual arrangements with the nominee shareholders of the variable interest entities and other stakeholders in order to enhance the stability and proper governance of the variable interest entities. For details, see “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements.”

- (2) Guangzhou BaiGuoYuan is a variable interest entity with which we maintain contractual arrangements, as of the date of this annual report. Guangzhou BaiGuoYuan is wholly owned by Guangzhou Qianxun Network Technology Co., Ltd., which is in turn owned by Guangzhou Fangu Network Technology Partnership (LP) and Guangzhou Wanyin Network Technology Partnership (LP), each holding 50% of equity interest in Guangzhou Qianxun Network Technology Co., Ltd. We also enter into contractual arrangements with the nominee shareholders of the variable interest entities and other stakeholders in order to enhance the stability and proper governance of the variable interest entities. For details, see “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions—VIE Structure and the Contractual Arrangements.”
- (3) On November 16, 2020, we entered into definitive agreements with Baidu, Inc., or Baidu, and made certain amendments to the share purchase agreement on February 7, 2021, pursuant to which Baidu agreed to acquire our video-based entertainment live streaming business in mainland China, or YY Live, including the YY mobile app, YY.com website, and PC YY, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. The acquisition has been substantially completed, with certain matters remaining to be completed in the future, including necessary regulatory approvals from government authorities. In April 2022, we and Baidu have agreed to extend the long stop date, which is the closing deadline of the proposed acquisition, indefinitely until the extension is terminated by either party.

#### **D. Property, Equipment and Land Use Right**

Our corporate headquarters is located in 30 Pasir Panjang Road #15-31A Mapletree Business City, Singapore 117440. We have leased office space with an aggregate area of 56,910 square meters, and we owned several buildings, with an aggregate area of 64,754 square meters.

The corporate headquarters of BIGO are located at the same premises in Singapore. BIGO also has local offices in mainland China, the United States, the United Kingdom and many other regions. As of the date of this annual report, BIGO has leased office space with an aggregate area of 39,706 square meters, of which 25,343 square meters are in Guangzhou and the remainder in other cities within and outside mainland China. BIGO’s physical servers are primarily hosted at internet data centers owned by major international internet data center providers hosted outside mainland China.

The headquarters of our subsidiaries in mainland China is located in Panyu District, Guangzhou, China, which comprises 37,548 square meters. We acquired a building in Zhuhai in October 2017 as branch office, which comprises 27,206 square meters. We also acquired the use right of a parcel of land located in Guangzhou in August 2015 and another one in Foshan in April 2021. Our capital commitment in connection with the construction of buildings located on the parcels of lands to which we acquired use right was US\$29.3 million as of December 31, 2022. We currently expect to complete the planned construction in Guangzhou and Foshan in 2023 and 2026, respectively.

We believe that our existing facilities, including facilities under construction, are sufficient for our current and prospective needs in the foreseeable future and we will obtain adequate facilities, principally through leasing, to accommodate our future expansion plans.

See Notes 13 and 14 to our audited consolidated financial statements included elsewhere in this annual report for further information about our property and equipment and land use right.

#### **ITEM 4A. UNRESOLVED STAFF COMMENTS**

None.

#### **ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS**

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our consolidated financial statements and the related notes included elsewhere in this annual report. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under “Item 3. Key Information—D. Risk Factors” and elsewhere in this annual report.

## A. **Operating Results**

### **Overview**

We are a global technology company with a mission to enrich lives through technology. We operate leading online social entertainment platforms that offer live streaming, short-form videos, instant messaging, casual games and beyond. We also operate a global smart commerce platform that enables merchants to easily build their brands online and sell their products to customers around the world.

Since our inception in 2005, we have successfully incubated, developed, and monetized several social entertainment products and platforms. Our expertise in building and operating vibrant social entertainment platforms was tested and proven first in mainland China. In 2014, foreseeing the massive global opportunities, we began our global expansion by investing in BIGO, followed by the internationalization of Hago in 2018, and the acquisition of BIGO in March 2019. In 2022, we consolidated Shopline through further equity investments, diversifying our product offerings in smart commerce and expanding our global footprint.

Today, we operate in a number of markets across the globe, including North America, Europe, the Middle East, Southeast Asia, Eastern Pacific regions and others. The global average mobile monthly active users on our social entertainment platforms reached 267.9 million in the fourth quarter of 2022, including 36.8 million of average monthly active users of Bigo Live, 45.3 million of average monthly active users of Likee, 6.7 million of average monthly active users of Hago, and 179.1 million of average monthly active users of imo.

Over the past few years, our global business has grown rapidly and our profitability has improved steadily. Our total net revenues increased from US\$1.9 billion in 2020 to US\$2.6 billion in 2021 and amounted to US\$2.4 billion in 2022. Our net operating losses decreased from US\$406.8 million in 2020 to US\$106.7 million in 2021, and we realized net operating profit of US\$50.7 million in 2022.

Our business model optimizes the seamless integration of traffic generation, user engagement and monetization. While the basic use of our platforms is currently free to attract traffic, we monetize our user base mainly through virtual tips for live streaming. We derived our revenues primarily from live streaming services, accounting for 94.7%, 94.6% and 92.3% of our total net revenues in 2020, 2021 and 2022, respectively. We have been exploring additional monetization opportunities and diversifying our revenue sources in order to capitalize on the large and highly engaged user base of our platforms. We generate other revenues mainly from advertising services and e-commerce, and to a lesser extent, our online game business, memberships and other services. Such other revenues accounted for 5.3%, 5.4% and 7.7% of our total net revenues in 2020, 2021 and 2022, respectively.

On April 3, 2020 and August 10, 2020, we transferred 16,523,819 and 30,000,000 Class B ordinary shares of Huya to Linen Investment Limited, a wholly-owned subsidiary of Tencent, respectively. As a result of the closing of the share transfer, we currently hold 38,374,463 Class B ordinary shares of Huya with Tencent becoming the controlling shareholder of Huya, and Tencent consolidates financial statements of Huya. Starting from the second quarter of 2020, we no longer consolidate the operating results of Huya into our financial statements, and Huya's historical financial results are and will be reflected in our consolidated financial statements as discontinued operations accordingly.

On November 16, 2020, we entered into definitive agreements with Baidu, Inc., or Baidu, and made certain amendments to the share purchase agreement on February 7, 2021, pursuant to which Baidu agreed to acquire our video-based entertainment live streaming business in mainland China, or YY Live, including the YY mobile app, YY.com website, and PC YY, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. Subsequently, the sale was substantially completed as of February 8, 2021, with certain matters remaining to be completed in the future, including necessary regulatory approvals from government authorities. As a result, the historical results of YY Live are reflected in our financial statements as discontinued operations, and accordingly, we ceased consolidation of YY Live business since February 8, 2021.

In August 2022, our subsidiary, Duowan Entertainment Corporation, together with other investors, entered into a definitive agreement with Shoplevel Corporation Limited, a company that operates the smart commerce platform “Shoplevel.” Pursuant to the agreement, we subscribed for certain number of series B preferred shares of Shoplevel for an aggregate cash consideration of US\$182.9 million. Prior to the transaction, Shoplevel had been an investee of ours since 2020. As a result of the closing of the transaction, we started to consolidate the financial results of Shoplevel from September 2022.

Historically, we presented our financial results in RMB. Starting from January 1, 2021, we changed our reporting currency from RMB to U.S. dollars since a majority of our revenues and expenses are now denominated in U.S. dollars. We believe the alignment of the reporting currency with the primary functional currency of underlying operations would better illustrate our results of operations for each period. We have applied the change of reporting currency retrospectively to our historical results of operations and financial statements included in this annual report.

### **Major Factors Affecting our Results of Operations**

Our business and results of operations are affected by general factors affecting the social entertainment and smart commerce industry in our target markets. Such general factors include:

- overall macroeconomic growth and users paying sentiment;
- growth of mobile internet usage and penetration rate;
- changes in user preferences; and
- growth and competitive landscape of the social networking, entertainment and smart commerce industry.

While our business and results of operations are influenced by the general factors summarized above, we believe that our results of operations are more directly affected by company-specific factors, which are mostly relevant to our live streaming business as we derived 94.7%, 94.6% and 92.3% of our total net revenues in 2020, 2021 and 2022, respectively, from live streaming business. The specific factors that more directly affect our business and results of operations include:

- our ability to increase our popularity by offering new and attractive contents, products and services that allow us to monetize our platforms;
- our ability to attract and retain a large and engaged user base;
- our ability to attract and retain certain popular performers, agencies, channel owners and other business partners;
- our cost and expense structure, and other resources directed to our operations;
- COVID-19 and its long-term effect on user behaviors; and
- fluctuations in the exchange rates of foreign currency in which the revenue we earn is denominated.

### **Discussion of Selected Statements of Operations Items**

#### ***Revenues***

Our live streaming revenues are primarily comprised of revenues from our social entertainment platforms, including Bigo Live, Likee, Hago, imo and others. Other revenues primarily include revenues from advertising, e-commerce, online games, membership and online education. Starting from the second quarter of 2020, we no longer consolidate the results of operations of Huya. The historical results of YY Live are reflected in our financial statements as discontinued operations. In addition, we started to consolidate the results of operations of Shoplevel from September 2022.

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The following table sets forth the principal components of our total net revenues by amount and as a percentage of our total net revenues for the periods presented.

	For the Year Ended December 31,					
	2020		2021		2022	
	US\$	% of total net revenues	US\$	% of total net revenues	US\$	% of total net revenues
	(in thousands, except for percentages)					
Live streaming	1,815,826	94.7	2,476,790	94.6	2,225,518	92.3
Others	102,318	5.3	142,261	5.4	185,998	7.7
Total net revenues <sup>(1)</sup>	1,918,144	100.0	2,619,051	100.0	2,411,516	100.0

(1) Revenues are presented net of rebates and discounts.

The following table sets forth the geographic locations from which we generated our net revenues by amount and as a percentage of our total net revenues for the periods presented.

	For the Year Ended December 31,					
	2020		2021		2022	
	US\$	% of total net revenues	US\$	% of total net revenues	US\$	% of total net revenues
	(in thousands, except for percentages)					
Developed countries and regions <sup>(1)</sup>	639,442	33.4	913,947	35.0	866,107	35.8
Middle East <sup>(2)</sup>	475,662	24.8	621,775	23.7	514,992	21.4
Mainland China	336,200	17.5	440,797	16.8	473,941	19.7
Southeast Asia and others <sup>(3)</sup>	466,840	24.3	642,532	24.5	556,476	23.1
Total net revenues	1,918,144	100.0	2,619,051	100.0	2,411,516	100.0

(1) Developed countries and regions mainly included the United States of America, the Great Britain, Japan, South Korea and Australia.

(2) Middle East mainly included Saudi Arabia and other countries located in the region.

(3) Southeast Asia and others mainly included countries located in Southeast Asia and India.

*Live streaming revenues.* We generate live streaming revenues from the sales of in-channel virtual items used on our live streaming platforms. Users access content on our platforms free of charge, but are charged for purchases of virtual items.

The most significant factors that directly affect our live streaming revenues include the number of our paying users and ARPU. Our management regularly monitor these operating metrics, which are important and direct performance indicators, in managing our live streaming business and in making relevant operational and production decisions.

- *The number of paying users.* In 2022, BIGO (including Bigo Live, Likee and imo) had 3.6 million paying users for our livestreaming services. We calculate the number of paying users during a given period as the cumulative number of registered user accounts that have purchased virtual items or other products and services on the above-mentioned platforms at least once during the relevant period.
- *ARPU.* In 2022, BIGO's (including Bigo Live, Likee and imo) ARPU for live streaming was US\$452. ARPU is calculated by dividing our total revenues from live streaming on the above-mentioned platforms during a given period by the number of paying users for our live streaming services on the above mentioned platforms for that period. As we begin to generate revenues from an increasing variety of live streaming services, our ARPU may fluctuate from period to period due to the mix of live streaming services purchased by our paying users.

We create and offer to users virtual items that can be used on various channels. Users can purchase consumable virtual items from us to show support for their favorite performers or time-based virtual items that provide users with recognized status, such as priority speaking rights or special symbols on the music and entertainment channels.

*Other revenues.* We generate other revenues mainly from advertising services, and to a lesser extent, our online game business, memberships and online education services.

- (i) *Advertising revenues.* Advertising revenues were generated from sales of various forms of advertising and provision of promotion campaigns on our live streaming platforms.
- (ii) *E-commerce business revenues.* We operate several e-commerce platforms providing service solutions for merchants, including a global smart commerce platform that enables merchants to easily build their brands online and sell their products to users around the world.
- (iii) *Online games revenues.* We generate online games revenues from the sales of in-game virtual items used for games developed by us or by third parties under revenue-sharing arrangements on our platforms. Users play online games free of charge, but are charged for purchases of virtual items. The online games we currently offer are primarily web games that can be run from an internet browser and require an internet connection to play.
- (iv) *Membership revenues.* We generated membership revenues from the membership subscription fees paid by our users. In our membership program, users pay a flat monthly subscription fee in order to become members, and in exchange, we give them access to various privileges and enhanced features on our channels, including virtual items exclusively available to members, dedicated customer services and priority entrance to certain live performances.
- (v) *Online education revenues.* Online education service consists of vocational training, language training and K-12 afterschool education courses and we generated revenue from course fee. We disposed our major online education business in 2021.

#### **Cost of Revenues**

Cost of revenues consists primarily of (i) revenue sharing fees and content costs including payments to various channel owners and performers, and content providers, (ii) bandwidth costs, (iii) payment handling costs, (iv) salary and welfare, (v) technical service fee, (vi) depreciation and amortization expense for servers, other equipment and intangibles directly related to operating the platform, (vii) share-based compensation, (viii) other taxes and surcharges, and (ix) other costs.

#### **Operating Expenses**

Our operating expenses consist of (i) research and development expenses, (ii) sales and marketing expenses, (iii) general and administrative expenses, and (iv) goodwill impairment.

### *Research and Development Expenses*

Research and development expenses consist primarily of (i) salary and welfare for research and development personnel, (ii) share-based compensation for research and development personnel, (iii) depreciation of office premise and servers utilized by research and development personnel, and (iv) rental expenses. Costs incurred during the research stage are expensed as incurred. We experienced a slight decrease in research and development expenses in 2021 and 2022, as compared to 2020, primarily due to decrease in personnel related expenses.

### *Sales and Marketing Expenses*

Sales and marketing expenses consist primarily of (i) advertising and promotion expenses, (ii) amortization of intangible assets from business acquisition, and (iii) salary and welfare for sales and marketing personnel. We experienced a slight decrease in sales and marketing expenses in 2021 and 2022, as compared to 2020, primarily due to our disciplined spending on user acquisition.

### *General and Administrative Expenses*

General and administrative expenses consist primarily of (i) salary and welfare for general and administrative personnel, (ii) share-based compensation for management and administrative personnel, (iii) impairment charge, and (iv) professional service fees. Our general and administrative expenses was higher in 2021, as compared to those for 2020 and 2022, primarily due to an impairment charge for certain equity investments without readily determinable fair values.

### *Share-based Compensation Expenses*

We grant stock-based awards, such as share options, restricted shares, restricted share units to eligible employees, officers, directors, and non-employee consultants. Awards granted to employees, officers, and directors are initially accounted for as equity-classified awards, which are measured at the grant date fair value of the award and are recognized using the graded vesting method, net of estimated forfeitures, over the requisite service period, which is generally the vesting period. Awards granted to non-employees are initially measured at fair value on the grant date and periodically re-measured thereafter until the earlier of the performance commitment date or the date the service is completed and recognized over the period in which the service is provided.

Our operating expenses include share-based compensation expenses as follows:

	For the Year Ended December 31,		
	2020 US\$	2021 US\$ (in thousands)	2022 US\$
Research and development expenses	302,818	279,781	261,807
Sales and marketing expenses	505,389	468,407	400,435
General and administrative expenses	146,666	221,731	141,826
Goodwill impairment	—	—	14,830
Total	954,873	969,919	818,898

### *Operating Income*

#### *Gain on disposal of business*

We disposed our online education business in 2021 and recognized related gain of US\$5.0 million. We did not record any gain on disposal of business in 2020 or 2022.

#### *Other income*

Other income primarily consists of government grants in connection with our contributions to technology development, tax refund and investments in local business districts. These grants may not be recurring in nature.

## **Taxation**

### *Cayman Islands*

According to our Cayman Islands counsel, Maples and Calder (Hong Kong) LLP, the Cayman Islands currently levies no taxes on individuals or corporations based upon profits, income, gains or appreciations and there is no taxation in the nature of inheritance tax or estate duty. There are no other taxes likely to be material to us levied by the government of the Cayman Islands except for stamp duties which may be applicable on instruments executed in, or after execution brought within the jurisdiction of, the Cayman Islands. There are no exchange control regulations or currency restrictions in the Cayman Islands.

The Cayman Islands is not party to any double tax treaties that are applicable to any payments made to or by our company.

Pursuant to Section 6 of the Tax Concessions Act (As Revised) of the Cayman Islands, we have obtained an undertaking from the Governor-in-Cabinet:

- (i) that no law which is enacted in the Cayman Islands imposing any tax to be levied on profits or income or gains or appreciations shall apply to us or our operations; and
- (ii) that the aforesaid tax or any tax in the nature of estate duty or inheritance tax shall not be payable (i) on or in respect of our shares, debentures or other obligations, or (ii) by way of withholding in whole or in part of any relevant payment as defined in section 6(3) of the Tax Concessions Act (As Revised).

The undertaking is for a period of twenty years from August 2, 2011.

### *British Virgin Islands*

Duowan BVI is our wholly owned subsidiary.

As Duowan BVI is a BVI business company subject to the provisions of the BVI Business Companies Act (As Revised), it is exempt from all provisions of the Income Tax Act of the BVI (including with respect to all dividends, interests, rents, royalties, compensation and other amounts payable by Duowan BVI to persons who are not persons resident in the BVI).

Capital gains realized with respect to any shares, debt obligations or other securities of Duowan BVI by persons who are not persons resident in the BVI are also exempt from all provisions of the Income Tax Act of the BVI.

No estate, inheritance, succession or gift tax, rate, duty, levy or other charge is payable by persons who are not persons resident in the BVI with respect to any shares, debt obligations or other securities of Duowan BVI, save for interest payable to or for the benefit of an individual resident in the European Union.

### *Hong Kong*

Our subsidiary registered in Hong Kong is subject to Hong Kong Profits Tax on the taxable income as reported in its respective statutory financial statements adjusted in accordance with relevant Hong Kong tax laws. The applicable tax rate is 16.5% in Hong Kong.

### *Singapore*

According to the Development and Expansion Incentive, or the Incentive, pursuant to the provisions of Part IIIB of the Economic Expansion Incentives (Relief from Income Tax) Act, Chapter 86, corporations engaging in new high-value-added projects, expanding or upgrading their operations, or undertaking incremental activities after their pioneer period may apply for their profits to be taxed at a reduced rate of not less than 5% for an initial period of up to ten years. The total tax relief period for each qualifying project or activity is subject to a maximum of 40 years (inclusive of the post-pioneer relief period previously granted, if applicable).

Bigo Singapore applied for the Incentive and received approval in October 2018. Bigo Singapore is entitled to enjoy the beneficial tax rate of 5% as the Incentive for the years 2018 through 2022. Bigo Singapore renewed its qualification in 2022 and is entitled to continue to enjoy such beneficial tax treatment from 2023 to 2027, and will need to re-apply for the Incentive qualification renewal in 2028. Other subsidiaries incorporated in Singapore were subject to 17% of their taxable income.

## *Mainland China*

Current taxation primarily represented the provision for a state and local corporate income tax, or EIT, for subsidiaries and variable interest entities operating in mainland China. On March 16, 2007, the PRC National People’s Congress promulgated the EIT Law, which became effective on January 1, 2008 and was amended on February 24, 2017 and December 29, 2018. These subsidiaries and VIEs are subject to EIT Law on their taxable income as reported in their respective statutory financial statements adjusted in accordance with the relevant tax laws and regulations in mainland China. All our entities in mainland China are subject to EIT at a rate of 25%, with the exception of any preferential treatments they may receive, such as the 15% preferential tax rate that BaiGuoYuan Technology can enjoy for the periods reported as a result of its qualification as a HNTE.

According to a policy promulgated by the mainland China’s state tax bureau and effective from 2008 onwards, enterprises engaged in research and development activities are entitled to claim 150% of the research and development expenses before 2018 so incurred in a year as tax deductible expenses in determining its tax assessable profits for that year, or Super Deduction. The additional tax deducting amount of the qualified research and development expenses have been increased from 50% to 75%, and 100% for manufacturing companies since 2018. Certain subsidiaries and VIEs have claimed such Super Deduction for the period reported.

In addition, according to the EIT Law and its implementation rules, foreign enterprises, which have no establishment or place in mainland China but derive dividends, interest, rents, royalties and other income (including capital gains) from sources in mainland China is subject to PRC withholding tax, or WHT, at 10% (a further reduced WHT rate may be available according to the applicable double tax treaty or arrangement). The 10% WHT is applicable to any dividends to be distributed from our subsidiaries in mainland China and the variable interest entities to us and our subsidiaries outside mainland China. In 2022, Guangzhou Huanju Shidai declared and distributed a cash dividend of part of its stand-alone 2020 earnings, totaling to US\$110.0 million, to its direct oversea parent company, Duowan BVI. As a result, Guangzhou Huanju Shidai paid a withholding tax in the amount of US\$11.0 million in 2022. We do not have any present plan to pay out the retained earnings in subsidiaries in mainland China and the variable interest entities in the foreseeable future. Accordingly, no further WHT has been accrued.

For more information on tax regulations of mainland China, see “Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulation on Tax.”

## **Impact of COVID-19 On Our Operations**

Our results of operations have been, and could continue to be affected by the COVID-19 or any other epidemic. Any potential impact to our results will depend on, to a large extent, future developments and new information that may emerge regarding the duration and severity of the COVID-19 and the actions taken by government authorities and other entities to contain the COVID-19 or treat its impact, almost all of which are beyond our control.

The COVID-19 has affected and may continue to affect our business and our users’ behaviors. As an effort to contain the spread of COVID-19, many countries took precautionary measures that reduced economic activities, including temporary closure of corporate offices, retail outlets and other business facilities, as well as strict implementation of quarantine measures. These measures adversely impacted the macroeconomic environment as well as the income and personal financial condition of many individuals, which in turn adversely affected the willingness of some of our users to purchase virtual items or other products or services on our platforms. The pandemic also adversely affected the activity level of certain users and broadcasters on some of our social entertainment platforms in certain regions, particularly those who are interested in, or rely on, offline activities and offline venues.

On the other hand, lockdown and social distancing measures implemented to control the spread of COVID-19 have led to the increase in demand for premium online entertainment content and authentic social engagement. As a result, we experienced an increase in user traffic on our live streaming and short-form video platforms and time spent by our users on our platforms during the lockdown period, which partially led to the rapid growth of our global business. However, there can be no assurance that such momentum will sustain in the future.

With the lockdown and social distancing measures being largely relaxed or lifted in many areas of the world in late 2021 and 2022, we have observed some moderation in online activities and fluctuations in user engagement in our businesses. Relaxation of pandemic-related restrictions may decrease the willingness of users to remain at home, and instead make travelling and other offline activities more attractive, which may adversely affect the usage of our platforms by our users and their spending habit. The overall situation of COVID-19 has been significantly improved and normalized in 2023. However, there remains uncertainty as to the future impact of the virus. Hence, the extent to which the COVID-19 pandemic impacts our long-term results remains uncertain, and we are closely monitoring its impact on us. See also “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business and Industry—Our business and results of operations have been and may continue to be affected by the COVID-19 pandemic.”

## Results of Operations

The following table sets forth a summary of our consolidated results of operations for the years indicated. Our business has grown rapidly since our inception, and our limited operating history makes it difficult to predict future operating results. We believe that period-to-period comparisons of results of operations should not be relied upon as indicative of future performance. Starting from April 3, 2020, we no longer consolidate the operating results of Huya into our financial statements. In addition, as a result of the definitive agreements entered into with Baidu on the sale of YY Live, which has been substantially completed with certain matters to be completed in the future, including necessary regulatory approvals from government authorities, the historical financial results of YY Live are reflected in our consolidated financial statements as discontinued operations, and accordingly, we ceased consolidation of the YY Live business since February 8, 2021. Furthermore, we started to consolidate Shoptline from September 2022. For the avoidance of confusion, the continuing operations of our consolidated financial statements for the year ended December 31, 2020, 2021 and 2022 primarily consisted of BIGO, excluding Huya and YY Live. The discontinued operations reported in our consolidated financial statements include the results of Huya from January 1, 2020 to April 3, 2020 and the results of YY Live from January 1, 2020 to February 8, 2021.

	For the Year Ended December 31,					
	2020		2021		2022	
	US\$	% of total net revenues	US\$	% of total net revenues	US\$	% of total net revenues
	(in thousands, except for percentages)					
Total net revenues <sup>(1)</sup>	1,918,144	100.0	2,619,051	100.0	2,411,516	100.0
Live streaming	1,815,826	94.7	2,476,790	94.6	2,225,518	92.3
Others	102,318	5.3	142,261	5.4	185,998	7.7
Cost of revenues	(1,378,146)	(71.8)	(1,781,150)	(68.0)	(1,559,388)	(64.7)
Gross profit	539,998	28.2	837,901	32.0	852,128	35.3
Research and development expenses	(302,818)	(15.8)	(279,781)	(10.7)	(261,807)	(10.9)
Sales and marketing expenses	(505,389)	(26.3)	(468,407)	(17.9)	(400,435)	(16.6)
General and administrative expenses	(146,666)	(7.6)	(221,731)	(8.5)	(141,826)	(5.9)
Goodwill impairment	—	—	—	—	(14,830)	(0.6)
Total operating expenses	(954,873)	(49.8)	(969,919)	(37.0)	(818,898)	(34.0)
Gain on disposal of business	—	—	4,959	0.2	—	—
Other income	8,095	0.4	20,376	0.8	17,505	0.7
Operating (loss) income	(406,780)	(21.2)	(106,683)	(4.1)	50,735	2.1
Gain (loss) on deemed disposal and disposal of investments	272,281	14.2	(23,762)	(0.9)	4,113	0.2
(Loss) gain on extinguishment of debt and derivative	(6,277)	(0.3)	5,291	0.2	63,378	2.6
Gain (loss) on fair value changes of investments	160,849	8.4	(15,435)	(0.6)	424,304	17.6
Foreign currency exchange (losses) gains, net	(17,472)	(0.9)	(13,377)	(0.5)	11,666	0.5
Interest expense	(75,555)	(3.9)	(14,475)	(0.6)	(12,770)	(0.5)
Interest income and investment income	89,078	4.6	91,233	3.5	93,148	3.9
Other non-operating expense	(2,467)	(0.1)	(381)	0.0	—	—
Income (loss) before income tax expenses	13,657	0.7	(77,589)	(3.0)	634,574	26.3
Income tax expenses	(27,825)	(1.5)	(25,745)	(1.0)	(34,575)	(1.4)
(Loss) income before share of loss in equity method investments, net of income taxes	(14,168)	(0.7)	(103,334)	(3.9)	599,999	24.9
Share of loss in equity method investments, net of income taxes	(7,634)	(0.4)	(26,217)	(1.0)	(498,431)	(20.7)
Net (loss) income from continuing operations	(21,802)	(1.1)	(129,551)	(4.9)	101,568	4.2
Net income from discontinued operations	1,401,670	73.1	35,567	1.4	—	—
Net income (loss)	1,379,868	71.9	(93,984)	(3.6)	101,568	4.2
Net (loss) income attributable to the non-controlling interest shareholders and the mezzanine equity classified non-controlling interest shareholders	(6,971)	(0.4)	13,691	0.5	27,323	1.1
Net income (loss) attributable to controlling interest of the Company	1,372,897	71.6	(80,293)	(3.1)	128,891	5.3
Including: Net (loss) income from continuing operations attributable to controlling interest of the Company	(18,741)	(1.0)	(115,860)	(4.4)	128,891	5.3
Net income from discontinued operations attributable to controlling interest of the Company	1,391,638	72.6	35,567	1.4	—	—
Accretion of subsidiaries' redeemable convertible preferred shares to redemption value	(5,564)	(0.3)	(5,236)	(0.2)	(5,426)	(0.2)
Cumulative dividend on subsidiary's Series A Preferred Shares	(4,000)	(0.2)	(4,000)	(0.2)	(4,000)	(0.2)
Net income (loss) attributable to common shareholders of the Company	1,363,333	71.1	(89,529)	(3.4)	119,465	5.0
Including: Net (loss) income from continuing operations attributable to common shareholders of the Company	(28,305)	(1.5)	(125,096)	(4.8)	119,465	5.0
Net income from discontinued operations attributable to common shareholders of the Company	1,391,638	72.6	35,567	1.4	—	—

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(1) Net of rebates and discounts.

#### **Year Ended December 31, 2022 Compared to Year Ended December 31, 2021**

**Net revenues.** Our net revenues decreased from US\$2,619.1 million in 2021 to US\$2,411.5 million in 2022. This decrease was primarily driven by decrease in live streaming revenues.

**Live streaming revenues.** Our live streaming revenues decreased from US\$2,476.8 million in 2021 to US\$2,225.5 million in 2022. The overall decrease was primarily attributable to the decrease in the average revenue per paying user of BIGO, as global macroeconomic uncertainties and the appreciation of U.S. dollars against certain other local currencies negatively affected users' paying activities. The total number of paying users of BIGO (including Bigo Live, Likee and imo) decreased from 3.8 million in 2021 to 3.6 million in 2022, while the ARPU for live streaming business of BIGO (including Bigo Live, Likee and imo) decreased from US\$509 in 2021 to US\$452 in 2022.

**Other revenues.** Other revenues increased by 30.7% from US\$142.3 million in 2021 to US\$186.0 million in 2022. The increase was mainly due to the contribution from the consolidation of Shoplevel.

**Cost of revenues.** Our cost of revenues decreased from US\$1,781.2 million in 2021 to US\$1,559.4 million in 2022. The decrease was mainly due to a decrease in our revenue sharing fees and content costs, which decreased from US\$1,158.4 million in 2021 to US\$1,020.2 million in 2022. This decrease in revenue sharing fees and content costs was in line with the decrease in live streaming revenues. Bandwidth costs decreased by 19.7% from US\$96.5 million in 2021 to US\$77.5 million in 2022, primarily due to our improved efficiency in bandwidth usage. Payment handling costs was US\$165.4 million in 2022, compare with US\$212.7 million in 2021, which was in line with the decrease in live streaming revenues, as well as our proactive efforts in introducing third-party payment channels of lower-cost.

**Operating expenses.** Our operating expenses decreased from US\$969.9 million in 2021 to US\$818.9 million in 2022, primarily due to the decreases in research and development expenses, sales and marketing expenses and general and administrative expenses, partially offset by an increase in goodwill impairment.

**Research and development expenses.** Our research and development expenses decreased from US\$279.8 million in 2021 to US\$261.8 million in 2022. The decrease was primarily due to the decrease in personnel related expenses.

**Sales and marketing expenses.** Our sales and marketing expenses decreased from US\$468.4 million in 2021 to US\$400.4 million in 2022. The decrease was primarily due to our disciplined spending on user acquisition.

**General and administrative expenses.** Our general and administrative expenses decreased from US\$221.7 million in 2021 to US\$141.8 million in 2022. Our general and administrative expenses was higher in 2021 primarily due to an impairment charge for our equity investments.

**Foreign currency exchange gains (losses).** We had net foreign currency exchange gains of US\$11.7 million in 2022, as compared to foreign currency exchange losses of US\$13.4 million in 2021, primarily due to appreciation of U.S. dollar.

**Interest income and investment income.** Our interest income and investment income were US\$93.1 million in 2022, as compared to US\$91.2 million in 2021.

**Income tax expenses.** We recorded income tax expenses of US\$34.6 million in 2022, as compared to US\$25.7 million in 2021.

**Share of loss in equity method investments.** We recorded share of loss in equity method investments of US\$498.4 million in 2022, as compared to US\$26.2 million in 2021, primarily due to an impairment loss of US\$417.2 million from an equity method investment recognized in 2022.

**Net income (loss) from continuing operations.** As a result of the foregoing, we had a net income from continuing operations attributable to common shareholders of our company of US\$119.5 million in 2022, as compared to a net loss from continuing operations attributable to common shareholders of our company of US\$125.1 million in 2021.

**Net income from discontinued operations.** We did not record any net income from discontinued operations attributable to common shareholders of our company in 2022, as compared to that of US\$35.6 million in 2021.

#### **Year Ended December 31, 2021 Compared to Year Ended December 31, 2020**

**Net revenues.** Our net revenues increased by 36.5% from US\$1,918.1 million in 2020 to US\$2,619.1 million in 2021. This increase was primarily driven by a 36.4% year-over-year increase in live streaming revenues.

**Live streaming revenues.** Our live streaming revenues increased by 36.4% from US\$1,815.8 million in 2020 to US\$2,476.8 million in 2021. The overall increase was primarily attributable to the increased number of paying users and average revenue per paying user of BIGO. The total number of paying users of BIGO (including Bigo Live, Likee and imo) increased from 3.4 million in 2020 to 3.8 million in 2021, while the ARPU for live streaming business of BIGO (including Bigo Live, Likee and imo) increased from US\$416 in 2020 to US\$509 in 2021.

**Other revenues.** Other revenues increased by 39.0% from US\$102.3 million in 2020 to US\$142.3 million in 2021, which was mainly due to the growth of our advertisement revenue.

**Cost of revenues.** Our cost of revenues increased by 29.2% from US\$1,378.1 million in 2020 to US\$1,781.2 million in 2021. The increase was mainly due to an increase in our revenue sharing fees and content costs, which increased by 42.5% from US\$812.7 million in 2020 to US\$1,158.4 million in 2021. This increase in revenue sharing fees and content costs was in line with the increase in live streaming revenues. Bandwidth costs decreased by 19.8% from US\$120.4 million in 2020 to US\$96.5 million in 2021, primarily due to our improved efficiency in bandwidth usage and the termination of bandwidth usage for users in India, partially offset by Bigo Live's user base expansion outside India. Payment handling costs increased from US\$190.6 million in 2020 to US\$212.7 million in 2021, which was in line with the increase in live streaming revenues, partially offset by our proactive efforts in introducing third-party payment channels of lower-cost.

**Operating expenses.** Our operating expenses increased from US\$954.9 million in 2020 to US\$969.9 million in 2021, primarily due to an increase in our general and administrative expenses, partially offset by decreases in our research and development expenses and sales and marketing expenses.

**Research and development expenses.** Our research and development expenses decreased from US\$302.8 million in 2020 to US\$279.8 million in 2021. This decrease was primarily due to the decrease in share-based compensation by US\$18.6 million from 2020 to 2021.

**Sales and marketing expenses.** Our sales and marketing expenses decreased from US\$505.4 million in 2020 to US\$468.4 million in 2021. This decrease was primarily due to our disciplined spending on user acquisition via advertisement for Likee and Hago.

**General and administrative expenses.** Our general and administrative expenses increased from US\$146.7 million in 2020 to US\$221.7 million in 2021. This increase was associated with an increase in impairment charge for certain equity investments and the general growth of our business, partially offset by the decrease in share-based compensation expenses.

**Foreign currency exchange gains (losses).** We had net foreign currency exchange losses of US\$13.4 million in 2021, compared to US\$17.5 million in 2020, primarily due to the appreciation of Renminbi against the U.S. dollars during 2021.

**Interest income and investment income.** Our interest income and investment income were US\$91.2 million in 2021, compared to US\$89.1 million in 2020.

**Income tax expenses.** We recorded income tax expenses of US\$25.7 million in 2021, compared to US\$27.8 million in 2020. The effective tax rate of 2020 was significantly impacted by the valuation allowances provided against the deferred tax assets that were unlikely to be realized.

**Net loss from continuing operations.** As a result of the foregoing, we had a net loss from continuing operations attributable to common shareholders of our company of US\$125.1 million in 2021 as compared to US\$28.3 million in 2020.

**Net income from discontinued operations.** We had net income from discontinued operations attributable to common shareholders of our company of US\$35.6 million in 2021 as compared to US\$1,391.6 million in 2020. The decrease was primarily due to the gain on disposal of Huya amounting to approximately US\$0.9 billion that was recorded as part of the net income from discontinued operations in 2020, as well as the deconsolidation of YY Live business since February 8, 2021.

### Segment Reporting

For the years ended December 31, 2020, 2021 and 2022, there are two operating and reportable segments, which is the BIGO segment and the All other segment.

For clarification, the segment reporting information disclosed hereunder does not take the financial results of Huya and YY Live into account. Starting from the second quarter of 2020, we deconsolidated Huya and its historical financial results were reflected in our consolidated financial statements as discontinued operations accordingly. Also, as a result of the definitive agreements entered into with Baidu on the sale of YY Live on November 16, 2020, YY Live is represented as discontinued operations. YY segment was renamed as “All other” segment and has been recast to exclude the financial results of YY Live. The segment reporting information disclosed hereunder reflects the Huya and YY Live transactions and the elimination from historical segment results of both discontinued businesses as reportable segments.

### Segment Revenues

Revenues from the BIGO segment primarily consist of the revenues generated from several social entertainment platforms, including Bigo Live, Likee, imo, and others. Revenues from the All other segment (formerly known as the YY segment) primarily consist of revenues generated from Hago, Shopline, and certain audio live streaming platforms. The table below sets forth our revenues by segment for the periods indicated:

	For the Year Ended December 31,		
	2020	2021	2022
	US\$	US\$	US\$
	(in thousands)		
<b>Net Revenues:</b>			
BIGO	1,732,811	2,323,758	1,997,021
All other	185,333	295,360	414,740
Elimination	—	(67)	(245)

#### BIGO

*2022 compared to 2021.* BIGO revenues decreased from US\$2,323.8 million in 2021 to US\$1,997.0 million in 2022, primarily due to the decrease in the average revenue per paying user of BIGO (including Bigo Live, Likee and imo), as global macroeconomic uncertainties and the appreciation of U.S. dollars against certain other local currencies negatively affected users’ paying activities.

*2021 compared to 2020.* BIGO revenues increased by 34.1% from US\$1,732.8 million in 2020 to US\$2,323.8 million in 2021, primarily due to the increases in number of paying users and average revenue per paying user of BIGO (including Bigo Live, Likee and imo).

#### All other

*2022 compared to 2021.* Revenues of All other segment increased by 40.4% from US\$295.4 million in 2021 to US\$414.7 million in 2022, primarily due to the contribution from the consolidation of Shopline.

*2021 compared to 2020.* Revenues of All other segment increased by 59.4% from US\$185.3 million in 2020 to US\$295.4 million in 2021, primarily due to the revenue growth of Hago and other products.

**Segment Operating Costs and Expenses**

The following table sets forth our operating costs and expenses by segment for the periods indicated:

	For the Year Ended December 31,		
	2020	2021	2022
	US\$	US\$	US\$
		(in thousands)	
<b>Operating Costs and Expenses:</b>			
BIGO	1,933,452	2,203,088	1,789,897
All other	399,567	548,048	588,634
Elimination	—	(67)	(245)

*BIGO*

Operating costs and expenses of BIGO mainly consist of revenue sharing, salaries and benefits, marketing and promotion expenses, bandwidth costs, depreciation and amortization, payment handling costs and other costs.

*Cost of revenues.*

*2022 compared to 2021.* The cost of revenues of BIGO decreased from US\$1,539.2 million in 2021 to US\$1,249.4 million in 2022, which was in line with the decrease in revenues.

*2021 compared to 2020.* The cost of revenues of BIGO increased by 27.5% from US\$1,207.1 million in 2020 to US\$1,539.2 million in 2021, which was in line with the increase in revenues.

*Research and development expenses.*

*2022 compared to 2021.* The research and development expenses of BIGO decreased from US\$204.6 million in 2021 to US\$168.1 million in 2022, primarily due to the decrease in salaries and welfare of research and development personnel.

*2021 compared to 2020.* The research and development expenses of BIGO increased by 5.4% from US\$194.1 million in 2020 to US\$204.6 million in 2021, primarily due to an increase in the salaries and welfare of research and development personnel.

*Sales and marketing expenses.*

*2022 compared to 2021.* The sales and marketing expenses of BIGO decreased from US\$402.5 million in 2021 to US\$311.5 million in 2022, primarily due to our disciplined spending on user acquisition via advertisement for Likee.

*2021 compared to 2020.* The sales and marketing expenses of BIGO decreased by 9.9% from US\$446.5 million in 2020 to US\$402.5 million in 2021, primarily due to our disciplined spending on user acquisition via advertisement for Likee.

*General and administrative expenses.*

*2022 compared to 2021.* The general and administrative expenses of BIGO increased from US\$56.8 million in 2021 to US\$60.8 million in 2022, primarily due to the increase in share-based compensation expenses.

*2021 compared to 2020.* The general and administrative expenses of BIGO decreased by 33.7% from US\$85.7 million in 2020 to US\$56.8 million in 2021, primarily due to the decrease in share-based compensation expenses.

*All other*

Operating costs and expenses of All other segment mainly consist of revenue sharing fees and content costs, salaries and benefits, marketing and promotion expenses, bandwidth costs, depreciation and amortization, impairment charge and other costs.

#### *Cost of revenues*

*2022 compared to 2021.* The cost of revenues of All other segment increased by 28.2% from US\$242.0 million in 2021 to US\$310.3 million in 2022, which was in line with the increase in revenues.

*2021 compared to 2020.* The cost of revenues of All other segment increased by 41.5% from US\$171.0 million in 2020 to US\$242.0 million in 2021, which was in line with the increase in revenues.

#### *Research and development expense*

*2022 compared to 2021.* The research and development expenses of All other segment increased from US\$75.2 million in 2021 to US\$93.7 million in 2022, primarily due to the increase in staff-related expenses for research and development personnel.

*2021 compared to 2020.* The research and development expenses of All other segment decreased from US\$108.7 million in 2020 to US\$75.2 million in 2021, primarily due to the decrease in staff related expenses for research and development personnel.

#### *Sales and marketing expenses*

*2022 compared to 2021.* The sales and marketing expenses of All other segment increased from US\$65.9 million in 2021 to US\$88.9 million in 2022, primarily due to increased efforts in sales and marketing activities for most of the other products, partially offset by our disciplined spending on user acquisition.

*2021 compared to 2020.* The sales and marketing expenses of All other segment increased by 12.0% from US\$58.9 million in 2020 to US\$65.9 million in 2021, primarily due to increased efforts in sales and marketing activities for most of the other products, partially offset by our disciplined spending on user acquisition via advertisement for Hago.

#### *General and administrative expenses*

*2022 compared to 2021.* The general and administrative expenses of All other segment decreased from US\$164.9 million in 2021 to US\$81.0 million in 2022, primarily due to a decrease in impairment charge for equity investments.

*2021 compared to 2020.* The general and administrative expenses of All other segment increased from US\$61.0 million in 2020 to US\$164.9 million in 2021, primarily due to an increase in impairment charge for certain equity investments.

### **Recently Issued Accounting Pronouncements**

The recently issued accounting pronouncements that are relevant to us are included in Note 2(l) to our audited consolidated financial statements, which are included elsewhere in this annual report.

## **B. Liquidity and Capital Resources**

### **Cash Flows and Working Capital**

In recent years, we have financed our operations primarily through cash flows from operations, the proceeds from our follow-on equity offerings and convertible senior notes offerings, and gain on disposal of businesses. See “Item 4. Information on the Company—A. History and Development of the Company” for more information about our material transactions in the past few years.

We expect to require cash to fund our ongoing operational needs, particularly our revenue sharing fees and content costs, salaries and benefits, bandwidth costs and potential acquisitions or strategic investments. We believe that our current cash and cash equivalents and the anticipated cash flow from operations will be sufficient to meet our anticipated working capital requirements and capital expenditures needs for the next 12 months. However, we may require additional cash resources due to changing business conditions or other future developments, including any investments or acquisitions we may decide to selectively pursue. If our existing cash resources are insufficient to meet our requirements, we may seek to sell equity or equity-linked securities, debt securities or borrow from banks.

As of December 31, 2020, 2021 and 2022, we had US\$1,788.0 million, US\$2,134.5 million and US\$1,565.6 million, respectively, in cash, cash equivalents, restricted cash, and restricted short-term deposits of continuing operation.

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As of December 31, 2022, our subsidiaries, the VIEs, and the VIEs' subsidiaries located in mainland China held cash and cash equivalents, restricted cash, short-term deposits, restricted short-term deposits and short-term investments in the amount of US\$755.4 million. Aggregate undistributed earnings and reserves of our subsidiaries, the VIEs, and the VIEs' subsidiaries located in mainland China that are available for distribution to our company as of December 31, 2022 were US\$2,385.3 million. We would need to accrue and pay withholding taxes if we were to distribute funds from our subsidiaries in mainland China to our offshore subsidiaries. However, we plan to indefinitely utilize undistributed earnings in mainland China to meet our obligations and commitments there, including our capital expenditure in connection with the construction of buildings located in mainland China and working capital requirements for our research and development team.

The following table sets forth a summary of our cash flows for the years indicated:

	For the Year Ended December 31,		
	2020	2021	2022
	US\$	US\$	US\$
		(in thousands)	
Net cash (used in) provided by continuing operating activities	(2,717)	146,127	316,494
Net cash provided by (used in) continuing investing activities	690,170	(846,857)	(510,284)
Net cash used in continuing financing activities	(136,734)	(723,536)	(321,909)
Net increase (decrease) in cash, cash equivalents and restricted cash in continuing operations	550,719	(1,424,266)	(515,699)
Net increase in cash, cash equivalents and restricted cash in discontinuing operations	591,466	1,700,739	—
Cash, cash equivalents and restricted cash at the beginning of the year	652,427	1,819,571	2,134,492
Effect of exchange rate changes on cash, cash equivalents and restricted cash	24,959	38,448	(53,233)
Cash, cash equivalents and restricted cash at the end of the year	1,819,571	2,134,492	1,565,560
Less: Cash, cash equivalents and restricted cash of held for sales at the end of the year	31,600	—	—
Cash, cash equivalents and restricted cash of continuing operations at the end of the year	1,787,971	2,134,492	1,565,560

### Operating Activities

Net cash used in continuing operating activities consists primarily of our net income with certain adjustments, such as gain on disposal and deemed disposal of investments, and gain on fair value changes of investments, and mitigated by non-cash adjustments, such as share-based compensation, depreciation of property and equipment, and amortization of acquired intangible assets and land use rights.

Net cash provided by continuing operating activities amounted to US\$316.5 million for the year ended December 31, 2022. In 2022, the difference between our net cash provided by continuing operating activities and our net income from continuing operations of US\$101.6 million was primarily due to a non-cash item adjustment in depreciation of property and equipment of US\$83.4 million, a non-cash item adjustment in amortization of acquired intangible assets and land use rights of US\$65.2 million, a non-cash item adjustment in share-based compensation of US\$44.1 million, a non-cash item adjustment in share of loss in equity method investments of US\$498.4 million, partially offset by a non-cash item adjustment in gain on fair value change of investments of US\$424.3 million, and a non-cash item adjustment in gain on extinguishment of debt and derivative of US\$63.4 million.

Net cash provided by continuing operating activities amounted to US\$146.1 million for the year ended December 31, 2021. In 2021, the difference between our net cash provided by continuing operating activities and our net loss from continuing operations of US\$129.6 million was primarily due to a non-cash item adjustment in share-based compensation of US\$33.4 million, a non-cash item adjustment in amortization of acquired intangible assets and land use rights of US\$67.2 million, a non-cash item adjustment in depreciation of property and equipment of US\$108.7 million, a non-cash item adjustment in loss on fair value change of investments of US\$15.4 million, a non-cash item adjustment in impairment of investments of US\$93.6 million, and a non-cash adjustment in loss on disposal and deemed disposal of investments of US\$23.8 million, partially offset by a decrease in accrued liabilities and other current liabilities of US\$89.5 million.

Net cash used in continuing operating activities amounted to US\$2.7 million for the year ended December 31, 2020. In 2020, the difference between our net cash used in continuing operating activities and our net loss from continuing operations of US\$21.8 million was primarily due to an increase in accrued liabilities and other current liabilities of US\$106.1 million as a result of an increase in accrued revenue sharing fees, accrued salaries and welfare, and value added taxes and other taxes payable, a non-cash item adjustment in share-based compensation of US\$92.2 million, a non-cash item adjustment in amortization of acquired intangible assets and land use rights of US\$109.4 million, a non-cash item adjustment in depreciation of property and equipment of US\$77.5 million, partially offset by a non-cash item adjustment in gain on fair value change of investments of US\$160.8 million, and an adjustment in gain on disposal and deemed disposal of investments of US\$272.3 million.

### **Investing Activities**

Net cash used in continuing investing activities largely reflects placements of short-term deposits, placements of short-term investments, purchases of property and equipment and other non-current assets in connection with the expansion and upgrade of our technology infrastructure, and our acquisitions of and investments in certain companies.

Net cash provided by continuing investing activities largely reflects maturities of short-term deposits, maturities of short-term investments, and cash received from disposal of investments.

Net cash used in continuing investing activities amounted to US\$510.3 million in the year ended December 31, 2022. Net cash used in continuing investing activities primarily resulted from the placement of short-term deposits and short-term investments in various banks in the amount of US\$4,843.8 million, payments for purchase of property and equipment, other non-current assets of US\$78.9 million, and cash paid for certain acquisitions and strategic investments of US\$175.7 million, partially offset by the maturities of short-term deposits and short-term investments in various banks in the amount of US\$4,601.5 million.

Net cash used in continuing investing activities amounted to US\$846.9 million in the year ended December 31, 2021. Net cash used in continuing investing activities primarily resulted from the placement of short-term deposits and short-term investments in various banks in the amount of US\$3,678.2 million, payments for purchase of property and equipment, intangible assets and land use right of US\$184.9 million, and cash paid for certain acquisitions and strategic investments of US\$89.7 million, partially offset by the maturities of short-term deposits and short-term investments in various banks in the amount of US\$2,990.8 million and cash received from disposal of investments of US\$156.5 million.

Net cash provided by continuing investing activities amounted to US\$690.2 million in the year ended December 31, 2020. Net cash provided by continuing investing activities primarily resulted from the maturities of short-term deposits and short-term investments in various banks in the amount of US\$2,285.5 million, and cash received from disposal of investments of US\$826.8 million, partially offset by the placement of short-term deposits and short-term investments in various banks in the amount of US\$2,103.5 million, cash paid for certain acquisitions and strategic investments of US\$206.6 million, and payments of US\$151.0 million for purchase of property and equipment.

### **Financing Activities**

Net cash used in continuing financing activities was US\$321.9 million in 2022, primarily attributable to cash paid for share repurchase of US\$138.1 million, dividends paid to shareholders of US\$145.9 million and cash paid for convertible bonds repurchase of US\$87.7 million, partially offset by the proceeds of US\$44.5 million from bank borrowings.

Net cash used in continuing financing activities was US\$723.5 million in 2021, primarily attributable to cash paid for share repurchase of US\$398.6 million, dividends paid to shareholders of US\$160.1 million, and US\$147.6 million repayment of bank borrowings.

Net cash used in continuing financing activities was US\$136.7 million in 2020, primarily attributable to dividends paid to shareholders of US\$64.6 million, cash paid for share repurchase of US\$106.0 million and US\$132.9 million repayment of bank borrowings, partially offset by the proceeds of US\$155.7 million from bank borrowings.

### **Material Cash Requirements**

Our material cash requirements as of December 31, 2022 and any subsequent interim period primarily include our operating lease commitments, capital commitment, loan obligations and convertible notes obligations.

Our operating lease commitments consist of lease of offices under operating lease agreements, where a significant portion of the risks and rewards of ownership are retained by the lessor. Payments made under operating leases are charged to our consolidated statements of operations on a straight-line basis over the period of the lease, including any free lease periods. Payment due by December 31, 2022 for our operating lease commitments amounted to US\$38.2 million, representing undiscounted cash payments of both leases recognized as lease liabilities on our consolidated balance sheet and lease commitments not recognized as lease liabilities.

Our capital commitments primarily consist of capital expenditures related to properties and additional investments in equity investments. We had outstanding capital commitments totaling to US\$143.5 million as of December 31, 2022. Our capital expenditures are primarily used to purchase office space, computers, servers, office furniture, operating rights, domain names and other assets.

Our loan obligations primarily consist of long-term loans borrowed from banks. In 2021, we entered into a long-term borrowing agreement with the Agricultural Bank of China as borrower, for an up to RMB1.1 billion loan facility with a floating interest rate determined based on the one-year loan prime rate for the construction of our building located on the parcel of land in Guangzhou to which we acquired use right. The loan was pledged by our entitlement to the rental income from such building and our land use right to the parcel of land located in Guangzhou, which amounted to US\$227.6 million as of December 31, 2022. In 2021 and 2022, we drew down an aggregate principal amount of US\$12.4 million under such loan facility. The total outstanding borrowings were US\$7.4 million and US\$0.4 million as of December 31, 2021 and 2022, respectively. As of December 31, 2022, the total payments due for our loan obligations amounted to US\$0.4 million. The loan was fully repaid in April 2023.

Our convertible notes obligations primarily consist of the 2025 Notes and the 2026 Notes we issued in June 2019. The 2025 Notes bear interest at a rate of 0.75% per year, and the 2026 Notes at a rate of 1.375% per year. Interest on the Notes will accrue from, and including, June 24, 2019 and will be payable semiannually in arrears on June 15 and December 15 of each year, beginning on December 15, 2019. The 2025 Notes will mature on June 15, 2025 and the 2026 Notes will mature on June 15, 2026, unless repurchased, redeemed or converted in accordance with their terms prior to such date. Each holder of the 2025 Notes has the right, at the option of such holder, to require us to repurchase for cash on June 15, 2023 all of such holder's 2025 Notes or any portion thereof that is an integral multiple of US\$1,000 principal amount. The holders' repurchase right in relation to the 2025 Notes becomes exercisable at 9:00 a.m., New York City time, on Friday, May 12, 2023 and expires at 5:00 p.m., New York City time, on Tuesday, June 13, 2023.

We have not entered into any financial guarantees or other commitments to guarantee the payment obligations of any third parties. We have not entered into any derivative contracts that are indexed to our shares and classified as shareholders' (deficit)/equity, or that are not reflected in our consolidated financial statements. Furthermore, we do not have any retained or contingent interest in assets transferred to an unconsolidated entity that serves as credit, liquidity or market risk support to such entity. We do not have any variable interest in any unconsolidated entity that provides financing, liquidity, market risk or credit support to us or engages in leasing, hedging or research and development services with us.

Other than the obligations set forth above, we did not have any significant operating lease obligations, purchase obligations or other long-term obligations as of December 31, 2022.

## **Holding Company Structure**

JOYY Inc. is a holding company with no material operations of its own. We conduct our operations primarily through (i) our subsidiaries in Singapore, the United States, the United Kingdom, and many other regions for a majority of our global business; and (ii) the variable interest entities and their subsidiaries for some of our remaining business in mainland China. As a result, JOYY Inc.'s ability to pay dividends depends upon dividends paid by our subsidiaries, which is subject to restrictions imposed by the applicable laws and regulations in these markets. In certain jurisdictions, such as Singapore, there are currently no foreign exchange control regulations which restrict the ability of our subsidiaries in these jurisdictions to distribute dividends to us. However, the relevant regulations may be changed and the ability of these subsidiaries to distribute dividends to us may be restricted in the future. As for the jurisdiction of mainland China, under the laws and regulations of mainland China, if our existing subsidiaries or any newly formed ones incur debt on their own behalf in the future, the instruments governing their debt may restrict their ability to pay dividends to us. In addition, our wholly foreign-owned subsidiaries in mainland China are permitted to pay dividends to us only out of its retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. Under law of mainland China, each of our subsidiaries and the variable interest entities in mainland China is required to set aside at least 10% of its after-tax profits each year, if any, to fund certain statutory reserve funds until such reserve funds reach 50% of their registered capital. In addition, our wholly foreign-owned subsidiaries in mainland China may allocate a portion of their after-tax profits based on PRC accounting standards to enterprise expansion funds and staff bonus and welfare funds at their discretion, and the variable interest entities may allocate a portion of its after-tax profits based on PRC accounting standards to a surplus fund at their discretion. The statutory reserve funds and the discretionary funds are not distributable as cash dividends. Remittance of dividends by a wholly foreign-owned company out of mainland China is subject to examination by the banks designated by SAFE. Our subsidiaries in mainland China have not paid dividends and will not be able to pay dividends until they generate accumulated profits and meet the requirements for statutory reserve funds.

### **C. Research and Development, Patents and Licenses, Etc.**

In order to support the kind of multi-user, real-time online voice and video communications on a scale necessary for our platforms, we build and develop our own network infrastructure. See "Item 4. Information on the Company—B. Business Overview—Intellectual Property" for a description of the protection of our intellectual property.

Research and development expenses consist primarily of salaries and benefits for research and development personnel and rental and depreciation of office premises and servers utilized by the research and development personnel. We incurred US\$302.8 million, US\$279.8 million and US\$261.8 million research and development expenses in 2020, 2021 and 2022, respectively.

### **D. Trend Information**

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demands, commitments or events since the beginning of our fiscal year 2022 that are reasonably likely to have a material effect on our net revenues, income from operations, profitability, liquidity or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future operating results or financial condition.

### **E. Critical Accounting Estimates**

#### **Critical Accounting Policies and Estimates**

We prepare our financial statements in conformity with U.S. GAAP, which requires us to make estimates and assumptions that affect our reporting of, among other things, assets and liabilities, revenues and expenses. We regularly evaluate these estimates and assumptions based on the most recently available information, our own historical experiences and other factors that we believe to be relevant under the circumstances. Since our financial reporting process inherently relies on the use of estimates and assumptions, our actual results could differ from these estimates. This is especially true with some accounting policies that require higher degrees of judgment than others in their application. We consider the policies discussed below to be critical to an understanding of our audited consolidated financial statements because they involve the greatest reliance on our management's judgment.

#### **Revenue Recognition and Deferred Revenue**

Revenues are recognized when control of the promised virtual items or services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those virtual items or services.

We have a recharge system for users to purchase our virtual currency. Users can recharge via various online payment platforms provided by third parties. Virtual currency is non-refundable and without expiry. As the virtual currency is often consumed soon after it is purchased based on history of turnover, we consider the impact of the breakage amount for virtual currency coupons is insignificant. Unconsumed virtual currency is recorded as deferred revenue. Virtual currencies used to purchase virtual items are recognized as revenue according to the prescribed revenue recognition policies of virtual items addressed below unless otherwise stated.

### ***Live Streaming***

We generate our live streaming revenue from sales of virtual items on our live streaming platforms. Our users can access the platforms and view the live streaming content showed by the performers. We share a portion of the sales proceeds of virtual items (“revenue sharing fee”) with performers and talent agencies in accordance with their revenue sharing arrangements. Those performers who do not have revenue sharing arrangements with us are not entitled to any revenue sharing fee.

We evaluate and determine that we are the principal and view users to be our customers. We report live streaming revenues on a gross basis. Accordingly, the amounts billed to users are recorded as revenues and revenue sharing fee paid to performers and talent agencies are recorded as cost of revenues. Where we are the principal, we control the virtual items before they are transferred to users. Our control is evidenced by our sole ability to monetize the virtual items before they are transferred to users, and is further supported by us being primarily responsible to users and having a level of discretion in establishing pricing.

We design, create and offer various virtual items for sales to users with pre-determined selling price. Sales proceeds are recorded as deferred revenue and recognized as revenue based on the consumption of the virtual items. Virtual items are categorized as consumable and time-based items. Consumable items are consumed upon purchase and use while time-based items could be used for a fixed period of time. Users can purchase and present consumable items to performers to show support for their favorite performers, or purchase time-based virtual items for one or multiple months for a monthly fee, which provide users with recognized status, such as priority speaking rights or special symbols over a period of time. Accordingly, live streaming revenue is recognized immediately when the consumable virtual item is used, or in the case of time-based virtual items, revenue is recognized ratably over the fixed period on a straight-line basis. We do not have further obligations to the user after the virtual items are consumed immediately or after the stated period of time for time-based items.

We may also enter into contracts that can include various combinations of virtual items, which are generally capable of being distinct and accounted for as separate performance obligations, such as noble member program. Judgments are required as follow: (1) determining whether those virtual items are considered distinct performance obligations that should be accounted for separately versus together, (2) determining the standalone selling price for each distinct performance obligation, and (3) allocating of the arrangement consideration to the separate accounting of each distinct performance obligation based on their relative standalone selling prices. Certain virtual items are provided to customers over time and have the same pattern of transfer to customers. We exercise judgement in determining the number of distinct performance obligations by accounting for services that have the same pattern of transfer to customers as a single performance obligation. In instances where standalone selling price is not directly observable as we do not sell the virtual item separately, we determine the standalone selling price based on pricing strategies, market factors and strategic objectives. We recognize revenue for each of the distinct performance obligations identified in accordance with the applicable revenue recognition method relevant for that obligation.

As our live streaming virtual items are generally sold without right of return and we do not provide any other credit and incentive to its users, therefore accounting of variable consideration when estimating the amount of revenue to recognize is not applicable to our live streaming business.

### ***Others***

Other revenues mainly generated from advertising, e-commerce business and membership.

### ***Advertising revenues***

We primarily generate advertising revenues from sales of various forms of advertising and provision of promotion campaigns on the live streaming platforms by way of advertisement display or integrated promotion activities in shows and programs on the live streaming platforms. Advertisements on our platforms are generally charged on the basis of duration, and advertising contracts are signed to establish the fixed price and the advertising services to be provided. Where collectability is reasonably assured, advertising revenues from advertising contracts are recognized ratably over the contract period of display.

We enter into advertising contracts directly with advertisers or third-party advertising agencies that represent advertisers. Payment terms and conditions vary by contract type, although the terms generally include a requirement of payment within one to three months. Both third-party advertising agencies and direct advertisers are generally billed at the end of the display period and payments are due usually within three months. In instances where the timing of revenue recognition differs from the timing of billing, we have determined the advertising contracts generally do not include a significant financing component. The primary purpose of the credits terms is to provide customers with simplified and predictable ways of purchasing our advertising services, not to receive financing from our customers or to provide customers with financing.

Certain customers may receive sales incentives in the forms of discounts and rebates to advertisers or advertising agencies based on purchase volume, which are accounted for as variable consideration. We estimate these amounts based on the expected amount to be provided to customers considering the contracted rebate rates and estimated sales volume based on historical experience, and reduce revenues recognized. We believe that there will not be significant changes to its estimates of variable consideration.

#### *E-commerce business revenues*

We operate several e-commerce platforms providing service solutions for merchants, including a global smart commerce platform that enables merchants to easily build their brands online and sell their products to users around the world. We recognize revenue when the identified performance obligation is satisfied by rendering the promised service to the customer and when specific criteria have been met. Services are rendered when or as the customers benefit from the services rendered.

We also operate an e-commerce platform and display goods for end customers to select and order. We are responsible to arrange delivery of the goods to the end customers after customers place an order in the platforms. We recognize e-commerce business revenue equal to the sales price (net of sales discount) to the end customers when control of the inventory is transferred. Revenues derived from the e-commerce business are recorded on a gross basis, because (i) we are primarily responsible for fulfilling the promise to provide the specified good, (ii) we are subject to inventory risks before the specified goods have been transferred to a customer or after transfer of control to the customers, and (iii) we have discretion in establishing the price of the specified goods.

#### *Membership*

We operate a membership subscription program where subscription members can have enhanced user privileges. The membership fee is collected up-front from subscribers. The receipt of the revenue is initially recorded as deferred revenue and revenue is recognized ratably over the period of the subscription when services are rendered. Unrecognized portion beyond 12 months from balance sheet date is classified as deferred revenue-non current.

#### **Accounts receivable**

In June 2016, the FASB issued ASU 2016-13: Financial Instruments-Credit Losses (Topic 326), which requires entities to measure all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. This replaces the existing incurred loss model and is applicable to the measurement of credit losses on financial assets measured at amortized cost. We adopted ASU 2016-13 from January 1, 2020 and maintains an allowance for credit losses in accordance with Topic 326 and records the allowance for credit losses as an offset to accounts receivable. We assess collectability by reviewing accounts receivable on a collective basis where similar characteristics exist, primarily based on similar business line, service or product offerings and on an individual basis when we identify specific customers with known disputes or collectability issues. In calculating the expected credit loss rates, we consider historical loss rates for each category of receivables and adjusts for forward looking macroeconomic data, including global GDP and external rates of non-performing loans. We used the modified-retrospective transition approach with a cumulative-effect adjustment to shareholders' equity amounting to US\$1.7 million recognized as of January 1, 2020.

## **Investments**

### *Equity Investments Accounted for Using the Equity Method*

We account for its equity investment over which it has significant influence but does not own a majority equity interest or otherwise control using the equity method. We adjust the carrying amount of the investment and recognizes investment income or loss for share of the earnings or loss of the investee after the date of investment. We assess its equity investment for other-than-temporary impairment (which would require an adjustment to estimated fair value) by considering factors including, but not limited to, current economic and market conditions, operating performance of the entities, including current earnings trends and undiscounted cash flows, and other entity-specific information. The fair value determination, particularly for investment in privately held entities, requires judgment to determine appropriate estimates and assumptions. Changes in these estimates and assumptions could affect the calculation of the fair value of the investment and determination of whether any identified impairment is other-than-temporary. Impairment charges of US\$417.2 million were recorded in share of loss in equity method investments for the year ended December 31, 2022 in relation to equity investments that were accounted for using equity method.

### *Equity Investments with Readily Determinable Fair Values*

Equity investments with readily determinable fair values are measured and recorded at fair value using the market approach based on the quoted prices in active markets at the reporting date. We classify the valuation techniques that use these inputs as Level 1 of fair value measurements. Gains or losses arising from changes in fair value of these investments are recorded in earnings.

### *Equity Investments without Readily Determinable Fair Values*

After the adoption of this new accounting standard, we elected to record equity investments without readily determinable fair values and not accounted for under the equity method at cost, less impairment, adjusted for subsequent observable price changes on a nonrecurring basis, and report changes in the carrying value of the equity investments in current earnings. Changes in the carrying value of the equity investments are required to be made whenever there are observable price changes in orderly transactions for the identical or similar investment of the same issuer. The implementation guidance notes that an entity should make a “reasonable effort” to identify price changes that are known or that can reasonably be known. Impairment charges related to equity investments without readily determinable fair values were recorded in general and administrative expenses for the years ended December 31, 2020, 2021 and 2022, totaling US\$6.2 million, US\$93.6 million and nil, respectively.

## **Consolidation**

Our consolidated financial statements include the financial statements of our company, our subsidiaries, and the VIEs, for which we or our subsidiaries are the primary beneficiaries. All transactions and balances among our company, subsidiaries and VIEs have been eliminated upon consolidation.

A subsidiary is an entity in which our company, directly or indirectly, controls more than one half of the voting powers; or has the power to appoint or remove the majority of the members of the board of directors or to cast a majority of votes at the meeting of directors; or has the power to govern the financial and operating policies of the investee under a statute or agreement among the shareholders or equity holders.

A VIE is an entity in which we, or our subsidiary, through contractual agreements, bears the risks of, and enjoys the rewards normally associated with ownership of the entity, and therefore our company or our subsidiary is the primary beneficiary of the entity. In determining whether we or our subsidiaries are the primary beneficiary, we considered whether it has the power to direct activities that are significant to the VIEs’ economic performance, and also our obligation to absorb losses of the VIEs that could potentially be significant to the VIEs or the right to receive benefits from the VIEs that could potentially be significant to the VIEs. Determining the primary beneficiary by considering the factors above involves significant judgments. Guangzhou Huanju Shidai, Beijing Huanju Shidai, Huya Technology, BaiGuoYuan Technology, Guangzhou Wangxing and ultimately we hold all the variable interests of the VIEs and have been determined to be the primary beneficiary of the VIEs. As a result of the share transfer to Tencent on April 3, 2020, we no longer consolidate the results of operations of Huya.

We deconsolidate our subsidiaries or business in accordance with ASC 810 as of the date we cease to have a controlling financial interest in our subsidiaries.

We account for the deconsolidation of our subsidiaries or business by recognizing a gain or loss in net income/loss attributable to us in accordance with ASC 810. This gain or loss is measured at the date our subsidiaries are deconsolidated as the difference between (a) the aggregate of the fair value of any consideration received, the fair value of any retained non-controlling interest in our subsidiaries being deconsolidated, and the carrying amount of any non-controlling interest in our subsidiaries being deconsolidated, including any accumulated other comprehensive income/loss attributable to the non-controlling interest, and (b) the carrying amount of the assets and liabilities of our subsidiaries being deconsolidated.

## **Acquisitions**

We apply the purchase method of accounting to account for our acquisitions. The acquisition date is based on the date in which we acquire substantive, or effective control of the business.

We estimate the fair value of an acquired business, using the income approach, which we believe is most appropriate to determine the fair value in an orderly transaction between market participants. Under the income approach, we determine the fair value of an acquired business based on the estimated future cash flows discounted by an estimated weighted-average cost of capital, which reflects the overall level of inherent risk and the rate of return an outside investor would expect to earn. We base the cash flow projections on forecasted cash flows derived from the most recent annual financial forecast using a terminal value based on the perpetuity growth model.

We estimated the fair value of acquired trademarks using the relief from royalty method. The value is estimated as the present value of the after-tax cost savings at an appropriate discount rate. In terms of the fair value of the acquired user base, the excess earnings method was used. The value is estimated as the present value of the revenues calculated at an appropriate discount rate. Our determination of the fair values of acquired trademark and user base acquired involved the use of estimates and assumptions related to revenue growth rates, royalty rates, discount rates and attrition rates.

In estimating the fair value of the contingent consideration recognized on the acquisition date, we consider the trinomial tree model. Under this model, we perform a scenario analysis and calculate the fair value of the contingent consideration based on the net present value of the total contingent payments under each scenario and the expected probability of each scenario.

The identifiable assets acquired and liabilities and contingent liabilities assumed in a business acquisition are measured initially at the fair value at the acquisition date. The excess of the cost of acquisition over the fair value of the identifiable net assets acquired is recorded as goodwill.

We are responsible for determining the fair value of the equity issued, assets acquired, liabilities assumed and intangibles identified as of the relevant acquisition date. Post-acquisition expenses are charged to general and administrative expenses directly.

## **Goodwill**

Goodwill represents the excess of the purchase price over the amounts assigned to the fair value of the assets acquired and the liabilities assumed of an acquired business.

We assess goodwill for impairment in accordance with ASC Subtopic 350-20, Intangibles—Goodwill and Other: Goodwill (“ASC 350-20”), which requires that goodwill be tested for impairment at the reporting unit level at least annually and more frequently upon the occurrence of certain events, as defined by ASC 350-20. A reporting unit is defined as an operating segment or one level below an operating segment referred to as a component. We determine our reporting units by first identifying its operating segments, and then assesses whether any components of these segments constituted a business for which discrete financial information is available and where our segment manager regularly reviews the operating results of that component. We determined that we have three reporting units.

In January 2017, the FASB issued ASU 2017-04, Simplifying the Test for Goodwill Impairment, which simplifies the accounting for goodwill impairment by eliminating Step two from the goodwill impairment test. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, versus determining an implied fair value in Step two to measure the impairment loss. We adopted this guidance on a prospective basis on January 1, 2020 with no material impact on its consolidated financial statements and related disclosures as a result of adopting the new standard.

We have the option to assess qualitative factors first to determine whether it is necessary to perform the quantitative impairment test in accordance with ASC 350-20. If we believe, as a result of the qualitative assessment, that it is more-likely-than-not that the fair value of the reporting unit is less than its carrying amount, the quantitative impairment test described above is required. Otherwise, no further testing is required. In the qualitative assessment, we consider primary factors such as industry and market considerations, overall financial performance of the reporting unit, and other specific information related to the operations. The quantitative goodwill impairment test, used to identify both the existence of impairment and the amount of impairment loss, compares the fair value of a reporting unit with its carrying amount, including goodwill. If the carrying amount of a reporting unit is greater than zero and its fair value exceeds its carrying amount, goodwill of the reporting unit is considered not impaired.

We perform annual goodwill impairment test of each reporting unit in the fourth quarter, or more frequently, if certain events or circumstances warrant. Events or changes in circumstances which might indicate potential impairment in goodwill include the entity-specific factors, including, but not limited to, stock price volatility, market capitalization relative to net book value, and projected revenue, market growth and operating results.

We have performed a goodwill impairment analysis on BIGO and other reporting units in the fourth quarter of 2020, 2021 and 2022. When determining the fair value of BIGO reporting unit, we used the income approach. The income approach determines fair value based on discounted cash flow models derived from the reporting units' long-term forecasts which included a five-year future cash flow projection and an estimated terminal value impairment analysis. The discounted cash flow model included a number of significant unobservable inputs. Key assumptions used to determine the estimated fair value include: (a) the five-year future cash flows forecasts including expected revenue growth, (b) an estimated terminal value using a terminal year long-term future growth rate determined based on the growth prospects of the reporting units; and (c) a discount rate that reflects the weighted-average cost of capital adjusted for the relevant risk associated with each reporting unit's operations and the uncertainty inherent in our internally developed forecasts. These key assumptions are subject to uncertainties and actual results may not be the same as the forecasted amounts. For example, our efforts to attract more paying users and increase the spending level of paying users may not be as successful as forecasted and therefore the actual revenue growth may not be as high as forecasted. Based on our assessment, the fair value of BIGO segment reporting unit exceeded its carrying value by around 4% of the carrying value of the BIGO segment reporting unit as of December 31, 2022. Changes in these estimates and assumptions could materially affect the determination of fair value of the reporting unit. If the revenue growth increased or decreased by 100 basis points, our headroom would have increased or decreased by US\$94.1 million and US\$69.7 million. If the discount rate increased or decreased by 50 basis points, our headroom would have decreased or increased by US\$59.5 million and US\$63.2 million. If the growth rate used to calculate the terminal value increased or decreased by 100 basis points, our headroom would have increased or decreased by US\$66.7 million and US\$59.1 million. These potential changes in assumptions in comparison with those used by the company would not result in the BIGO reporting unit carrying amount exceeding its determined fair value. In addition, we also assessed the reasonableness of the fair value derived from our BIGO reporting unit discounted cash flow analysis after giving consideration to our net book value and market capitalization.

In the annual goodwill impairment assessment of our reporting units, we concluded that the carrying amount of a certain reporting unit exceeded its respective fair value and recorded a related impairment loss of US\$14.8 million for the year ended December 31, 2022.

### **Intangible assets**

Intangible assets mainly consist of trademark, customer relationship, non-compete agreement, operating rights, software, domain names, technology, license and others. Identifiable intangible assets are carried at acquisition cost less accumulated amortization and impairment loss, if any. Finite-lived intangible assets are tested for impairment if impairment indicators arise. Amortization of finite-lived intangible assets is computed using the straight-line method over their estimated useful lives.

Intangible assets mainly including trademark, customer relationships and technology that are acquired in business acquisitions are recognized apart from goodwill if the intangible assets arise from contractual or other legal rights, or are separately identifiable if the intangible assets do not arise from contractual or other legal rights.

We estimated the fair value of acquired trademark using the relief from royalty method. The value is estimated as the present value of the after-tax cost savings at an appropriate discount rate. In terms of the fair value of the acquired customer relationships and technology, the excess earnings method was used. The value is estimated as the present value of the revenues calculated at an appropriate discount rate. Our determination of the fair values of acquired trademark, customer relationships and technology acquired involved the use of estimates and assumptions related to revenue growth rates, royalty rates, discount rates and attrition rates.

### **Impairment of long-lived assets**

Long-lived assets other than investments and goodwill are evaluated for impairment whenever events or changes (triggering events) indicate that the carrying amount of an asset may no longer be recoverable. When such events occur, we assess the recoverability of the long-lived assets by comparing the carrying value of the long-lived assets to the undiscounted future cash flows expected to receive from use of the assets and their eventual disposition. If we identify an impairment, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets based on a discounted cash flow approach or when available and appropriate to comparable market values. We test impairment of long-lived assets at the asset group level, the lowest level of assets with discrete cash flows.

Impairment charges related to the long-lived assets were recorded in general and administrative expenses for the years ended December 31, 2020, 2021 and 2022, totaling nil, nil and US\$1.4 million, respectively.

### **Taxation and uncertain tax positions**

Current income taxes are provided on the basis of net income for financial reporting purposes, adjusted for income and expense items which are not assessable or deductible for income tax purposes in accordance with the regulations of the relevant tax jurisdictions. Deferred income taxes are accounted for using an asset and liability method. Under this method, deferred income taxes are recognized for the tax consequences of temporary differences by applying enacted statutory rates applicable to future years to differences between the financial statement carrying amounts and the tax bases of existing assets and liabilities. The tax base of an asset or liability is the amount attributed to that asset or liability for tax purpose. The effect on deferred taxes of a change in tax rates is recognized in statement of comprehensive income in the period of change. A valuation allowance is provided to reduce the amount of deferred tax assets if it is considered more likely than not that some portion of, or all of the deferred tax assets will not be realized.

We currently have deferred tax assets resulting from net operating loss carry forwards and deductible temporary differences, all of which are available to reduce future tax payable in our significant tax jurisdictions. In assessing whether such deferred tax assets can be realized in the future, we need to make judgments and estimates on the ability of each of our subsidiary and VIE to generate taxable income in the future years. To the extent that we believe it is more likely than not that some portion or the entire amount of deferred tax assets will not be realized, we established a total valuation allowance to offset the deferred tax assets. As of December 31, 2020, 2021 and 2022, a total valuation allowance of US\$150.3 million, US\$213.7 million and US\$242.1 million, respectively, was recognized against deferred tax assets. If we subsequently determine that all or a portion of the temporary differences are more like than not to be realized, the valuation allowance will be fully or partially released, which will result in a tax benefit in our consolidated statements of operations.

The guidance on accounting for uncertainties in income taxes prescribes a more likely than not threshold for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Guidance was also provided on derecognition of income tax assets and liabilities, classification of current and deferred income tax assets and liabilities, accounting for interest and penalties associated with tax positions, accounting for income taxes in interim periods, and income tax disclosures. Significant judgment is required in evaluating our uncertain tax positions and determining the relevant provision for income taxes. We recognize interests and penalties, if any, under accrued expenses and other current liabilities on the balance sheet and under other expenses in the statements of other comprehensive income. We did not recognize any significant interest and penalties associated with uncertain tax positions for the years ended December 31, 2020, 2021 and 2022. As of December 31, 2020, 2021 and 2022, we did not have any significant unrecognized uncertain tax positions.

**ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES****A. Directors and Senior Management**

The following table sets forth information regarding our directors and executive officers as of the date of this annual report. There are no family relationships among any of the directors or executive officers of our company.

<b>Directors and Executive Officers</b>	<b>Age</b>	<b>Position/Title</b>
David Xueling Li	48	Chairman of the Board and Director, Chief Executive Officer
Qin Liu	50	Director
Peter Andrew Schloss	62	Independent Director
Richard Weidong Ji	55	Independent Director
David Tang	68	Independent Director
Ting Li	40	Chief Operating Officer
Fuyong Liu	38	General Manager of Finance

*Mr. David Xueling Li* is our co-founder and has been our chairman since August 2016. Mr. Li served as our chief executive officer since our inception to August 2016 and as our acting chief executive officer from May 2017 to April 2019. Currently, Mr. Li serves as our chief executive officer, focusing on broader corporate strategy and the development of new and emerging applications and products. Mr. Li also heads our international business, overseeing the business operations and development strategy of BIGO. Before founding our company, Mr. Li worked at Netease.com, Inc. from July 2003 to April 2005 and served as its chief editor. In 2000, Mr. Li founded CFP.cn, a website that provided a copyright trading platform for journalists and amateur photographers. Mr. Li received a bachelor's degree in philosophy from Renmin University of China in 1997.

*Mr. Qin Liu* has served as our director since June 2008. Mr. Liu co-founded 5Y Capital (formerly known as Morningside Venture Capital) in June 2007. Before co-founding 5Y Capital, Mr. Liu served various roles including as a business development director for investment at Morningside IT Management Services (Shanghai) Co. Ltd. from July 2000 to November 2008. Mr. Liu became a director of Xiaomi Corporation (HKEX: 1810) in May 2010, and currently serves as a non-executive director of Xiaomi Corporation. Since December 2014, Mr. Liu has served as a director of Agora, Inc. (Nasdaq: API). Currently, Mr. Liu has also served as a non-executive director of XPeng Inc. (NYSE: XPEV, HKEX: 9868) since September 12, 2019. Mr. Liu received his bachelor's degree in industrial electrical automation from University of Science and Technology Beijing in July 1993, and his master's degree in business administration from China Europe International Business School in April 2000.

*Mr. Peter Andrew Schloss* has served as our independent director since November 2012. Mr. Schloss is managing director and CEO of Castle Hill Partners. He is also an independent director and audit committee chairman of Bright Scholar Education Holdings (NYSE: BEDU). Previously Mr. Schloss was an independent director and audit committee chairman of Giant Interactive Group Inc., and an independent director of Zhaopin Limited. From 2008 to 2012, Mr. Schloss served as the chief executive officer of Allied Pacific Sports Network Limited, a leading internet and wireless provider of live and on-demand sports programs in Asia. Prior to joining Allied Pacific Sports Network Limited, Mr. Schloss worked at TOM Online Inc., serving as the chief financial officer from 2003 to 2005, as an executive director from 2004 to 2007 and as the chief legal officer from 2005 to 2007. Mr. Schloss received a bachelor's degree in political science and a juris doctor degree from Tulane University.

*Mr. Richard Weidong Ji* has served as our independent director since May 2013. Mr. Ji currently also serves on the board of directors of Full Truck Alliance Co. Ltd. (NYSE: YMM). Mr. Ji is the cofounder and managing partner of All-Stars Investment Limited, which focuses on investing in internet technology leaders, such as Didi, SenseTime, Lufax, Xiaomi and Grab. From 2005 to 2012, Mr. Ji served as managing director and head of Asia-Pacific Internet/media investment research at Morgan Stanley Asia Limited. During his time with Morgan Stanley, Mr. Ji was consistently rated as one of the top internet analysts covering the Chinese internet according to the Institutional Investor and Greenwich Associates' annual surveys. Over Mr. Ji's career, he has received many awards from reputable publications and research groups including the Financial Times, South China Morning Post, Asiamoney, Absolute Return & Alpha magazine and iResearch Consulting Group. Mr. Ji holds a doctor of sciences degree from Harvard University, an MBA from the Wharton School of Business at the University of Pennsylvania and a bachelor's degree in of Science from Fudan University in China.

*Mr. David Tang* has served as our independent director since May 2013. Mr. Tang currently serves as a managing director of Nokia Growth Partners, a global venture capital firm that specializes in investing in mobile technologies and mobile businesses. From 2011 to 2012, Mr. Tang was the vice president of the European Union Chamber of Commerce in China, vice chairman of the China Association of Enterprises with Foreign Investments, and vice chairman of the Beijing International Chamber of Commerce. Mr. Tang has spent nearly a decade with the Nokia group, having served as the vice chairman of Nokia (China) Investment Co., Ltd. and chairman of Nokia Telecommunications Ltd. where he was responsible for government relations, strategic partnerships, corporate development, and sustainability. Prior to serving in those roles, he was the vice chairman and vice president of sales for Nokia in the greater China region from 2005 to 2009. Mr. Tang has also held executive positions in other leading global technology firms such as Apple, AMD, 3Com, DEC, and AST. Mr. Tang received his bachelor's degree in Computer Science and Engineering from California State University at Long Beach and a master's degree in Business from California State University at Fullerton.

*Ms. Ting Li* has served as our chief operating officer since 2016. Ms. Li has been focusing on our ecosystem development and the enrichment of our content and product offerings since she joined us in 2011. In 2017, Ms. Li was in charge of the updates and launch of YY Live 7.0, which for the first time in the industry observed and satisfied user demand for personalized interactions with live streaming hosts. Prior to joining us, Ms. Li served as product manager at Tencent from 2006 to 2011. Ms. Li received a bachelor's degree from South China University of Technology in 2006.

*Mr. Fuyong Liu* has served as our general manager of the finance department since September 2019, responsible for our company's overall finance activities. Prior to joining us, Mr. Liu was with Huawei, most recently as chief financial officer of its Norway Region from April 2018 to September 2019, and prior to that, he held various finance positions for Huawei in China, Singapore and South America between 2009 and 2018. Mr. Liu received a master's degree in Economics from Nankai University in China.

## **B. Compensation of Directors and Executive Officers**

For the fiscal year ended December 31, 2022, we paid an aggregate of US\$1.9 million in cash, including salaries and bonuses, to our directors and executive officers. For details on JOYY's share incentive grants to our directors and officers, see "—Share Incentive Plans." Other than the share incentive awards granted pursuant to JOYY's share incentive plans, Ms. Ting Li and Mr. Fuyong Liu were also granted with share incentive awards of Shoptline entitling them to certain number of shares in Shoptline, which represented insignificant value as of the date of this annual report. For the fiscal year ended December 31, 2022, we made contributions for our directors and executive officers for their pension insurance, medical insurance, housing fund, unemployment and other statutory benefits in an aggregate amount of US\$0.1 million. We did not set aside or accrue any other pension or retirement benefits for our directors and executive officers for the fiscal year ended December 31, 2022.

## **Employment Agreements**

We have entered into employment agreements with our senior executive officers. We may terminate a senior executive officer's employment for cause at any time without remuneration for certain acts of the officer, such as being convicted of any criminal conduct, any act of gross or willful misconduct or any serious, willful, grossly negligent or persistent breach of any employment agreement provision, or engaging in any conduct which may make the continued employment of such officer detrimental to our company. We may also terminate a senior executive officer's employment by giving three months' prior written notice. A senior executive officer may terminate his or her employment at any time by giving three months' written notice, provided that such notice may only be given by the officer any time after the third anniversary of his or her employment.

Each senior executive officer has agreed to hold all information, know-how and records in any way connected with the business of our company, including, without limitation, all formulae, designs, specifications, drawings, data, operations and testing procedures, manuals and instructions and all customer and supplier lists, sales information, business plans and forecasts and all technical or other expertise and all computer software of our company, in strict confidence during and after his or her employment. Each officer also agrees that we shall own all the intellectual property developed by such officer during his or her employment.

### **Share Incentive Plans**

We have adopted three share incentive plans, namely, the 2009 Scheme, the Amended and Restated 2011 Plan and the 2019 Arrangement. The purpose of these share incentive plans is to attract and retain personnel by linking the personal interests of the members of the board, officers, employees and consultants to the success of our business and by providing such individuals with an incentive for outstanding performance.

As of March 31, 2023, options to purchase 9,414,400 Class A common shares, 11,179,892 restricted shares and 43,943,732 restricted share units were outstanding under the 2009 Scheme, the Amended and Restated 2011 Plan and the 2019 Arrangement.

### **2009 Employee Equity Incentive Scheme**

We adopted the 2009 Scheme in December 2009. In September 2011, YY Inc. assumed all the rights and obligations of Duowan Entertainment Corporation under all share-based compensation previously issued by Duowan Entertainment Corporation, including under the relevant award agreement and under the 2009 Scheme, if applicable, and undertook to issue its own common shares upon the exercise of any share-based compensation awards previously issued by Duowan Entertainment Corporation, subject to compliance with the terms and conditions of the relevant award agreements and the 2009 Scheme, if applicable. The 2009 Scheme expired in December 2019. No further awards will be granted under the 2009 Scheme and the provisions under the 2009 Scheme will remain in effect to the extent necessary to effect the exercise of any options granted prior to the expiration or otherwise as may be required in accordance with the 2009 Scheme.

The following paragraphs summarize the terms of the 2009 Scheme.

**Types of Awards.** The following briefly describe the principal features of the various awards that may be granted under the 2009 Scheme.

- **Options.** Options provide for the right to purchase a specified number of our common shares at a specified price and usually will become exercisable at the discretion of our plan administrator in one or more installments after the grant date. The option exercise price may be paid, subject to the discretion of the plan administrator, in cash or check, in our common shares which have been held by the option holder for such period of time as may be required to avoid adverse accounting consequences, in other property with value equal to the exercise price, through a broker-assisted cashless exercise, or by any combination of the foregoing.
- **Restricted Shares.** A restricted share award is the grant of our common shares which are subject to certain restrictions and may be subject to risk of forfeiture. Unless otherwise determined by our plan administrator, a restricted share is nontransferable and may be forfeited or repurchased by us upon termination of employment or service during a restricted period. Our plan administrator may also impose other restrictions on the restricted shares, such as limitations on the right to vote or the right to receive dividends.

**Plan Administration.** Our board or a committee of one or more members of our board duly authorized for the purpose of the 2009 Scheme can act as the plan administrator.

**Award Agreement.** Options or restricted shares granted under the 2009 Scheme are evidenced by an award agreement that sets forth the terms, conditions and limitations for each grant.

**Option Exercise Price.** The exercise price in respect of any option shall be fixed by reference to the date upon which the option (or the relevant part thereof) is granted, and shall be, at the election of the plan administrator, (a) the latest valuation price per share certified by a third-party valuer prior to the date of grant of the relevant option (or relevant part thereof) or (b) the latest price per share at which we have issued any shares prior to the date of grant of the relevant option (or relevant part thereof).

**Eligibility.** We may grant awards to our employees, officers and directors or consultants to our members.

**Term of the Awards.** The 2009 Scheme shall be valid and effective for a period of ten years from the date of effectiveness. The term of each option or restricted share grant shall be ten years from the date of the grant.

**Vesting Schedule.** In general, the plan administrator determines the vesting schedule, which is set forth in the award agreement.

**Transfer Restrictions.** Awards for options or restricted shares may not be transferred in any manner by the award holders and may be exercised only by such holders, subject to limited exceptions. Restricted shares may not be transferred during the period of restriction.

**Termination.** The plan administrator may at any time terminate the operation of the 2009 Scheme.

#### **Amended and Restated 2011 Share Incentive Plan**

We adopted the original 2011 share incentive plan in September 2011, which was amended in October 2012 and further amended and restated in September 2021. Upon the adoption of the Amended and Restated 2011 Share Incentive Plan, or the Amended and Restated 2011 Plan, it replaced the previously adopted 2011 share incentive plan in its entirety and the awards granted and outstanding thereunder remain effective and binding under the Amended and Restated 2011 Share Incentive Plan. Under the Amended and Restated 2011 Plan, the maximum number of common shares reserved for issuance under the plan is 131,950,949, plus an annual increase of 20,000,000 on the first day of each fiscal year, beginning in 2022, or such smaller number of common shares as determined by our board of directors. As of March 31, 2023, the maximum aggregate number of shares which may be issued under the Amended and Restated 2011 Plan is 171,950,949, subject to further adjustments. As of March 31, 2023, awards to purchase 54,147,984 Class A common shares under the Amended and Restated 2011 Plan have been granted and outstanding, excluding awards that were forfeited, canceled or exercised after the relevant grant dates.

The following paragraphs summarize the terms of the Amended and Restated 2011 Plan.

**Types of Awards.** The following briefly describe the principal features of the various awards that may be granted under the Amended and Restated 2011 Plan.

- **Options.** Options provide for the right to purchase a specified number of our common shares at a specified price and usually will become exercisable at the discretion of our plan administrator in one or more installments after the grant date. The option exercise price may be paid, subject to the discretion of the plan administrator, in cash or check, in our common shares which have been held by the option holder for such period of time as may be required to avoid adverse accounting consequences, in other property with value equal to the exercise price, through a broker-assisted cashless exercise, or by any combination of the foregoing.
- **Restricted Shares.** A restricted share award is the grant of our common shares which are subject to certain restrictions and may be subject to risk of forfeiture. Unless otherwise determined by our plan administrator, a restricted share is nontransferable and may be forfeited or repurchased by us upon termination of employment or service during a restricted period. Our plan administrator may also impose other restrictions on the restricted shares, such as limitations on the right to vote or the right to receive dividends.
- **Restricted Share Units.** A restricted share unit award is the grant of the right to receive a common share at a future date and may be subject to forfeiture. Our plan administrator has the discretion to set performance objectives or other vesting criteria that will determine the number or value of restricted share units to be granted. Unless otherwise determined by our plan administrator, a restricted share unit is nontransferable and may be forfeited or repurchased by us upon termination of employment or service during a restricted period. Our plan administrator, at the time of grant, specifies the dates on which the restricted share units become fully vested.

**Plan Administration.** Our board or a committee of one or more members of our board duly authorized for the purpose of the Amended and Restated 2011 Plan can act as the plan administrator.

**Award Agreement.** Options, restricted shares or restricted shares units granted under the Amended and Restated 2011 Plan are evidenced by an award agreement that sets forth the terms, conditions and limitations for each grant.

**Option Exercise Price.** The exercise price in respect of any option shall be determined by the plan administrator and set forth in the award agreement which may be a fixed or variable price related to the fair market value of the shares. The exercise price per share subject to an option may be amended or adjusted in the absolute discretion of the plan administrator, the determination of which shall be final, binding and conclusive.

**Eligibility.** We may grant awards to our employees, consultants or directors.

**Term of the Awards.** The Amended and Restated 2011 Plan shall be valid and effective for a period of ten years from the date of effectiveness, which is the date of its adoption by our board of directors. The term of each option grant shall not exceed ten years from the date of the grant.

**Vesting Schedule.** In general, the plan administrator determines the vesting schedule, which is set forth in the award agreement.

**Transfer Restrictions.** Awards for options, restricted shares or restricted share units may not be transferred in any manner by the award holders and may be exercised only by such holders, subject to limited exceptions. Restricted shares may not be transferred during the period of restriction.

**Termination.** The plan administrator may at any time terminate the operation of the Amended and Restated 2011 Plan.

### **2019 Share Incentive Awards Arrangement**

We adopted the 2019 Arrangement in March 2019, pursuant to which we can offer share-based awards to employees of BIGO. The 2019 Arrangement reserved 65,922,045 Class A common shares for incentive awards to be granted.

In the event of any dividend, share split, combination or exchange of common shares, amalgamation, arrangement or consolidation, spin-off, recapitalization or other distribution (other than normal cash dividends) of our assets to our shareholders, or any other change affecting the shares of common shares or the share price of a common share, the board of directors shall make such proportionate adjustments, if any, as the board of directors in its discretion may deem appropriate to reflect such change with respect to (a) the aggregate number and type of shares that may be issued under the 2019 Arrangement; (b) the terms and conditions of any outstanding awards (including, without limitation, any applicable performance targets or criteria with respect thereto); and (c) the grant or exercise price per share for any outstanding awards under the 2019 Arrangement.

### **Grants of Options**

The following table summarizes, as of March 31, 2023, the outstanding options granted to our executive officers, directors and other individuals as a group under the Amended and Restated 2011 Plan.

	<b>Common Shares Underlying Options Awarded</b>	<b>Exercise Price</b>	<b>Date of Grant</b>	<b>Date of Expiration</b>
Ting Li	*	4.7025	June 30, 2018	June 30, 2026
	*	3.5350	June 30, 2018	June 30, 2025
	*	3.5350	June 30, 2019	June 30, 2025

\* The aggregate number of common shares underlying the outstanding options held by this individual is less than 1% of our total outstanding shares.

### **Grants of Restricted Shares**

As of March 31, 2023, the total amount of outstanding restricted shares granted to our executive officers, directors and other individuals as a group under the 2009 Scheme, the Amended and Restated 2011 Plan and the 2019 Arrangement is 11,179,892, among which no restricted shares are granted to our directors or management team.

**Grants of Restricted Share Units**

The following table summarizes, as of March 31, 2023, the outstanding restricted share units granted to our executive officers, directors and other individuals as a group under the 2009 Scheme and the Amended and Restated 2011 Plan.

Name	Common Shares Underlying Restricted Share Units Granted	Date of Grant
David Xueling Li	*	April 30, 2013
	*	June 20, 2014
Qin Liu	*	August 6, 2015
Peter Andrew Schloss	*	November 7, 2012
	*	June 16, 2014
	*	November 7, 2015
Richard Weidong Ji	*	May 23, 2013
	*	June 16, 2014
David Tang	*	May 23, 2013
	*	June 16, 2014
Ting Li	*	April 30, 2013
	*	June 20, 2014
	*	July 1, 2015
	*	June 30, 2018
	*	June 30, 2019
Fuyong Liu	*	December 30, 2019
	*	July 20, 2022
Other Individuals as a Group	37,261,407	January 1, 2011 to March 31, 2023
Total	<u>43,943,732</u>	

\* The aggregate number of common shares underlying the outstanding restricted share units, or RSUs, held by each of these individuals is less than 1% of our total outstanding shares.

**C. Board Practices**

Our board of directors currently consists of five directors. A director is not required to hold any shares in our company to qualify to serve as a director. A director may vote with respect to any contract, proposed contract, or arrangement in which he or she is materially interested. A director may exercise all the powers of the company to borrow money, mortgage its business, property and uncalled capital, and issue debentures or other securities whenever money is borrowed or as security for any obligation of the company or of any third party. See “Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers” for a description of the employment agreements we have entered into with our senior executive officers.

## Committees of the Board of Directors

We have established an audit committee, a compensation committee, a corporate governance and nominating committee and an investment committee under the board of directors. We have adopted a charter for each of the audit committee, compensation committee and the corporate governance and nominating committee. Each committee's members and functions are described below.

**Audit Committee.** Our audit committee consists of Mr. Peter Andrew Schloss, Mr. David Tang and Mr. Richard Weidong Ji, and is chaired by Mr. Schloss. We have determined that each of Mr. Schloss, Mr. Tang and Mr. Ji satisfies the "independence" requirements of Rule 5605(c)(2) of the Listing Rules of the Nasdaq Global Select Market and meet the independence standards under Rule 10A-3 under the Securities Exchange Act of 1934, as amended. We have determined that Mr. Schloss qualifies as an "audit committee financial expert." The audit committee oversees our accounting and financial reporting processes and the audits of the financial statements of our company. The audit committee is responsible for, among other things:

- selecting the independent registered public accounting firm and pre-approving all auditing and non-auditing services permitted to be performed by the independent registered public accounting firm;
- reviewing with the independent registered public accounting firm any audit problems or difficulties and management's response;
- reviewing and approving all proposed related party transactions, as defined in Item 404 of Regulation S-K under the Securities Act;
- discussing the annual audited financial statements with management and the independent registered public accounting firm;
- reviewing major issues as to the adequacy of our internal controls and any special audit steps adopted in light of any material control deficiencies;
- annually reviewing and reassessing the adequacy of our audit committee charter;
- meeting separately and periodically with management and the independent registered public accounting firm; and
- reporting regularly to the board.

**Compensation Committee.** Our compensation committee consists of Mr. David Xueling Li and Mr. David Tang, and is chaired by Mr. David Xueling Li. We have determined that Mr. Tang satisfies the "independence" requirements of Rule 5605(c)(2) of the Listing Rules of the Nasdaq Global Select Market. The compensation committee assists the board in reviewing and approving the compensation structure, including all forms of compensation, relating to our directors and executive officers. Our directors may not be present at any committee meeting during which their compensation is deliberated upon. The compensation committee is responsible for, among other things:

- reviewing the total compensation package for our executive officers and making recommendations to the board with respect to it;
- approving and overseeing the total compensation package for our executives other than the three most senior executives;
- reviewing the compensation of our directors and making recommendations to the board with respect to it;
- periodically reviewing and approving any long-term incentive compensation or equity plans, programs or similar arrangements, annual bonuses, and employee pension and welfare benefit plans; and
- selecting compensation consultant, legal counsel or other adviser only after taking into consideration all factors relevant to that person's independence from management.

**Corporate Governance and Nominating Committee.** Our nominating committee consists of Mr. David Tang, Mr. Qin Liu and Mr. Peter Andrew Schloss, and is chaired by Mr. Tang. We have determined that each of Mr. Tang and Mr. Schloss satisfies the “independence” requirements of Rule 5605(c)(2) of the Listing Rules of the Nasdaq Global Select Market. The nominating committee assists the board in selecting individuals qualified to become our directors and in determining the composition of the board and its committees. The nominating committee is responsible for, among other things:

- recommending nominees to the board for election or re-election to the board, or for appointment to fill any vacancy on the board;
- reviewing annually with the board the current composition of the board with regards to characteristics such as independence, age, skills, experience and availability of service to us;
- selecting and recommending to the board the names of directors to serve as members of the audit committee and the compensation committee, as well as of the nominating committee itself; and
- monitoring compliance with our code of business conduct and ethics, including reviewing the adequacy and effectiveness of our procedures to ensure proper compliance.

Investment Committee. Our investment committee consists of Mr. Xueling Li and Mr. Qin Liu. The investment committee is responsible for negotiating and determining the nature, timing, amount and other terms of an investment if such investment amount ranges from US\$50 million to US\$200 million.

### Duties of Directors

Under Cayman Islands law, our directors owe fiduciary duties to our company including a duty of loyalty, a duty to act honestly, and a duty to act in what they consider in good faith to be in our best interests. Our directors also have a duty to exercise the care and diligence that a reasonably prudent person would exercise in comparable circumstances and a duty to exercise the skill they actually possess. It was previously considered that a director need not exhibit in the performance of his duties a greater degree of skill than may reasonably be expected from a person of his knowledge and experience. However, English and Commonwealth courts have moved towards an objective standard with regard to the required skill and care and these authorities are likely to be followed in the Cayman Islands. In fulfilling their duty of care to us, our directors must ensure compliance with our memorandum and articles of association and the class rights vested thereunder in the holders of the shares. Our company has the right to seek damages if a duty owed by our directors is breached. In limited exceptional circumstances, a shareholder may have the right to seek damages in our name if a duty owed by our directors is breached.

### Terms of Directors and Officers

Our officers are elected by and serve at the discretion of the board. Our directors are not subject to a term of office and hold office until such time as they resign or are removed from office by special resolution of our shareholders. A director will be removed from office automatically if, among other things, the director (1) becomes of unsound mind or dies, (2) without special leave of absence from our board, is absent from meetings of our board for six consecutive months and our board resolves that his office be vacated; (3) becomes bankrupt or has a receiving order made against him or suspends payment or compounds with his creditors; (4) is prohibited by law from being a director; or (5) ceases to be a director by virtue of any provision of the Companies act or other laws of the Cayman Islands or is removed from office pursuant to our articles of association.

### Board Diversity Matrix

Board Diversity Matrix (As of March 31, 2023)	
Country of Principal Executive Offices	Singapore
Foreign Private Issuer	Yes
Disclosure Prohibited Under Home Country Law	No
Total Number of Directors	5

	Female	Male	Non-Binary	Did Not Disclose Gender
<b>Part I: Gender Identity</b>				
Directors	—	5	—	—
<b>Part II: Demographic Background</b>				
Underrepresented Individual in Home Country Jurisdiction			—	
LGBTQ+			—	
Did Not Disclose Demographic Background			—	

**D. Employees**

The following table sets forth the numbers of our employees, categorized by function, as of December 31, 2022:

Functions	Number of Employees	Percentage
Customer services and operations	2,721	41%
Research and development	2,852	43%
General and administration	575	8%
Sales and marketing	533	8%
<b>Total</b>	<b>6,681</b>	<b>100%</b>

We had a total of 7,931, 7,449 and 6,681 employees as of December 31, 2020, 2021 and 2022, respectively. The decrease of employees was primarily due to the reduction of our content moderation personnel as we partially outsourced such function to third-party vendors, partially offset by the increase in other employees due to the consolidation of Shoptline. We have developed a corporate culture that encourages initiative, technical superiority and self-development. In addition, we periodically evaluate our employees' performance and provide them with training sessions tailored to each job function to enhance performance and service quality.

As of March 31, 2023, we had a certain number of employees in mainland China. As required by regulations in mainland China, we participate in various employee social security plans that are organized by municipal and provincial governments, including pension, unemployment insurance, childbirth insurance, work-related injury insurance, medical insurance and housing insurance. We are required under law of mainland China to make contributions to employee benefit plans at specified percentages of the salaries, bonuses and certain allowances of our employees, up to a maximum amount specified by the local government from time to time. We believe that we maintain a good working relationship with our employees and we have not experienced any significant labor disputes.

**E. Share Ownership**

**Class A Common Shares**

As of March 31, 2023, we had 1,046,018,977 Class A common shares outstanding (excluding 250,327,847 outstanding restricted shares and treasury Class A common shares held by entities controlled by us).

**Class B Common Shares**

As of March 31, 2023, we had 326,509,555 Class B common shares outstanding.

**Beneficial Ownership**

The following table sets forth information concerning the beneficial ownership of our common shares as of March 31, 2023, by:

- each of our directors and executive officers; and
- each person known to us to beneficially own 5% or more of our common shares.

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Beneficial ownership is determined in accordance with the rules and regulations of the SEC. In computing the number of shares beneficially owned by a person and the percentage ownership of that person, we have included shares that the person has the right to acquire or that would become unrestricted shares within 60 days after March 31, 2023, the most recent practicable date, including through the exercise of any option, warrant, or other right or the conversion of any other security. These shares, however, are not included in the computation of the percentage ownership of any other person.

The calculations in the table below assume that there were 1,046,018,977 Class A common shares outstanding (excluding 250,327,847 outstanding restricted shares and treasury Class A common shares held by entities controlled by us) and 326,509,555 Class B common shares as of March 31, 2023.

	Class A	Class B	Total Common Share		Total
	Common Shares	Common Shares	Beneficially Owned		Voting
	Beneficially	Beneficially	Number <sup>(3)</sup>	% <sup>(4)</sup>	Power <sup>(5)</sup>
	Owned <sup>(1)</sup>	Owned <sup>(2)</sup>			%
	Number	Number			
<b>Directors and Executive Officers:*</b>					
David Xueling Li <sup>(6)</sup>	160,505,284	203,768,062	364,273,346	26.5	79.4
Qin Liu	**	—	**	**	**
Peter Andrew Schloss	**	—	**	**	—
Richard Weidong Ji	**	—	**	**	**
David Tang	**	—	**	**	—
Ting Li	**	—	**	**	**
Fuyong Liu	**	—	**	**	**
All directors and executive officers as a group	179,688,754	203,768,062	383,456,816	27.7	79.6
<b>Principal Shareholders:</b>					
YYME Limited <sup>(7)</sup>	156,340,804	203,768,062	360,108,866	26.2	50.9
Top Brand Holdings Limited <sup>(8)</sup>	—	122,741,483	122,741,483	8.9	—
T. ROWE PRICE ASSOCIATES, INC. <sup>(9)</sup>	78,363,440	—	78,363,440	5.7	1.8

Notes:

- \* Except for Mr. Peter Andrew Schloss, Mr. Richard Weidong Ji, Mr. David Tang and Mr. Qin Liu, the business address of our directors and executive officers is c/o 30 Pasir Panjang Road #15-31A Mapletree Business City, Singapore 117440. The business address of Mr. Qin Liu is Suite 905-6, 9th Floor, ICBC Tower, Three Garden Road, Hong Kong S.A.R. The business address of Mr. Peter Andrew Schloss is 602 Silver Tower, No. 2 Dong San Huan Bei Lu, Chaoyang District, Beijing 100027, People's Republic of China. The business address of Mr. Richard Weidong Ji is Suite 2103, Two Exchange Square, 8 Connaught Place, Central, Hong Kong S.A.R. The business address of Mr. David Tang is 3306 Longwan Villa, Houshayu, Shunyi District, Beijing 101318, People's Republic of China.
- \*\* The aggregate number of common shares beneficially owned by each of these individuals is less than 1% of our total outstanding shares.
- (1) For each person and group included in this column, percentage ownership is calculated by dividing the number of Class A common shares beneficially owned by such person or group, including shares that such person or group has the right to acquire within 60 days of March 31, 2023, by the sum of (i) 1,046,018,977 which is the total number of Class A common shares outstanding as of March 31, 2023 (excluding 250,327,847 outstanding restricted shares and treasury Class A common shares held by entities controlled by us), and (ii) the number of Class A common shares that such person or group has the right to acquire within 60 days after March 31, 2023.
- (2) For each person and group included in this column, percentage ownership is calculated by dividing the number of Class B common shares beneficially owned by such person or group by 326,509,555, being the total number of Class B common shares outstanding as of March 31, 2023.
- (3) Represents the sum of Class A and Class B common shares beneficially owned by such person or group.
- (4) For each person and group included in this column, percentage ownership is calculated by dividing the number of total common shares beneficially owned by such person or group, by the sum of the number of common shares outstanding and the number of common shares such person or group has the right to acquire upon exercise of the stock options or warrants within 60 days after March 31, 2023.

- (5) For each person or group included in this column, the percentage of total voting power represents voting power based on both Class A and Class B common shares held by such person or group with respect to all of our outstanding Class A and Class B common shares as one class. Each holder of Class A common shares is entitled to one vote per share. Each holder of our Class B common shares is entitled to ten votes per share on all matters requiring a shareholders' vote. Our Class B common shares are convertible at any time by the holder into Class A common shares on a one-for-one basis, whereas Class A common shares are not convertible into Class B common shares under any circumstances.
- (6) Representing (i) 156,340,804 Class A common shares (including 17,800,000 Class A common shares in the form of ADSs) and 199,448,382 Class B common shares held by YY One Limited, a British Virgin Islands company, (ii) 4,319,680 Class B common shares held by New Wales Holdings Limited, a British Virgin Islands company, and (iii) 4,164,480 Class A common shares underlying options and restricted share units granted to Mr. David Xueling Li that have vested or will become vested within 60 days of March 31, 2023. Mr. David Xueling Li is the sole owner and director of YYME Limited. Each of YY One Limited and New Wales Holdings Limited is wholly-owned by YYME Limited. In August 2016, Mr. Jun Lei, who beneficially owned 122,741,483 Class B common shares as of March 31, 2023, delegated the voting rights of such shares to Mr. David Xueling Li.
- (7) Representing (i) 156,340,804 Class A common shares and 199,448,382 Class B common shares held by YY One Limited, a British Virgin Islands company, and (ii) 4,319,680 Class B common shares held by New Wales Holdings Limited, a British Virgin Islands company. Mr. David Xueling Li is the sole owner and director of YYME Limited. Each of YY One Limited and New Wales Holdings Limited is wholly owned by YYME Limited. The business address of YYME Limited is c/o David Xueling Li, 30 Pasir Panjang Road #15-31A Mapletree Business City, Singapore 117440.
- (8) Representing 122,741,483 Class B common shares held by Top Brand Holdings Limited, a BVI company wholly owned and controlled by Mr. Jun Lei. The voting rights of such 122,741,483 Class B common shares were delegated to Mr. David Xueling Li in August 2016. The business address of Top Brand Holdings Limited is c/o Jun Lei, 19E, Huating Jiayuan, No.6 of Middle Beisihuan Road, Chaoyang District, Beijing 100102, People's Republic of China.
- (9) Representing 78,363,440 Class A common shares (or Class A common shares represented by ADSs) beneficially owned by T. ROWE PRICE ASSOCIATES, INC. as of December 31, 2022, as reported in a Schedule 13G/A filed by T. ROWE PRICE ASSOCIATES, INC. with the SEC on February 14, 2023. Please see the Schedule 13G/A filed by T. ROWE PRICE ASSOCIATES, INC. with the SEC on February 14, 2023 for information relating to T. ROWE PRICE ASSOCIATES, INC. The principal business office of T. ROWE PRICE ASSOCIATES, INC. is located at 100 E. Pratt Street, Baltimore, MD 21202, the United States.

As of March 31, 2023, 1,372,528,532 of our common shares were issued and outstanding, including 326,509,555 Class B common shares and 1,046,018,977 Class A common shares (excluding 250,327,847 outstanding restricted shares and treasury Class A common shares held by entities controlled by us). Based on a review of the register of members maintained by our Cayman Islands corporate administrator, we believe that as of March 31, 2023, none of our total outstanding shares were held by record holder in the United States. The number of beneficial owners of our ADSs in the United States is likely to be much larger than the number of record holders of our common shares in the United States. None of our existing shareholders have different voting rights from other shareholders in the same class. See "Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers—Employment Agreements" for a description of the employment agreements we have entered into with our senior executive officers.

Our common shares are divided into Class A common shares and Class B common shares. Holders of Class A common shares are entitled to one vote per share, while holders of Class B common shares are entitled to ten votes per share. We are not aware of any arrangement that may, at a subsequent date, result in a change of control of our company.

**F. Disclosure of a Registrant's Action to Recover Erroneously Awarded Compensation**

Not applicable.

**ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS**

**A. Major Shareholders**

Please refer to "Item 6. Directors, Senior Management and Employees—E. Share Ownership."

## **B. Related Party Transactions**

### **VIE Structure and the Contractual Arrangements**

The government of mainland China extensively regulates foreign ownership of, and the licensing and permit requirements pertaining to, companies that provide internet-based services such as our platforms. To comply with these restrictions, we conduct our mainland China operations that are subject to these restrictions through the variable interest entities and the contractual arrangements with them. The contractual arrangements with the primary operating variable interest entities that we currently rely on to conduct our main operations in mainland China include (i) the contractual arrangements among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and its direct and indirect shareholders, and (ii) the contractual arrangements among Guangzhou Huanju Shidai, Guangzhou Ruicheng and its direct and indirect shareholders, through which we direct the business operations of Guangzhou Huaduo, a wholly-owned subsidiary indirectly held by Guangzhou Ruicheng.

We have completed the enhancement of the structure we use to hold the major operating variable interest entities so that we can better ensure the stability and proper governance of the operating variable interest entities as an integral part of our company, or the VIE Enhancement. Pursuant to the VIE Enhancement, an operating variable interest entity is typically held by a limited liability company in mainland China. This limited liability company in mainland China is in turn be directly or indirectly owned by two limited partnerships in mainland China, each of which holds 50% of the equity interest. Each of these partnerships is comprised of (i) a limited liability company in mainland China, as general partner (which is formed by a number of selected individuals of our company and our management who are PRC citizens), and (ii) the same group of natural persons, as limited partners. For the primary operating variable interest entities, these individuals are Ting Li, Lin Song, and Di Fu (with respect to each of Guangzhou Huaduo and Guangzhou BaiGuoYuan). Following the VIE Enhancement, the designated wholly-owned entity, on the one hand, and the corresponding VIE and the multiple layers of legal entities above the VIE, as well as the natural persons described above, on the other hand, enter into contractual arrangements as summarized below.

There continue to be risks associated with the VIE structure in general. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure.”

The following is a summary of our contractual arrangements with our primary operating VIEs.

#### ***Contractual Arrangements with Guangzhou BaiGuoYuan***

The following is a summary of the currently effective contracts among our subsidiary, BaiGuoYuan Technology, a variable interest entity, Guangzhou BaiGuoYuan Network Technology Co., Ltd., or Guangzhou BaiGuoYuan, and the direct and indirect shareholders of Guangzhou BaiGuoYuan.

##### ***Exclusive Service Agreement***

Under each exclusive service agreement dated January 15, 2021 entered into among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and each direct and indirect shareholder of Guangzhou BaiGuoYuan, BaiGuoYuan Technology has the right to exclusively provide relevant services to Guangzhou BaiGuoYuan and each direct and indirect shareholders of Guangzhou BaiGuoYuan, including, without limitations, the licensing of software, technology support, training, research and business consulting services related to their applicable business, the scope of which is to be determined by BaiGuoYuan Technology from time to time. The service scope and service fee payable by such companies to BaiGuoYuan Technology is determined by the sole discretion of BaiGuoYuan Technology. The term of each exclusive service agreement is twenty years and will be automatically extended year by year unless BaiGuoYuan Technology delivers a prior written notice to such shareholder not to extend the term.

##### ***Proxy Agreement***

Under each proxy agreement dated January 15, 2021 entered into among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and each direct and indirect shareholder of Guangzhou BaiGuoYuan, each such shareholder irrevocably authorized BaiGuoYuan Technology or its designee(s) to act on their respective behalf as proxy attorney, including, but not limited to, proposing to convene or attend shareholder meetings, voting at such meetings, appointing directors and senior management, disposal the equity interests under the respective exclusive service agreement. The term of each proxy agreement is twenty years and will be automatically extended year by year unless BaiGuoYuan Technology delivers prior written notice to the relevant parties under the proxy agreements not to extend the term.

*Equity Interest Pledge Agreement*

Under each equity interest pledge agreement dated January 15, 2021 entered into among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and each direct and indirect shareholder of Guangzhou BaiGuoYuan, each such shareholders of Guangzhou BaiGuoYuan pledged all of its equity interests to BaiGuoYuan Technology to guarantee the performance by such shareholder's performance of their respective contractual obligations under the respective exclusive service agreement, exclusive option agreement, and proxy agreement to which such shareholder is a party. If such shareholder breach its contractual obligations under those agreements, BaiGuoYuan Technology, as the pledgee, will be entitled to certain rights, including the right to dispose the pledged equity interests. We have completed the registration of the equity interest pledge under the equity interest pledge agreements with the relevant office of SAMR. The pledge will remain effective until the contractual obligations have been fully performed or the secured debts have been fully paid.

*Exclusive Option Agreement*

Under each exclusive option agreement dated January 15, 2021 entered into among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and each direct and indirect shareholder of Guangzhou BaiGuoYuan, each such shareholder irrevocably granted BaiGuoYuan Technology or its designee(s) an exclusive call option to purchase all or any part of its equity interests, all or any part of its assets, and an exclusive call option to request the capital increase into the relevant entity, to the extent permissible by the then-applicable PRC laws and regulations, at BaiGuoYuan Technology's sole discretion.

***Contractual Arrangements with Guangzhou Ruicheng***

The following is a summary of the currently effective contracts among our subsidiary, Guangzhou Huanju Shidai, a variable interest entity, Guangzhou Ruicheng, and the direct and indirect shareholders of Guangdong Ruicheng.

*Exclusive Services Agreement*

Under each exclusive services agreement dated December 9, 2020 entered into among Guangzhou Huanju Shidai, Guangzhou Ruicheng and each direct and indirect shareholder of Guangzhou Ruicheng, Guangzhou Huanju Shidai had the exclusive right to provide to Guangzhou Ruicheng and each direct and indirect shareholder of Guangzhou Ruicheng services related to their applicable business. Guangzhou Huanju Shidai owns the exclusive intellectual property rights created as a result of the performance of each exclusive services agreement. The service scope and service fee payable by Guangzhou Ruicheng and each of its direct and indirect shareholders to Guangzhou Huanju Shidai is determined by the sole discretion of Guangzhou Huanju Shidai. The term of each exclusive services agreement is twenty years and will be automatically extended year by year unless Guangzhou Huanju Shidai delivers a prior written notice to Guangzhou Ruicheng or its director and indirect shareholders not to extend the term.

*Voting Rights Proxy Agreement*

Under each voting rights proxy agreement dated December 9, 2020 entered into among Guangzhou Huanju Shidai, Guangzhou Ruicheng and each direct and indirect shareholder of Guangzhou Ruicheng, each such shareholders of Guangzhou Ruicheng irrevocably executed a power of attorney and appointed Guangzhou Huanju Shidai's designated representatives as its attorney-in-fact to exercise the shareholders' rights of such shareholders, including, without limitation, the power to vote on its behalf on all matters shareholder approval under PRC laws and regulations and the articles of association and their amendments from time to time and the rights to information. The term of each voting rights proxy agreement is twenty years and will be automatically extended year by year unless Guangzhou Huanju Shidai delivers a prior written notice to the relevant parties under the voting rights proxy agreements not to extend the term or upon mutual written agreement by all parties.

*Exclusive Option Agreement*

Under each exclusive option agreement dated December 9, 2020 entered into among Guangzhou Huanju Shidai, Guangzhou Ruicheng and each direct and indirect shareholders of Guangzhou Ruicheng, each such shareholder irrevocably granted Guangzhou Huanju Shidai or its designated representative(s) an exclusive option to purchase, to the extent permitted under PRC law, all or part of its equity interests in the relevant entities. Guangzhou Huanju Shidai or its designated representative(s) had sole discretion as to when to exercise such options, either in part or in full. Without Guangzhou Huanju Shidai's prior written consent, the direct and indirect shareholders of Guangzhou Ruicheng shall not sell, transfer, mortgage or otherwise dispose their equity interests that directly or indirectly relating to Guangzhou Ruicheng. Each exclusive option agreement will remain effective until all the equity interests in or assets held by the relevant shareholders are transferred to Guangzhou Huanju Shidai or its designated representative(s) or may be terminated at Guangzhou Huanju Shidai's sole discretion.

### *Equity Interest Pledge Agreement*

Under each equity interest pledge agreement dated December 9, 2020 entered into among Guangzhou Huanju Shidai, Guangzhou Ruicheng and each direct and indirect shareholder of Guangzhou Ruicheng, each such shareholder of Guangzhou Ruicheng pledged all of its equity interests to Guangzhou Huanju Shidai to guarantee the performance by such shareholders' performance of their respective contractual obligations under the exclusive service agreement, exclusive option agreement, and voting rights proxy agreement. If such shareholder breached its contractual obligations under those agreements, Guangzhou Huanju Shidai, as the pledgee, would be entitled to certain rights, including the right to sell the pledged equity interests. The pledge will remain effective until the contractual obligations have been fully performed or the secured debts have been fully paid.

### **Other Immaterial Contractual Arrangements**

We also entered into contractual arrangements among several immaterial variable interest entities, both in amount and significance, their shareholders and primary beneficiaries, with terms and conditions substantially similar to the ones summarized above. As of the date of this annual report, those immaterial contractual arrangements include the ones among: (i) Huanju Shidai Technology (Beijing) Co., Ltd., Beijing Tuda Science and Technology Co., Ltd. and its shareholders; (ii) Haishaman (Shanghai) Information Technology Co., Ltd., Shanghai Ruogu Information Technology Co., Ltd. and its shareholders; (iii) Blue Buck Network Technology (Beijing) Co., Ltd., Guangzhou Blue Ocean Whale Riding Technology Co., Ltd., Beijing Cengcengceng Information Technology Co., Ltd. and its shareholder; (iv) Guangzhou LianYiYun Information Technology Co., Ltd., Guangzhou AnSiChuang Information Technology Co., Ltd. and its shareholder; (v) Guangzhou Wangxing Information Technology Co., Ltd., Chengdu Yunbu Internet Technology Co., Ltd. and its shareholder; (vi) Guangzhou Wangxing Information Technology Co., Ltd., Chengdu Luota Internet Technology Co., Ltd. and its shareholder; (vii) Guangzhou Wangxing Information Technology Co., Ltd., Chengdu Jiyue Internet Technology Co., Ltd. and its shareholder; and (viii) Guangzhou Blue Ocean Whale Riding Technology Co., Ltd., Guangzhou Blue Whale Weaving Garment Co., Ltd. and its shareholders. In connection with the contractual arrangements with those immaterial variable interest entities, the pledge of equity interest in Chengdu Jiyue Internet Technology Co., Ltd. by its shareholders, the pledge of equity interest in Chengdu Luota Internet Technology Co., Ltd. by its shareholders, the pledge of equity interest in Guangzhou AnSiChuang Information Technology Co., Ltd. by its shareholders, and the equity interest pledged by the shareholders of Beijing Tuda of their equity in Beijing Tuda have not been registered with the competent office of SAMR.

### **Transactions with Affiliates**

In 2010 and 2011, Guangzhou Huaduo and Guangzhou Sunhongs Corp., Ltd (formerly named as Guangzhou Shanghang Information Technical Co., Ltd.), or Guangzhou Sunhongs, entered into certain server co-location agreements, under which Guangzhou Sunhongs provides Guangzhou Huaduo with bandwidth and server co-location services in different cities in mainland China. In addition, Guangzhou Huaduo and Guangzhou Sunhongs entered into two content delivery network acceleration service agreements, under which Guangzhou Sunhongs provides content delivery network acceleration services to Guangzhou Huaduo. Guangzhou Sunhongs is an investee of Mr. Jun Lei, one of our major shareholders, and Shanghai Yilian Equity Investment Partnership (LP), one of the subsidiaries of Guangzhou Huaduo. In the years ended December 31, 2020, 2021 and 2022, the bandwidth service that we received from Guangzhou Sunhongs amounted to US\$14.2 million, US\$3.3 million and US\$1.5 million, respectively.

Guangzhou Huaduo and Kingsoft Cloud Holdings Limited (Nasdaq: KC) ("Kingsoft Cloud") entered into certain cloud service agreements, under which Kingsoft Cloud provides Guangzhou Huaduo with bandwidth service. Mr. Jun Lei, our major shareholder, is also the major shareholder and Chairman of the Board of Directors of Kingsoft Cloud. In the years ended December 31, 2020, 2021 and 2022, the bandwidth service that we received from Kingsoft Cloud amounted to US\$2.1 million, US\$0.4 million and nil, respectively. We also purchased servers and equipments from Kingsoft Cloud. In the year ended December 31, 2020, 2021 and 2022, the fixed assets that we purchased from Kingsoft Cloud amounted to US\$0.4 million, nil and nil, respectively.

See Note 28 to our audited consolidated financial statements included elsewhere in this annual report for further information about our related party transactions.

## **Registration Rights Agreement with Huya**

On April 3, 2020, Huya and we entered into a registration rights agreement. Under the agreement, Huya have granted us certain registration rights, including:

- Demand registration rights. So long as we hold 25% or more of the voting power of Huya outstanding shares, we have the right to request us effect a registration for their shares. Huya is not obligated to effect more than two demand registrations that have been declared and ordered effective.
- Form F-3 registration rights. If Huya qualifies for registration on Form F-3, we may request Huya to file a registration statement on Form F-3. Huya is not obligated to effect more than six registration statements on Form F-3 that have been declared and ordered effective.
- Piggyback registration rights. If Huya proposes to file a registration statement for a public offering of its securities, it must afford us an opportunity to participate in that offering. Huya has the right to terminate or withdraw any registration initiated by it under the piggyback registration rights prior to the effectiveness of such registration.

## **Employment Agreements**

See “Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers—Employment Agreements” for a description of the employment agreements we have entered into with our senior executive officers.

## **Share Incentives**

See “Item 6. Directors, Senior Management and Employees—B. Compensation of Directors and Executive Officers” for a description of share-based compensation awards we have granted to our directors, officers and other individuals as a group.

## **C. Interests of Experts and Counsel**

Not applicable.

## **ITEM 8. FINANCIAL INFORMATION**

### **A. Consolidated Statements and Other Financial Information**

See “Item 18. Financial Statements.”

## **Legal Proceedings**

Guangzhou NetEase Computer System Co., Ltd. has initiated a lawsuit against us in Guangzhou in October 2014, claiming infringement of its rights of reproduction concerning the online game of Fantasy Westward Journey in an amount of RMB100 million. In 2017, Guangzhou Intellectual Property Court ordered us to compensate NetEase in an amount of RMB20.0 million. In December 2019, the Higher People’s Court of Guangdong Province rejected the appeal of NetEase and us, and upheld the judgement of the Guangzhou Intellectual Property Court. We have applied for adjudication supervision from the Supreme People’s Court of PRC against the judgement in 2020, and we have applied for withdrawal of such adjudication supervision in April 2021. We paid the compensation of RMB20.0 million to NetEase in 2020 following the effective judgement.

On November 20, 2020, a putative securities class action complaint captioned Hershewe v. JOYY Inc. et al., No. 2:20-cv-10611 (C.D. Cal.) was filed in the United States District Court for Central District of California against us and certain of our current and former officers. The complaint asserts claims for violations of Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 and Rule 10b-5 promulgated thereunder and seeks damages based on alleged material misrepresentations and omissions about our revenue, component businesses, and acquisition of BIGO. The proposed class period is April 28, 2016, through November 18, 2020, inclusive. On March 9, 2022, the court granted the defendants’ motion to dismiss and dismissed the operative complaint in its entirety with prejudice. On April 8, 2022, the co-lead plaintiffs filed a notice of appeal. The court heard oral argument on April 21, 2023 and took the case under submission. We cannot reasonably estimate a potential future loss.

Apart from the aforesaid lawsuit, we are not currently a party to any pending material litigation or other material legal proceeding and are not aware of any pending or threatened litigation or other legal proceeding that may have a material adverse impact on our business or operations. However, we may be subject to various legal proceedings and claims that are incidental to our ordinary course of business. Regardless of the outcome, legal or administrative proceedings or claims may have an adverse impact on us because of defense and settlement costs, diversion of management attention and other factors.

### **Dividend Policy**

On August 11, 2020, our board of directors approved a quarterly dividend policy for three years commencing in the second quarter of 2020. Under the policy, total cash dividend amount expected to be paid would be approximately US\$300 million and quarterly dividends would be set at approximately US\$25 million in each fiscal quarter. On November 20, 2020, our board of directors approved an additional quarterly dividend policy for three years, under which the total cash dividend amount expected to be paid would be approximately US\$200 million and quarterly dividend would be set at a fixed amount of approximately US\$16.67 million in each fiscal quarter. As of March 31, 2023, we have paid dividends in an aggregate amount of US\$372.9 million.

We are a holding company incorporated in the Cayman Islands. We may receive dividends from our subsidiaries for our cash requirements, including any payment of dividends to our shareholders. Our ability to pay dividends depends upon dividends paid by our subsidiaries, which is subject to restrictions imposed by the applicable laws and regulations in these markets. In certain jurisdictions, such as Singapore, there are currently no foreign exchange control regulations which restrict the ability of our subsidiaries in these jurisdictions to distribute dividends to us. However, the relevant regulations may be changed and the ability of these subsidiaries to distribute dividends to us may be restricted in the future. As for the jurisdiction of mainland China, regulations of mainland China may restrict the ability of our subsidiary in mainland China to pay dividends to us. See “Item 3. Key information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate —Our subsidiaries and the variable interest entities in mainland China are subject to restrictions on paying dividends or making other payments to us, which may restrict our ability to satisfy our liquidity requirements” and “Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulation of Foreign Currency Exchange and Dividend Distribution.”

Our board of directors has complete discretion on whether to distribute dividends, subject to the approval of our shareholders. Even if our board of directors decides to pay dividends, the form, frequency and amount will depend upon our future operations and earnings, capital requirements and surplus, general financial condition, contractual restrictions and other factors that the board of directors may deem relevant. If we pay any dividends, we will pay our ADS holders to the same extent as holders of our Class A common shares, subject to the terms of the deposit agreement, including the fees and expenses payable thereunder. See “Item 12. Description of Securities Other than Equity Securities—D. American Depositary Shares.” Cash dividends on our Class A common shares, if any, will be paid in U.S. dollars.

### **B. Significant Changes**

Except as disclosed elsewhere in this annual report, we have not experienced any significant changes since the date of our audited consolidated financial statements included in this annual report.

**ITEM 9. THE OFFER AND LISTING**

**A. Offering and Listing Details**

See “—C. Markets” and “Item 12. Description of Securities other than Equity Securities—D. American Depositary Shares.” We have a dual-class common share structure in which Class A common shares have different voting rights from Class B common shares. Class B common shares are each entitled to ten votes, whereas Class A common shares are each entitled to one vote. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our ADSs—Our dual class common share structure with different voting rights will limit your ability to influence corporate matters and could discourage others from pursuing any change of control transactions that holders of our Class A common shares and ADSs may view as beneficial.”

**B. Plan of Distribution**

Not applicable.

**C. Markets**

Our ADSs, each representing twenty Class A common shares, have been listed on the Nasdaq Global Select Market since November 21, 2012 and trade under the symbol “YY.”

**D. Selling Shareholders**

Not applicable.

**E. Dilution**

Not applicable.

**F. Expenses of the Issue**

Not applicable.

**ITEM 10. ADDITIONAL INFORMATION**

**A. Share Capital**

Not applicable.

**B. Memorandum and Articles of Association**

We are a Cayman Islands exempted company and our affairs are governed by our memorandum and articles of association and the Companies Act (As Revised) of the Cayman Islands, referred to as the Companies Act below. The following are summaries of certain provisions of our memorandum and articles of association in effect as of the date of this annual report insofar as they relate to the material terms of our common shares.

## **Registered Office and Objects**

Our registered office in the Cayman Islands is located at Conyers Trust Company (Cayman) Limited, Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman, KYI-1111, Cayman Islands. The memorandum of association provides, inter alia, that the liability of the members of our company is limited to the amount, if any, for the time being unpaid on the common shares. The objects for which our company is established are unrestricted (including acting as an investment company), and we shall have and be capable of exercising all the functions of a natural person of full capacity irrespective of corporate benefit, as provided in Section 27(2) of the Companies Act and in view of the fact that we are an exempted Company, we will not trade in the Cayman Islands with any person, firm or corporation except in furtherance of our business carried on outside the Cayman Islands.

## **Board of Directors**

See “Item 6. Directors, Senior Management and Employees—C. Board Practices—Duties of Directors” and “Item 6. Directors, Senior Management and Employees—C. Board Practices—Terms of Directors and Officers.”

## **Common Shares**

### ***General***

Our common shares are divided into Class A common shares and Class B common shares. Holders of Class A common shares and Class B common shares will have the same rights except for voting and conversion rights. The holders of ADSs will not be treated as our shareholders and will be required to surrender their ADSs for cancellation and withdrawal from the depository facility in which the Class A common shares are held in accordance with the provisions of the deposit agreement in order to exercise shareholders’ rights in respect of the Class A common shares. The depository will agree, so far as it is practical, to vote or cause to be voted the amount of underlying Class A common shares represented by ADSs in accordance with the non-discretionary written instructions of the holders of such ADSs.

All of our issued and outstanding common shares are fully paid and non-assessable. Our common shares are issued in registered form and are issued when registered in our register of members (shareholders). We may not issue shares to bearer. Our shareholders who are non-residents of the Cayman Islands may freely hold and vote their common shares.

## **Meetings**

As a Cayman Islands exempted company, we are not obliged by the Companies Act to call shareholders’ annual general meetings. Our third amended and restated memorandum and articles of association provide that we may (but are not obliged to) in each year hold a general meeting as our annual general meeting in which case we shall specify the meeting as such in the notices calling it, and the annual general meeting shall be held at such time and place as may be determined by our directors. In addition, extraordinary general meetings of our shareholders may be convened by a majority of our board of directors or the chairman of our board of directors. Advance notice in writing of at least ten clear days is required for the convening of our annual general meeting and any other general meeting of our shareholders. A quorum required for a meeting of shareholders consists of at least one or more shareholders present in person or by proxy, or (in the case of a shareholder being a corporation) by its duly authorized representative representing not less than one-third in nominal value of the total issued voting shares in our company throughout the meeting.

If our directors wish to make this facility available for a specific general meeting or all general meetings of our company, attendance and participation in any such general meeting may be by means of Communication Facilities (as defined in our articles of association, including video, video-conferencing, internet or online conferencing applications, telephone or tele-conferencing and/or any other video-communications, internet or online conferencing application or telecommunications facilities by means of which all persons participating in the meeting are capable of hearing and being heard by each other), including entirely virtual meetings. A shareholder attending any such general meeting by means of Communications Facilities shall be deemed to be present at the meeting, including for quorum purposes.

Notwithstanding that a meeting is called by shorter notice than that mentioned above, it will be deemed to have been duly called, if it is so agreed (a) in the case of a meeting called as an annual general meeting by all of our shareholders entitled to attend and vote at the meeting; and (b) in the case of any other meeting, by a majority in number of the shareholders having the right to attend and vote at the meeting, being a majority together holding not less than 95% in nominal value of the issued shares giving that right.

No business other than the appointment of a chairman may be transacted at any general meeting unless a quorum is present at the commencement of business. However, the absence of a quorum will not preclude the appointment of a chairman. If present, the chairman of our board of directors shall be the chairman presiding at any shareholders' meetings.

A corporation being a shareholder shall be deemed for the purpose of our articles of association to be present in person if represented by its duly authorized representative being the person appointed by resolution of the directors or other governing body of such corporation to act as its representative at the relevant general meeting or at any relevant general meeting of any class of our shareholders. Such duly authorized representative shall be entitled to exercise the same powers on behalf of the corporation that he represents as that corporation could exercise if it were our individual shareholder.

The quorum for a separate general meeting of the holders of a separate class of shares is described in "—Modification of Rights" below.

Our articles of association do not allow our shareholders to approve matters to be determined at shareholders' meetings by way of written resolutions without a meeting.

### **Voting Rights**

In respect of all matters requiring a shareholders' vote, each Class A common share is entitled to one vote, and each Class B common share is entitled to ten votes, voting together as one class. At any shareholders' meeting, and subject to the voting rights attached to our Class A common shares and Class B common shares as described in this paragraph, on a show of hands, every shareholder present (whether in person or by proxy (or, in the case of a shareholder being a corporation, by its duly authorized representative) or by means of Communications Facilities (as defined in our articles of association), if permitted) shall have one vote and on a poll, every shareholder present (whether in person or by proxy (or, in the case of a shareholder being a corporation, by its duly authorized representative) or by means of Communications Facilities (as defined in our articles of association), if permitted) shall have one vote for each fully paid share of which such shareholder is the holder.

No shareholder shall, unless our board of directors otherwise determines, be entitled to vote or be reckoned in a quorum, in respect of any share, unless such shareholder is duly registered as our shareholder and all calls or installments due by such shareholder to us have been paid.

If a clearing house (or its nominee(s)) or a central depository entity, being a corporation, is a shareholder, it may authorize such person or persons as it thinks fit to act as its representative(s) at any meeting or at any meeting of any class of shareholders, provided that the authorization shall specify the number and class of shares in respect of which each such person is so authorized. A person so authorized is entitled to exercise the same rights and powers on behalf of the clearing house or central depository entity (or its nominee(s)) as if such person was the registered holder of our shares held by the clearing house or central depository entity (or its nominee(s)) including the right to vote individually on a show of hands.

While there is nothing under the laws of the Cayman Islands which specifically prohibits or restricts the creation of cumulative voting rights for the election of directors of our company, it is not a concept that is accepted as a common practice in the Cayman Islands, and our company has made no provisions in our articles of association to allow cumulative voting for such elections.

### **Conversion**

Each Class B common share is convertible into one Class A common share at any time by the holder thereof. Class A common shares are not convertible into Class B common shares under any circumstances. Upon any transfer, sale, pledge, assignment or disposition of Class B common shares by a holder to any person or entity which is not an affiliate of such holder and which is not any of our founders or any affiliates of our founders, such Class B common shares shall be automatically and immediately converted into the equivalent number of Class A common shares. In addition, if at any time, Messrs. David Xueling Li, Jun Lei, Tony Bin Zhao and Jin Cao and their affiliates collectively beneficially own less than 5% of the total number of the issued and outstanding Class B common shares, each issued and outstanding Class B common share will be automatically and immediately converted into one Class A common share, and we will not issue any Class B common shares thereafter. Furthermore, if at any time more than 50% of the ultimate beneficial ownership of any holder of Class B common shares (other than our founders or our founders' affiliates) changes, each such Class B common share will be automatically and immediately converted into one Class A common share.

### **Calls on Shares and Forfeiture of Shares**

Subject to our memorandum and articles of association, our directors may from time to time make such calls upon the members in respect of any amounts unpaid on the shares held by them. The shares that have been called upon and remain unpaid after it has become due and payable are subject to forfeiture.

### **Protection of Minority Shareholders**

In principle, we will normally be the proper plaintiff to sue for a wrong done to us as a company because as a general rule a derivative action may not be brought by a minority shareholder. However, based on English authorities, which would in all likelihood be of persuasive authority in the Cayman Islands, the Cayman Islands court can be expected to apply and follow the common law principles (namely the rule in *Foss v. Harbottle* and the exceptions thereto) which permit a minority shareholder to commence a class action against, or derivative actions in the name of, a company to challenge the following:

- (i) an act which is illegal or ultra vires and is therefore incapable of ratification by the shareholders;
- (ii) an act which, although not ultra vires, could only be effected duly if authorized by a special or qualified majority vote that has not been obtained; and
- (iii) an act which constitutes a fraud against, the minority where the wrongdoers are themselves in control of the company.

In the case of a company (not being a bank) having its share capital divided into shares, the Grand Court of the Cayman Islands may, on the application of members holding not less than one fifth of the shares of the company in issue, appoint an inspector to examine the affairs of the company and to report thereon in such manner as the Grand Court of the Cayman Islands shall direct.

Any of our shareholders may petition the Grand Court of the Cayman Islands which may make a winding up order if the Grand Court of the Cayman Islands is of the opinion that it is just and equitable that we should be wound up or, as an alternative to a winding up order, (a) an order regulating the conduct of our affairs in the future, (b) an order requiring us to refrain from doing or continuing an act complained of by the shareholder petitioner or to do an act which the shareholder petitioner has complained we have omitted to do, (c) an order authorizing civil proceedings to be brought in our name and on our behalf by the shareholder petitioner on such terms as the Grand Court of the Cayman Islands may direct, or (d) an order providing for the purchase of the shares of any of our shareholders by other shareholders or us and, in the case of a purchase by us, a reduction of our capital accordingly.

Generally, claims against us must be based on the general laws of contract or tort applicable in the Cayman Islands or individual rights as shareholders as established by our articles of association.

### **Pre-Emption Rights**

There are no pre-emption rights applicable to the issue of new shares of our company under either Cayman Islands law or our memorandum and articles of association.

### **Liquidation Rights**

Subject to any class or classes of shares or future shares which are issued with specific rights, privileges or restrictions as to the distribution of available surplus assets on liquidation, (a) if we are wound up and the assets available for distribution among our shareholders are more than sufficient to repay the whole of the capital paid up at the commencement of the winding up, the excess shall be distributed *pari passu* among those shareholders in proportion to the amount paid up at the commencement of the winding up on the shares held by them, respectively, and (b) if we are wound up and the assets available for distribution among the shareholders as such are insufficient to repay the whole of the paid-up capital, those assets shall be distributed so that, as nearly as may be, the losses shall be borne by the shareholders in proportion to the capital paid up at the commencement of the winding up on the shares held by them, respectively.

If we are wound up (whether the liquidation is voluntary or by the court), the liquidator may with the sanction of our special resolution and any other sanction required by the Companies Act, divide among our shareholders in specie or kind the whole or any part of our assets (whether or not they shall consist of property of the same kind) and may, for such purpose, set such value as the liquidator deems fair upon any property to be divided and may determine how such division shall be carried out as between the shareholders or different classes of shareholders. The liquidator may also vest the whole or any part of these assets in trustees upon such trusts for the benefit of the shareholders as the liquidator shall think fit, but so that no shareholder will be compelled to accept any assets, shares or other securities upon which there is a liability.

The consideration received by each holder of a Class A common share and a holder of a Class B common share will be the same in any liquidation event.

### **Variation of Rights**

Alterations to our memorandum and articles of association may only be made by special resolution, meaning a majority of not less than two-thirds of votes cast at a shareholders' meeting.

Subject to applicable laws and our memorandum and articles of association, all or any of the special rights for the time being attached to the shares or any class of shares may, unless otherwise provided by the terms of issue of the shares of that class, from time to time be varied, modified or abrogated by a special resolution passed at a separate general meeting of the holders of the shares of that class. All the provisions of our articles of association relating to general meetings shall, *mutatis mutandis*, apply, but so that:

- separate general meetings of the holders of a class or series of shares may be called only by (i) the chairman of our board of directors, or (ii) a majority of our board of directors (unless otherwise specifically provided by the terms of issue of the shares of such class or series). Our articles of association does not give any shareholder(s) the right to call a class or series meeting;
- the necessary quorum shall be a person or persons (or in the case of a shareholder being a corporation, its duly authorized representative) together holding or representing by proxy not less than one-third in nominal value of the issued shares of that class;
- every holder of shares of the class shall be entitled on a poll to one vote for every such share held by him; and
- any holder of shares of the class present (whether in person or by proxy (or, in the case of a shareholder being a corporation, by its authorized representative) or by means of Communication Facilities (as defined in our articles of association), if permitted) may demand a poll.

The special rights conferred upon the holders of any shares or class of shares shall not, unless otherwise expressly provided in the rights attaching to or the terms of issue of such shares, be deemed to be varied, modified or abrogated by the creation or issue of further shares ranking *pari passu* with such existing shares or class of shares.

### **Alteration of Capital**

We may from time to time by ordinary resolution in accordance with the Companies Act alter the conditions of our memorandum of association to:

- increase our capital by such sum, to be divided into shares of such amounts, as the resolution shall prescribe;
- consolidate and divide all or any of our share capital into shares of larger amounts than our existing shares;
- cancel any shares which at the date of the passing of the resolution have not been taken or agreed to be taken by any person, and diminish the amount of its share capital by the amount of the shares so cancelled subject to the provisions of the Companies Act;

- sub-divide our shares or any of them into shares of smaller amount than is fixed by our memorandum of association, subject nevertheless to the Companies Act, so that the resolution whereby any share is sub-divided may determine that, as between the holders of the shares resulting from such subdivision, one or more of the shares may have any such preferred or other special rights over, or may have such deferred rights or be subject to any such restrictions as compared with the others, as we have power to attach to unissued or new shares; and
- divide our shares into several classes and without prejudice to any special rights previously conferred on the holders of existing shares, attach to the shares respectively any preferential, deferred, qualified or special rights, privileges, conditions or such restrictions that in the absence of any such determination in a general meeting may be determined by our directors.

We may, by special resolution, subject to any confirmation or consent required by the Companies Act, reduce our share capital or any capital redemption reserve in any manner authorized by law.

### **Transfer of Shares**

Subject to any applicable restrictions set forth in our articles of association, including, for example, the board of directors' discretion to refuse to register a transfer of any share (not being a fully paid up share) to a person of whom it does not approve, or any share issued under share incentive plans for employees upon which a restriction on transfer imposed thereby still subsists, or a transfer of any share to more than four joint holders, any of our shareholders may transfer all or any of his or her shares by an instrument of transfer in the usual or common form or in a form prescribed by the Nasdaq Global Select Market or in another form that our directors may approve.

Our directors may decline to register any transfer of any share which is not paid up or on which we have a lien. Our directors may also decline to register any transfer of any share unless:

- the instrument of transfer is lodged with us and is accompanied by the certificate for the shares to which it relates and such other evidence as our directors may reasonably require to show the right of the transferor to make the transfer;
- the instrument of transfer is in respect of only one class of share;
- the instrument of transfer is properly stamped (in circumstances where stamping is required); and
- fee of such maximum sum as the Nasdaq Global Select Market may determine to be payable or such lesser sum as our directors may from time to time require is paid to us in respect thereof.

If our directors refuse to register a transfer, they shall, within three months after the date on which the instrument of transfer was lodged, send to each of the transferor and the transferee notice of such refusal.

The registration of transfers may, after compliance with any notice requirement of the Nasdaq Global Select Market, be suspended and the register closed at such times and for such periods as our directors may from time to time determine; provided, however, that the registration of transfers shall not be suspended nor the register closed for more than 30 days in any year as our directors may determine.

### **Register of Members**

In accordance with Section 48 of the Companies Act, the register of members is prima facie evidence of the registered holder or member of shares of a company. Therefore, a person becomes a registered holder or member of shares of the company only upon entry being made in the register of members. Our directors will maintain one register of members, at the office of Conyers Trust Company (Cayman) Limited, Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman, KY1-1111, Cayman Islands, which provides us with corporate administrative services. We will perform the procedures necessary to register the shares in the register of members as required in "PART III—Distribution of Capital and Liability of Members of Companies and Associations" of the Companies Act, and will ensure that the entries on the register of members are made without any delay.

The common shares underlying our ADSs are not shares in bearer form, but are in registered form and are "non-negotiable" or "registered" shares and accordingly the common shares underlying our ADSs can only be transferred on the books of the company in accordance with Section 166 of the Companies Act.

If the name of any person is incorrectly entered in or omitted from our register of members, or if there is any default or unnecessary delay in entering on the register the fact of any person having ceased to be a member of our company, the person or member aggrieved (or any member of our company or our company itself) may apply to the Grand Court of the Cayman Islands for an order that the register be rectified, and the Court may either refuse such application or it may, if satisfied of the justice of the case, make an order for the rectification of the register.

### **Share Repurchases**

We are empowered by the Companies Act and our articles of association to purchase our own shares, subject to certain restrictions. Our directors may only exercise this power on our behalf, subject to the Companies Act, our memorandum and articles of association and to any applicable requirements imposed from time to time by the Nasdaq Global Select Market, the U.S. Securities and Exchange Commission, or by any other recognized stock exchange on which our securities are listed.

### **Dividends**

Subject to the Companies Act, our company in a general meeting or our directors may declare dividends in any currency to be paid to our shareholders, but no dividend shall be declared in excess of the amount recommended by our board of directors. Dividends may be declared and paid out of our profits, realized or unrealized, or from any reserve set aside from profits which our directors determine is no longer needed. Our board of directors may also declare and pay dividends out of our share premium account or any other fund or account that can be authorized for this purpose in accordance with the Companies Act. However, even if our company has sufficient profits or share premium, it may not pay a dividend if this would result in our company being unable to pay its debts as they fall due in the ordinary course of business.

Except in so far as the rights attaching to, or the terms of issue of, any share otherwise provides, (a) all dividends shall be declared and paid according to the amounts paid up on the shares in respect of which the dividend is paid, but no amount paid up on a share in advance of calls shall be treated for this purpose as paid up on that share and (b) all dividends shall be apportioned and paid pro rata according to the amounts paid up on the shares during any portion or portions of the period in respect of which the dividend is paid.

Our directors may also pay interim dividends, whenever our financial position, in the opinion of our directors, justifies such payment.

Our directors may deduct from any dividend or bonus payable to any shareholder all sums of money (if any) presently payable by such shareholder to us on account of calls or otherwise.

No dividend or other money payable by us on or in respect of any share shall bear interest against us.

In respect of any dividend proposed to be paid or declared on our share capital, our directors may resolve and direct that (a) such dividend be satisfied wholly or in part in the form of an allotment of shares credited as fully paid up, provided that our shareholders entitled thereto will be entitled to elect to receive such dividend (or part thereof if our directors so determine) in cash in lieu of such allotment or (b) the shareholders entitled to such dividend will be entitled to elect to receive an allotment of shares credited as fully paid up in lieu of the whole or such part of the dividend as our directors may think fit. Our shareholders may, upon the recommendation of our directors, by ordinary resolution resolve in respect of any particular dividend that, notwithstanding the foregoing, a dividend may be satisfied wholly in the form of an allotment of shares credited as fully paid up without offering any right to shareholders to elect to receive such dividend in cash in lieu of such allotment.

Any dividend interest or other sum payable in cash to the holder of shares may be paid by check or warrant sent by mail addressed to the holder at his registered address, or addressed to such person and at such addresses as the holder may direct. Every check or warrant shall, unless the holder or joint holders otherwise direct, be made payable to the order of the holder or, in the case of joint holders, to the order of the holder whose name stands first on the register in respect of such shares, and shall be sent at his or their risk and payment of the check or warrant by the bank on which it is drawn shall constitute a good discharge to us.

All dividends unclaimed for one year after having been declared may be invested or otherwise made use of by our board of directors for the benefit of our company until claimed. Any dividend unclaimed after a period of six years from the date of declaration of such dividend shall be forfeited and reverted to us.

Whenever our directors have resolved that a dividend be paid or declared, our directors may further resolve that such dividend be satisfied wholly or in part by the distribution of specific assets of any kind, and in particular of paid up shares, debentures or warrants to subscribe for our securities or securities of any other company. Where any difficulty arises with regard to such distribution, our directors may settle it as they think expedient. In particular, our directors may issue fractional certificates, ignore fractions altogether or round the same up or down, fix the value for distribution purposes of any such specific assets, determine that cash payments shall be made to any of our shareholders upon the footing of the value so fixed in order to adjust the rights of the parties, vest any such specific assets in trustees as may seem expedient to our directors, and appoint any person to sign any requisite instruments of transfer and other documents on behalf of the persons entitled to the dividend, which appointment shall be effective and binding on our shareholders.

### **Untraceable Shareholders**

We are entitled to sell any shares of a shareholder who is untraceable, provided that no such sale shall be made unless:

- all checks or warrants in respect of dividends of such shares, not being less than three in number, for any sums payable in cash to the holder of such shares have remained un-cashed for a period of 12 years prior to the publication of the advertisement and during the three months referred to in the third bullet point below;
- we have not during that time received any indication of the existence of the shareholder or person entitled to such shares by death, bankruptcy or operation of law; and
- we, if so required by the rules of the Nasdaq Global Select Market, have given notice to, and caused an advertisement to be published in newspapers in accordance with such applicable rules giving notice of our intention to sell these shares, and a period of three months (or such shorter period as permitted under the applicable rules) has elapsed since the date of such advertisement.

The net proceeds of any such sale shall belong to us, and when we receive these net proceeds we shall become indebted to the former shareholder for an amount equal to such net proceeds.

### **Exclusive Forum**

Unless we consent in writing to the selection of an alternative forum, the United States District Court for the Southern District of New York (or, if the United States District Court for the Southern District of New York lacks subject matter jurisdiction over a particular dispute, the state courts in New York County, New York) shall be the exclusive forum within the United States for the resolution of any complaint asserting a cause of action arising out of or relating in any way to the federal securities laws of the United States, regardless of whether such legal suit, action, or proceeding also involves parties other than us. Any person or entity purchasing or otherwise acquiring any share or other securities in our company, or purchasing or otherwise acquiring American depositary shares issued pursuant to deposit agreements, shall be deemed to have notice of and consented to the provisions of this article. Without prejudice to the foregoing, if the provision in this article is held to be illegal, invalid or unenforceable under applicable law, the legality, validity or enforceability of the rest of articles of association shall not be affected and this article shall be interpreted and construed to the maximum extent possible to apply in the relevant jurisdiction with whatever modification or deletion may be necessary so as best to give effect to our intention.

### **Differences Between the Law of Different Jurisdictions**

The Companies Act of the Cayman Islands is derived, to a large extent, from the older Companies Acts of England but does not follow recent English statutory enactments and accordingly there are significant differences between the Companies Act of the Cayman Islands and the current Companies Act of England. In addition, the Companies Act of the Cayman Islands differs from laws applicable to U.S. corporations and their shareholders. Set forth below is a summary of the significant differences between the provisions of the Companies Act of the Cayman Islands applicable to us and the laws applicable to companies incorporated in the United States and their shareholders.

*Mergers and Similar Arrangements.* The Companies Act permits mergers and consolidations between Cayman Islands companies and between Cayman Islands companies and non-Cayman Islands companies. For these purposes, (a) “merger” means the merging of two or more constituent companies and the vesting of their undertaking, property and liabilities in one of such companies as the surviving company, and (b) a “consolidation” means the combination of two or more constituent companies into a consolidated company and the vesting of the undertaking, property and liabilities of such companies to the consolidated company. In order to effect such a merger or consolidation, the directors of each constituent company must approve a written plan of merger or consolidation, which must then be authorized by (a) a special resolution of the shareholders of each constituent company, and (b) such other authorization, if any, as may be specified in such constituent company’s articles of association. The plan must be filed with the Registrar of Companies of the Cayman Islands together with a declaration as to the solvency of the consolidated or surviving company, a list of the assets and liabilities of each constituent company and an undertaking that a copy of the certificate of merger or consolidation will be given to the members and creditors of each constituent company and that notification of the merger or consolidation will be published in the Cayman Islands Gazette. Court approval is not required for a merger or consolidation which is effected in compliance with these statutory procedures.

A merger between a Cayman parent company and its Cayman subsidiary or subsidiaries does not require authorization by a resolution of shareholders of that Cayman subsidiary if a copy of the plan of merger is given to every member of that Cayman subsidiary to be merged unless that member agrees otherwise. For this purpose a company is a “parent” of a subsidiary if it holds issued shares that together represent at least ninety percent (90%) of the votes at a general meeting of the subsidiary.

The consent of each holder of a fixed or floating security interest over a constituent company is required unless this requirement is waived by a court in the Cayman Islands.

Save in certain limited circumstances, a shareholder of a Cayman constituent company who dissents from the merger or consolidation is entitled to payment of the fair value of his shares (which, if not agreed between the parties, will be determined by the Cayman Islands court) upon dissenting to the merger or consolidation, provide the dissenting shareholder complies strictly with the procedures set out in the Companies Act. The exercise of dissenter rights will preclude the exercise by the dissenting shareholder of any other rights to which he or she might otherwise be entitled by virtue of holding shares, save for the right to seek relief on the grounds that the merger or consolidation is void or unlawful.

Separate from the statutory provisions relating to mergers and consolidations, the Companies Act also contains statutory provisions that facilitate the reconstruction and amalgamation of companies by way of schemes of arrangement, provided that the arrangement is approved by (a) 75% in value of the shareholders or class of shareholders, as the case may be, or (b) a majority in number representing 75% in value of the creditors or each class of creditors, as the case may be, with whom the arrangement is to be made, that are, in each case, present and voting either in person or by proxy at a meeting, or meetings, convened for that purpose. The convening of the meetings and subsequently the arrangement must be sanctioned by the Grand Court of the Cayman Islands. While a dissenting shareholder has the right to express to the court the view that the transaction ought not to be approved, the court can be expected to approve the arrangement if it determines that:

- the statutory provisions as to the required majority vote have been met;
- the shareholders have been fairly represented at the meeting in question and the statutory majority are acting bona fide without coercion of the minority to promote interests adverse to those of the class;
- the arrangement is such that may be reasonably approved by an intelligent and honest man of that class acting in respect of his interest; and
- the arrangement is not one that would more properly be sanctioned under some other provision of the Companies Act.

The Companies Act also contains a statutory power of compulsory acquisition which may facilitate the “squeeze out” of dissentient minority shareholder upon a tender offer. When a tender offer is made and accepted by holders of 90% of the shares affected within four months, the offeror may, within a two-month period commencing on the expiration of such four-month period, require the holders of the remaining shares to transfer such shares to the offeror on the terms of the offer. An objection can be made to the Grand Court of the Cayman Islands but this is unlikely to succeed in the case of an offer which has been so approved unless there is evidence of fraud, bad faith or collusion.

If an arrangement and reconstruction by way of scheme of arrangement is thus approved and sanctioned, or if a tender offer is made and accepted in accordance with the foregoing statutory procedures, a dissenting shareholder would have no rights comparable to appraisal rights, save that objectors to a takeover offer may apply to the Grand Court of the Cayman Islands for various orders that the Grand Court of the Cayman Islands has a broad discretion to make, which would otherwise ordinarily be available to dissenting shareholders of Delaware corporations, providing rights to receive payment in cash for the judicially determined value of the shares.

*Shareholders' Suits.* In principle, we will normally be the proper plaintiff to sue for a wrong done to us as a company and as a general rule, a derivative action may not be brought by a minority shareholder. However, based on English authorities, which would in all likelihood be of persuasive authority in the Cayman Islands, there are exceptions to the foregoing principle which permit a minority shareholder to commence a class action against, or derivative actions in the name of, a company, including when:

- a company acts or proposes to act illegally or ultra vires;
- the act complained of, although not ultra vires, could only be effected duly if authorized by more than a simple majority vote that has not been obtained; and
- those who control the company are perpetrating a “fraud on the minority.”

*Indemnification of Directors and Executive Officers and Limitation of Liability.* Cayman Islands law does not limit the extent to which a company’s memorandum and articles of association may provide for indemnification of officers and directors, except to the extent any such provision may be held by the Cayman Islands courts to be contrary to public policy, such as to provide indemnification against civil fraud or the consequences of committing a crime. Our Memorandum and Articles of Association provide that our Company shall indemnify our officers and directors from and against all actions, costs, charges, losses, damages and expenses incurred in their capacities as such unless such losses or damages arise from dishonesty or fraud of such directors or officers. This standard of conduct is generally the same as permitted under the Delaware General Corporation Law for a Delaware corporation.

In addition, we have entered into indemnification agreements with our directors and executive officers that provide such persons with additional indemnification beyond that provided in our Memorandum and Articles of Association.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or persons controlling us under the foregoing provisions, we have been informed that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

*Anti-Takeover Provisions in the Memorandum and Articles of Association.* Some provisions of our current Memorandum and Articles of Association may discourage, delay or prevent a change in control of our company or management that shareholders may consider favorable, including provisions that authorize our board of directors to issue preferred shares in one or more series and to designate the price, rights, preferences, privileges and restrictions of such preferred shares without any further vote or action by our shareholders.

However, under Cayman Islands law, our directors may only exercise the rights and powers granted to them under our Memorandum and Articles of Association, as amended and restated from time to time, for a proper purpose and for what they believe in good faith to be in the best interests of our company.

*Directors’ Fiduciary Duties.* Under Delaware corporate law, a director of a Delaware corporation has a fiduciary duty to the corporation and its shareholders. This duty has two components: the duty of care and the duty of loyalty. The duty of care requires that a director act in good faith, with the care that an ordinarily prudent person would exercise under similar circumstances. Under this duty, a director must inform himself of and disclose to shareholders, all material information reasonably available regarding a significant transaction. The duty of loyalty requires that a director acts in a manner he reasonably believes to be in the best interests of the corporation. He must not use his corporate position for personal gain or advantage. This duty prohibits self-dealing by a director and mandates that the best interest of the corporation and its shareholders take precedence over any interest possessed by a director, officer or controlling shareholder and not shared by the shareholders generally. In general, actions of a director are presumed to have been made on an informed basis, in good faith and in the honest belief that the action taken was in the best interests of the corporation. However, this presumption may be rebutted by evidence of a breach of one of the fiduciary duties. Should such evidence be presented concerning a transaction by a director, the director must prove the procedural fairness of the transaction and that the transaction was of fair value to the corporation.

As a matter of Cayman Islands law, a director of a Cayman Islands company is in the position of a fiduciary with respect to the company and therefore it is considered that he owes the following duties to the company—a duty to act bona fide in the best interests of the company, a duty not to make a profit based on his position as director (unless the company permits him to do so) and a duty not to put himself in a position where the interests of the company conflict with his personal interest or his duty to a third party. A director of a Cayman Islands company owes to the company a duty to act with skill and care. It was previously considered that a director need not exhibit in the performance of his duties a greater degree of skill than may reasonably be expected from a person of his knowledge and experience. However, English and Commonwealth courts have moved towards an objective standard with regard to the required skill and care and these authorities are likely to be followed in the Cayman Islands.

*Shareholder Action by Written Consent.* Under the Delaware General Corporation Law, a corporation may eliminate the right of shareholders to act by written consent by amendment to its certificate of incorporation. Our Memorandum and Articles of Association do not allow our shareholders to approve matters to be determined at shareholders' meetings by way of written resolutions without a meeting.

*Shareholder Proposals.* Under the Delaware General Corporation Law, a shareholder has the right to put any proposal before the annual meeting of shareholders, provided it complies with the notice provisions in the governing documents. A special meeting may be called by the board of directors or any other person authorized to do so in the governing documents, but shareholders may be precluded from calling special meetings.

The Companies Act provides shareholders with only limited rights to requisition a general meeting, and does not provide shareholders with any right to put any proposal before a general meeting. These rights may be provided in a company's articles of association. However, our memorandum and articles of association do not allow our shareholders to requisition any general meeting of our shareholders and do not provide our shareholders with any other right to put proposals before any annual general meetings or extraordinary general meetings. As a Cayman Islands exempted company, we are not obliged by law to call shareholders' annual general meetings. Our third amended and restated memorandum and articles of association provide that we may (but are not obliged to) in each year hold a general meeting as our annual general meeting. In addition, extraordinary general meetings of our shareholders may be convened only by a majority of our board of directors or the chairman of our board of directors. Cumulative Voting. Under the Delaware General Corporation Law, cumulative voting for elections of directors is not permitted unless the corporation's certificate of incorporation specifically provides for it. Cumulative voting potentially facilitates the representation of minority shareholders on a board of directors since it permits the minority shareholder to cast all the votes to which the shareholder is entitled on a single director, which increases the shareholder's voting power with respect to electing such director. While there is nothing under the laws of the Cayman Islands which specifically prohibits or restricts the creation of cumulative voting rights for the election of directors of our company, it is not a concept that is accepted as a common practice in the Cayman Islands, and our company has made no provisions in our Memorandum and Articles of Association to allow cumulative voting for such elections. As a result, our shareholders are not afforded any less protections or rights on this issue than shareholders of a Delaware corporation.

*Removal of Directors.* Under the Delaware General Corporation Law, a director of a corporation with a classified board may be removed only for cause with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. Under our Memorandum and Articles of Association, a director may be removed by a special resolution of our shareholders.

*Transactions with Interested Shareholders.* The Delaware General Corporation Law contains a business combination statute applicable to Delaware corporations whereby, unless the corporation has specifically elected not to be governed by such statute by amendment to its certificate of incorporation, it is prohibited from engaging in certain business combinations with an "interested shareholder" for three years following the date that such person becomes an interested shareholder. An interested shareholder generally is a person or a group who or which owns or owned 15% or more of the target's outstanding voting share within the past three years. This has the effect of limiting the ability of a potential acquirer to make a two-tiered bid for the target in which all shareholders would not be treated equally. The statute does not apply if, among other things, prior to the date on which such shareholder becomes an interested shareholder, the board of directors approves either the business combination or the transaction which resulted in the person becoming an interested shareholder. This encourages any potential acquirer of a Delaware corporation to negotiate the terms of any acquisition transaction with the target's board of directors.

Cayman Islands law has no comparable statute. As a result, we cannot avail ourselves of the types of protections afforded by the Delaware business combination statute. However, although Cayman Islands law does not regulate transactions between a company and its significant shareholders, it does provide that such transactions must be entered into bona fide in the best interests of the company and not with the effect of constituting a fraud on the minority shareholders.

*Restructuring.* A company may present a petition to the Grand Court of the Cayman Islands for the appointment of a restructuring officer on the grounds that the company: (a) is or is likely to become unable to pay its debts; and (b) intends to present a compromise or arrangement to its creditors (or classes thereof) either pursuant to the Companies Act, the law of a foreign country or by way of a consensual restructuring.

The Grand Court may, among other things, make an order appointing a restructuring officer upon hearing of such petition, with such powers and to carry out such functions as the court may order. At any time (i) after the presentation of a petition for the appointment of a restructuring officer but before an order for the appointment of a restructuring officer has been made, and (ii) when an order for the appointment of a restructuring officer is made, until such order has been discharged, no suit, action or other proceedings (other than criminal proceedings) shall be proceeded with or commenced against the company, no resolution to wind up the company shall be passed, and no winding up petition may be presented against the company, except with the leave of the court. However, notwithstanding the presentation of a petition for the appointment of a restructuring officer or the appointment of a restructuring officer, a creditor who has security over the whole or part of the assets of the company is entitled to enforce the security without the leave of the court and without reference to the restructuring officer appointed.

*Dissolution; Winding up.* Under the Delaware General Corporation Law, unless the board of directors approves the proposal to dissolve, dissolution must be approved by shareholders holding 100% of the total voting power of the corporation. Only if the dissolution is initiated by the board of directors may it be approved by a simple majority of the corporation's outstanding shares. Delaware law allows a Delaware corporation to include in its certificate of incorporation a supermajority voting requirement in connection with dissolutions initiated by the board.

Under Cayman Islands law, a company may be wound up by either an order of the courts of the Cayman Islands or by a special resolution of its members or, if the company is unable to pay its debts as they fall due, by an ordinary resolution of its members. The court has authority to order winding up in a number of specified circumstances including where it is, in the opinion of the court, just and equitable to do so.

*Variation of Rights of Shares.* Under the Delaware General Corporation Law, a corporation may vary the rights of a class of shares with the approval of a majority of the outstanding shares of such class, unless the certificate of incorporation provides otherwise. Under our Memorandum and Articles of Association, all or any of the special rights for the time being attached to the shares or any class of shares may, unless otherwise provided by the terms of issue of the shares of that class, from time to time be varied, modified or abrogated by a special resolution passed at a separate general meeting of the holders of the shares of that class. The special rights conferred upon the holders of any shares or class of shares shall not, unless otherwise expressly provided in the rights attaching to or the terms of issue of such shares, be deemed to be varied, modified or abrogated by the creation or issue of further shares ranking *pari passu* with such existing class of shares.

*Amendment of Governing Documents.* Under the Delaware General Corporation Law, a corporation's governing documents may be amended with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. As permitted by Cayman Islands law and our Memorandum and Articles of Association, our Memorandum and Articles of Association may only be amended with a special resolution of our shareholders.

*Rights of Non-resident or Foreign Shareholders.* There are no limitations imposed by our Memorandum and Articles of Association on the rights of nonresident or foreign shareholders to hold or exercise voting rights on our shares. In addition, there are no provisions in our Memorandum and Articles of Association which require our company to disclose shareholder ownership above any particular ownership threshold.

*Exempted Company.* The Companies Act in the Cayman Islands distinguishes between ordinary resident companies and exempted companies. Any company that is registered in the Cayman Islands but conducts business mainly outside of the Cayman Islands may apply to be registered as an exempted company. The requirements for an exempted company are essentially the same as for an ordinary company except for the exemptions and privileges listed below:

- an exempted company does not have to file an annual return of its shareholders with the Registrar of Companies;

- an exempted company’s register of members is not required to be open to inspection;
- an exempted company does not have to hold an annual general meeting;
- an exempted company may issue no par value shares;
- an exempted company may obtain an undertaking against the imposition of taxation on profits, capital gains or inheritance (such undertakings are usually given for 20 years in the first instance);
- an exempted company may register by way of continuation in another jurisdiction and be deregistered in the Cayman Islands;
- an exempted company may register as a limited duration company; and
- an exempted company may register as a segregated portfolio company.

“Limited liability” means that the liability of each shareholder is limited to the amount unpaid by the shareholder on that shareholder’s shares of the company (except in exceptional circumstances, such as involving fraud, the establishment of an agency relationship or an illegal or improper purpose or other circumstances in which a court may be prepared to pierce or lift the corporate veil).

#### **Inspection of Books and Records**

Holders of our common shares will have no general right under Cayman Islands law to inspect or obtain copies of our list of shareholders or our corporate records (other than our memorandum and articles of association, special resolutions passed by our shareholders, and our register of mortgages and charges). However, we will provide our shareholders with annual audited financial statements.

#### **C. Material Contracts**

We have not entered into any material contracts other than in the ordinary course of business and other than those described elsewhere in “Item 4. Information on the Company—B. Business Overview,” “Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions,” or elsewhere in this annual report.

#### **D. Exchange Controls**

See “Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulations—Regulation of Foreign Currency Exchange and Dividend Distribution.”

#### **E. Taxation**

##### **Cayman Islands Taxation**

See “Item 5. Operating and Financial Review and Prospects—A. Operating Results—Discussion of Selected Statements of Operations Items—Taxation—Cayman Islands.”

## **Singapore Taxation**

The following discussion is a summary of Singapore income tax, goods and services tax and stamp duty considerations relevant to the acquisition, ownership and disposition of ADSs or our common shares. The statements made herein regarding taxation are general in nature and based upon certain aspects of the current tax laws of Singapore and administrative guidelines issued by the relevant authorities in force as of the date hereof and are subject to any changes in such laws or administrative guidelines or the interpretation of such laws or guidelines occurring after such date, which changes could be made on a retrospective basis. The statements made herein do not purport to be a comprehensive or exhaustive description of all of the tax considerations that may be relevant to a decision to acquire, own or dispose of our ADSs or our common shares and do not purport to deal with the tax consequences applicable to all categories of investors, some of which (such as dealers in securities) may be subject to special rules. Prospective shareholders are advised to consult their own tax advisers as to the Singapore or other tax consequences of the acquisition, ownership of or disposal of our ADSs and our common shares, taking into account their own particular circumstances. It is emphasized that neither we nor any other persons involved in this annual report accept responsibility for any tax effects or liabilities resulting from the acquisition, holding or disposal of our ADSs or our common shares.

### **Income Tax**

Under the Singapore Income Tax Act (Chapter 134 of Singapore), a company established outside Singapore but whose governing body, being the board of directors, usually exercises de facto control and management of its business in Singapore could be considered tax residents in Singapore. However, such control and management of the business should not be deemed to be in Singapore if physical board meetings are mainly conducted outside Singapore. Where board resolutions are passed in the form of written consent signed by the directors each acting in their own jurisdictions, or where the board meetings are held by teleconference or videoconference, it is possible that the place of de facto control and management will be considered to be where the majority of the board are located when they sign such consent or attend such conferences.

We believe that JOYY Inc. is not a Singapore tax resident for Singapore income tax purposes. However, the tax resident status of JOYY Inc. is subject to determination by the IRAS and uncertainties remain with respect to our tax residence status. It is not certain if JOYY Inc. will be classified as a Singapore tax resident. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate— It is not certain if we will be classified as a Singapore tax resident” for a discussion of the Singapore tax consequences to non-resident investors if JOYY Inc. is deemed to be a Singapore tax resident. The statements below are based on the assumption that JOYY Inc. is not a tax resident in Singapore for Singapore income tax purposes.

#### *Dividends With Respect to Our ADSs or Our Common Shares*

Where JOYY Inc. is not considered a tax resident in Singapore for Singapore income tax purposes, the dividend payments made by JOYY Inc. would be considered sourced outside Singapore (unless our ADSs or our common shares are held as part of a trade or business carried out in Singapore, in which case the holders of our ADSs or our common shares may be taxed on the dividends distributed to them). Foreign-sourced dividends received or deemed to be received in Singapore by non-resident individuals are exempt from Singapore income tax. This exemption also applies to Singapore tax resident individuals who have received or, are deemed to have received his foreign-sourced income in Singapore on or after January 1, 2004 (except where such income is received through a partnership in Singapore).

Foreign-sourced dividends received or deemed to be received in Singapore by corporate investors who do not have a business presence in Singapore, are not tax resident in Singapore, and who do not have a permanent establishment or tax presence in Singapore, will generally not be subject to income tax in Singapore. Foreign-sourced dividends received or deemed to be received in Singapore by corporate investors who are tax residents in Singapore will generally be subject to Singapore income tax. Since JOYY Inc. is a company incorporated in the Cayman Islands, and the prevailing rate of tax in the Cayman Islands, being a tax of a similar character to the Singapore income tax, is 0%, dividends received in Singapore by resident corporate investors would be subject to Singapore income tax at the prevailing rate of 17%.

Dividends received in respect of our ADSs or our common shares whether by a Singapore tax resident or a non-Singapore tax resident as a shareholder are not subject to any withholding tax in Singapore.

### *Gains With Respect to Disposition of Our ADSs or Our Common Shares*

There is no capital gain tax in Singapore and there is no specific law or regulation in Singapore dealing with the characterization of a gain as income or capital in nature. Gains arising from disposition of our ADSs or our common shares may be construed as income and subject to Singapore income tax if they arise from or are otherwise connected with a trade or business activity in Singapore. Factors that determine the existence of a trade include, inter alia, the length of ownership, the frequency of similar transactions, and the motive of acquisition.

Such gains may also be considered income in nature, even if they do not arise from an activity in the ordinary course of trade or business or an ordinary incident of some other business activity, if our ADSs or our common shares were purchased with the intention or purpose of making a profit by sale rather than holding for long-term investment purposes in Singapore. Conversely, gains from disposition of our ADSs or our common shares in Singapore, if considered as capital gains rather than income by the Inland Revenue Authority of Singapore, are not taxable in Singapore.

For corporate shareholders who are subject to Singapore income tax treatment under Section 34A or 34AA of the Income Tax Act (Chapter 134 of Singapore) in relation to the adoption of Singapore Financial Reporting Standard 39—Financial Instruments: Recognition and Measurement (FRS 39) or Singapore Financial Reporting Standard 109—Financial Instruments (FRS 109), for accounting purposes, they may be required to recognize gains or losses (not being gains or losses in the nature of capital) even though no sale or disposal of our ADSs or our common shares has been made. Our corporate shareholders who may be subject to such provisions should consult their own accounting and tax advisers regarding the Singapore income tax consequences of their acquisition, ownership and disposition of our ADSs and our common shares arising from the adoption of FRS 39 or FRS 109.

Notwithstanding the above, foreign investors may claim that the gains from disposition of their ADSs or common shares are not sourced or received in Singapore (so that such gains will not be subject to Singapore income tax) if (i) the foreign investor is not a tax resident in Singapore, (ii) the foreign investor does not maintain a permanent establishment in Singapore, to which the disposition gains may be effectively connected, and (iii) the entire process (including the negotiation, deliberation, execution of the acquisition and sale, etc.) leading up to the actual acquisition and sale of our ADSs or our common shares is performed outside of Singapore.

### ***Goods and Services Tax***

The issuance of our ADSs or our common shares is not subject to Singapore goods and services tax (GST).

The sale of our ADS or our common shares by a GST-registered investor in Singapore to another person belonging in Singapore is an exempt supply (i.e., not subject to GST). Any input GST (for example, GST on brokerage) incurred by the GST-registered investor in connection with the making of this exempt supply is generally not recoverable and will become an additional cost to the investor unless the investor satisfies certain conditions prescribed under the GST legislation or satisfies certain GST concessions.

Where our ADS or our common shares are sold by a GST-registered investor in the course or furtherance of a business carried on by such an investor to a person belonging outside Singapore (and who is outside Singapore at the time of supply), the sale is a taxable supply subject to GST at a zero rate (i.e., 0%). Any input GST (for example, GST on brokerage) incurred by the GST-registered investor in making this zero-rated supply for the purpose of his business will, subject to the conditions prescribed under the GST legislation, be recoverable from the Comptroller of GST.

Investors should seek their own tax advice on the recoverability of GST incurred on expenses in connection with the purchase and sale of our ADSs or our common shares.

Services such as brokerage and handling services rendered by a GST-registered person to an investor belonging in Singapore in connection with the investor's purchase or sale of our ADSs or our common shares will be subject to GST at the prevailing rate (currently at 8%). Similar services rendered contractually to an investor belonging outside Singapore should, subject to certain conditions prescribed under the GST legislation, qualify for GST at zero rate (i.e., 0%).

### **Stamp Duty**

No stamp duty is payable on the subscription and issuance of our ADSs or our common shares. As JOYY Inc. is incorporated in the Cayman Islands and our ADSs and our common shares are not registered in any register kept in Singapore, no stamp duty is payable in Singapore on any instrument of transfer upon a sale or gift of our ADSs or our common shares. This position would remain as long as JOYY Inc. is not considered a residential property-holding entity.

### **United States Federal Income Tax Considerations**

The following is a summary of certain United States federal income tax considerations relating to the ownership and disposition of our ADSs or Class A common shares by a U.S. holder (as defined below) that holds our ADSs or Class A common shares as “capital assets” (generally, property held for investment) under the United States Internal Revenue Code of 1986, as amended (the “Code”). This summary is based upon existing United States federal income tax law, which is subject to differing interpretations or change, possibly with retroactive effect. This summary does not discuss all aspects of United States federal income taxation that may be important to particular holders in light of their particular circumstances, including holders subject to special tax rules (for example, banks and other financial institutions, insurance companies, broker-dealers, pension plans, cooperatives, real estate investment trusts, regulated investment companies, traders in securities that have elected the mark-to-market method of accounting for their securities, certain former U.S. citizens or long-term residents, partnerships and their partners, and tax-exempt organizations (including private foundations)), holders who are not U.S. holders, holders who own (directly, indirectly, or constructively) 10% or more of our stock (by vote or value), holders that hold their ADSs or Class A common shares as part of a straddle, hedge, conversion, constructive sale, or other integrated transaction for United States federal income tax purposes, persons who acquired ADSs or Class A common shares pursuant to the exercise of any employee share option or otherwise as compensation, or holders that have a functional currency other than the United States dollar, all of whom may be subject to tax rules that differ significantly from those summarized below. In addition, except to the extent described below, this summary does not discuss any state, local or non-United States tax considerations, Medicare tax, the alternative minimum tax or any non-income tax (such as the United States federal estate or gift tax) considerations. Each U.S. holder is urged to consult its tax advisor regarding the United States federal, state, local, and non-United States income and other tax considerations relating to the ownership and disposition of our ADSs or Class A common shares.

### **General**

For purposes of this summary, a “U.S. holder” is a beneficial owner of our ADSs or Class A common shares that is, for United States federal income tax purposes, (i) an individual who is a citizen or resident of the United States, (ii) a corporation (or other entity treated as a corporation for United States federal income tax purposes) created in, or organized under the law of, the United States or any state thereof or the District of Columbia, (iii) an estate the income of which is includible in gross income for United States federal income tax purposes regardless of its source, or (iv) a trust (A) the administration of which is subject to the primary supervision of a United States court and which has one or more United States persons who have the authority to control all substantial decisions of the trust or (B) that has otherwise elected to be treated as a United States person.

If a partnership (or other entity treated as a partnership for United States federal income tax purposes) is a beneficial owner of our ADSs or Class A common shares, the tax treatment of a partner in the partnership will generally depend upon the status of the partner and the activities of the partnership. Partnerships holding our ADSs or Class A common shares and partners in such partnerships are urged to consult their tax advisors regarding the ownership and disposition of our ADSs or Class A common shares.

It is generally expected that a holder of ADSs should be treated, for United States federal income tax purposes, as the beneficial owner of the Class A common shares represented by the ADSs. The remainder of this discussion assumes that a holder of ADSs will be treated in this manner. Predicated upon such treatment, deposits or withdrawals of common shares for ADSs will not be subject to United States federal income tax.

### ***Passive Foreign Investment Company Considerations***

A non-United States corporation, such as our company, will be classified as a “passive foreign investment company,” or “PFIC,” for United States federal income tax purposes, for any taxable year, if either (i) 75% or more of its gross income for such year consists of certain types of “passive” income or (ii) 50% or more of its assets (generally determined on the basis of a quarterly average) during such year produce or are held for the production of passive income. For this purpose, cash and assets readily convertible into cash are categorized as passive assets and the company’s unbooked intangibles are taken into account for determining the value of its assets. We will be treated as owning our proportionate share of the assets and earning our proportionate share of the income of any other corporation in which we own, directly or indirectly, 25% or more (by value) of the stock.

Although the law in this regard is unclear, we treat the variable interest entities as being owned by us for United States federal income tax purposes, not only because we exercise effective control over the operation of such entities but also because we are entitled to substantially all of their economic benefits, and, as a result, we consolidate their operating results in our consolidated financial statements.

Based on the market price of our ADSs and the nature and composition of our assets (in particular, the retention of substantial amounts of cash, deposits and investments), we believe that we were a PFIC for United States federal income tax purposes for the taxable year ended December 31, 2022, and we will likely be a PFIC for our current taxable year unless the market price of our ADSs increases and/or we invest a substantial amount of the cash and other passive assets we hold in assets that produce or are held for the production of active income.

If we are a PFIC for any year during which a U.S. holder holds our ADSs or Class A common shares, we generally would continue to be treated as a PFIC for all succeeding years during which such U.S. holder holds our ADSs or Class A common shares even if we cease to meet the threshold requirements for PFIC status, unless a U.S. holder makes a taxable “deemed sale” election that may allow the U.S. holder to eliminate the continuing PFIC status under certain circumstances.

The United States federal income tax rules that apply if we are classified as a PFIC for the current taxable year or any subsequent taxable year are generally discussed below under “Passive Foreign Investment Company Rules.”

### ***Dividends***

Subject to the discussion below under “Passive Foreign Investment Company Rules,” any cash distributions (including the amount of any taxes withheld) paid on our ADSs or Class A common shares out of our current or accumulated earnings and profits, as determined under United States federal income tax principles, will generally be includible in the gross income of a U.S. holder as dividend income on the day actually or constructively received by the U.S. holder, in the case of common shares, or by the Depository, in the case of ADSs. Because we do not intend to determine our earnings and profits on the basis of United States federal income tax principles, any distribution paid will generally be reported as a “dividend” for United States federal income tax purposes. A non-corporate recipient of dividend income will generally be subject to tax on dividend income from a “qualified foreign corporation” at a reduced United States federal tax rate rather than the marginal tax rates generally applicable to ordinary income provided that certain holding period requirements are met.

A non-United States corporation (other than a corporation that is classified as a PFIC for the taxable year in which the dividend is paid or the preceding taxable year) will generally be considered to be a qualified foreign corporation with respect to any dividend it pays on stock (or ADSs in respect of such stock) which is readily tradable on an established securities market in the United States or, in the event that the company is deemed to be a PRC resident under the PRC Enterprise Income Tax Law, the company is eligible for the benefits of the United States-PRC treaty (the “Treaty”). Although no assurances may be given, our ADSs are expected to be readily tradable on the Nasdaq Global Select Market, which is an established securities market in the United States. Since we do not expect that our Class A common shares will be listed on established securities markets, it is unclear whether dividends that we pay on our Class A common shares that are not backed by ADSs currently meet the conditions required for these reduced tax rates. There can be no assurance that our ADSs will be considered readily tradable on an established securities market in the current taxable year or future taxable years. Furthermore, as mentioned above, we believe that we were a PFIC for the taxable year ended December 31, 2022, and we will likely be classified as a PFIC for our current taxable year. U.S. holders are urged to consult their tax advisors regarding the availability of the reduced tax rate on dividends with respect to our ADSs or Class A common shares in their particular circumstances.

Dividends received on the ADSs or Class A common shares are not expected to be eligible for the dividends received deduction allowed to corporations. Each U.S. holder is advised to consult its tax advisor regarding the rate of tax that will apply to such holder with respect to dividend distributions, if any, received from us.

Dividends generally will be treated as income from foreign sources for United States foreign tax credit purposes and generally will constitute passive category income. A U.S. holder may be eligible, subject to a number of complex limitations, to claim a foreign tax credit in respect of any foreign withholding taxes imposed on dividends received on ADSs or Class A common shares. A U.S. holder who does not elect to claim a foreign tax credit for foreign tax withheld, may instead claim a deduction, for United States federal income tax purposes, in respect of such withholdings, but only for a year in which such U.S. holder elects to do so for all creditable foreign income taxes. The rules governing the foreign tax credit are complex. Each U.S. holder is advised to consult its tax advisor regarding the availability of the foreign tax credit under their particular circumstances.

### ***Sale or Other Disposition of ADSs or Common Shares***

Subject to the discussion below under “Passive Foreign Investment Company Rules,” a U.S. holder generally will recognize capital gain or loss upon the sale or other disposition of ADSs or Class A common shares in an amount equal to the difference between the amount realized upon the disposition and the U.S. holder’s adjusted tax basis in such ADSs or Class A common shares. Any capital gain or loss will be long-term if the ADSs or Class A common shares have been held for more than one year and will generally be United States source gain or loss for United States foreign tax credit purposes, which will generally limit the availability of foreign tax credits. Long-term capital gains of individuals and other non-corporate U.S. holders generally are eligible for a reduced rate of taxation. The deductibility of a capital loss may be subject to limitations.

As described in “Item 10. Additional Information—E. Taxation—Mainland China Taxation,” if we are deemed to be a PRC resident enterprise under the PRC Enterprise Income Tax Law, gains from the disposition of the ADSs or Class A common shares may be subject to PRC income tax and will generally be United States source, which may limit the ability to receive a foreign tax credit. If a U.S. Holder is eligible for the benefits of the Treaty, such holder may be able to elect to treat such gain as PRC source income under the Treaty. Pursuant to recently issued United States Treasury regulations, however, if a U.S. Holder is not eligible for the benefits of the Treaty or does not elect to apply the Treaty, then such holder may not be able to claim a foreign tax credit arising from any PRC tax imposed on the disposition of the ADSs or Class A common shares. The rules regarding foreign tax credits and deduction of foreign taxes are complex. U.S. Holders should consult their tax advisors regarding the availability of a foreign tax credit or deduction in light of their particular circumstances, including their eligibility for benefits under the Treaty, and the potential impact of the recently issued United States Treasury regulations.

As mentioned above, we believe that we were a PFIC for the taxable year ended December 31, 2022, and we will likely be classified as a PFIC for our current taxable year. U.S. holders are urged to consult their tax advisors regarding the tax considerations of the sale or other disposition of our ADSs or Class A common shares under their particular circumstances.

### ***Passive Foreign Investment Company Rules***

As mentioned above, we believe that we were a PFIC for the taxable year ended December 31, 2022, and we will likely be classified as a PFIC for our current taxable year. If we are classified as a PFIC for any taxable year during which a U.S. holder holds our ADSs or Class A common shares, and unless the U.S. holder makes a mark-to-market election (as described below), the U.S. holder will generally be subject to special tax rules that have a penalizing effect, regardless of whether we remain a PFIC, on (i) any excess distribution that we make to the U.S. holder (which generally means any distribution paid during a taxable year to a U.S. holder that is greater than 125% of the average annual distributions paid in the three preceding taxable years or, if shorter, the U.S. holder’s holding period for the ADSs or Class A common shares), and (ii) any gain realized on the sale or other disposition, including, under certain circumstances, a pledge, of ADSs or Class A common shares. Under the PFIC rules:

- such excess distribution and/or gain will be allocated ratably over the U.S. holder’s holding period for the ADSs or Class A common shares;
- such amount allocated to the current taxable year and any taxable years in the U.S. holder’s holding period prior to the first taxable year in which we are classified as a PFIC, or pre-PFIC year, will be taxable as ordinary income;
- such amount allocated to each prior taxable year, other than a pre-PFIC year, will be subject to tax at the highest tax rate in effect applicable to the U.S. holder for that year; and

- an interest charge generally applicable to underpayments of tax will be imposed on the tax attributable to each prior taxable year, other than a pre-PFIC year.

If we are a PFIC for any taxable year during which a U.S. holder holds our ADSs or Class A common shares and any of our non-United States subsidiaries is also a PFIC, such U.S. holder would be treated as owning a proportionate amount (by value) of the shares of the lower-tier PFIC and would be subject to the rules described above on certain distributions by a lower-tier PFIC and a disposition of shares of a lower-tier PFIC even though such U.S. holder would not receive the proceeds of those distributions or dispositions. Each U.S. holder is advised to consult its tax advisor regarding the application of the PFIC rules to any of our subsidiaries.

As an alternative to the foregoing rules, a U.S. holder of “marketable stock” (as defined below) in a PFIC may make a mark-to-market election for such stock to elect out of the tax treatment discussed above. The mark-to-market election is available only for “marketable stock,” which is stock that is traded in other than de minimis quantities on at least 15 days during each calendar quarter (“regularly traded”) on a qualified exchange or other market, as defined in applicable United States Treasury regulations. Our ADSs are listed on the Nasdaq Global Select Market, which is a qualified exchange or market for these purposes. We anticipate that our ADSs should qualify as being regularly traded, but no assurances may be given in this regard. Because a mark-to-market election technically cannot be made for equity interests in any lower-tier PFICs that we own, a U.S. holder may continue to be subject to the PFIC rules with respect to its indirect interest in any investments held by us that are treated as an equity interest in a PFIC for United States federal income tax purposes. If a mark-to-market election is made, the U.S. holder will generally (i) include as ordinary income for each taxable year that we are a PFIC the excess, if any, of the fair market value of ADSs held at the end of the taxable year over the adjusted tax basis of such ADSs and (ii) deduct as an ordinary loss the excess, if any, of the adjusted tax basis of the ADSs over the fair market value of such ADSs held at the end of the taxable year, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. The U.S. holder’s adjusted tax basis in the ADSs would be adjusted to reflect any income or loss resulting from the mark-to-market election.

If a U.S. holder makes a mark-to-market election in respect of a corporation classified as a PFIC and such corporation ceases to be classified as a PFIC, the U.S. holder will not be required to take into account the mark-to-market gain or loss described above during any period that such corporation is not classified as a PFIC.

We do not intend to provide information necessary for U.S. holders to make qualified electing fund elections, which, if available, would result in tax treatment different from (and generally less adverse than) the general tax treatment for PFICs described above.

If a U.S. holder owns our ADSs or Class A common shares during any taxable year that we are a PFIC, such holder is required to file an annual report containing such information as the United States Treasury Department may require and may be required to file an annual IRS Form 8621. Each U.S. holder is advised to consult its tax advisors regarding the potential tax consequences to such holder if we are or become classified as a PFIC, including the possibility of making a mark-to-market election.

## **Mainland China Taxation**

Under the existing tax laws in mainland China, we are qualified as a non-resident enterprise. We are a holding company incorporated in the Cayman Islands. Our holding company indirectly holds 100% of the equity interests in our subsidiaries in mainland China. Our business operations within mainland China are principally conducted through our subsidiaries in mainland China and the variable interest entities. The PRC Enterprise Income Tax Law, which was most recently amended on December 29, 2018, and its implementation rules, which was most recently amended on April 23, 2019, provide that income of foreign enterprises sourced from mainland China, such as dividends paid by a subsidiary in mainland China to its overseas parent that is not a PRC resident enterprise and has no establishment in mainland China, will normally be subject to PRC withholding tax at a rate of 10% (a further reduced WHT rate may be available according to the applicable double tax treaty or arrangement).

If the tax authorities of mainland China determine that JOYY Inc., our Cayman Islands holding company, is a PRC resident enterprise for enterprise income tax purposes, our world-wide income could be subject to PRC tax at a rate of 25%, which could materially reduce our net income. In addition, we will also be subject to PRC enterprise income tax reporting obligations. Furthermore, although dividends paid by one PRC tax resident to another PRC tax resident should be qualified as “tax-exempt income” under the PRC Enterprise Income Tax Law, we cannot assure you that dividends by our subsidiaries in mainland China to our Cayman holding company will not be subject to a 10% withholding tax, as the foreign exchange control authorities in mainland China, which enforce the withholding tax on dividends, and the tax authorities in mainland China have not yet issued guidance with respect to the processing of outbound remittances to entities that are treated as resident enterprises for PRC enterprise income tax purposes. In addition, ADS holders may be subject to PRC withholding tax on dividends payable by us and gains realized on the sale or other dispositions of ADSs or common shares, if the tax authorities in mainland China determine that our Cayman Islands holding company is a PRC resident enterprise for enterprise income tax purposes. See “Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Under the PRC enterprise income tax law, we may be classified as a PRC “resident enterprise,” which could result in unfavorable tax consequences to us and our shareholders and have a material adverse effect on our results of operations and the value of your investment.”

**F. Dividends and Paying Agents**

Not applicable.

**G. Statement by Experts**

Not applicable.

**H. Documents on Display**

We are subject to the periodic reporting and other informational requirements of the Securities Exchange Act of 1934 or the Exchange Act. Under the Exchange Act, we are required to file reports and other information with the SEC. Specifically, we are required to file annually a Form 20-F within four months after the end of each fiscal year which is December 31. The SEC maintains a website at [www.sec.gov](http://www.sec.gov) that contains reports, proxy and information statements, and other information regarding registrants that make electronic filings with the SEC using its EDGAR system. Copies of reports and other information, when filed, may also be inspected without charge and may be obtained at prescribed rates at the public reference facilities maintained by the SEC at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. The public may obtain information regarding the Washington, D.C. Public Reference Room by calling the SEC at 1-800-SEC-0330. As a foreign private issuer, we are exempt from the rules under the Exchange Act prescribing the furnishing and content of quarterly reports and proxy statements, and officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act.

We will furnish Citibank N.A., the depository of our ADSs, with our annual reports, which will include a review of operations and annual audited consolidated financial statements prepared in conformity with U.S. GAAP, and all notices of shareholders’ meetings and other reports and communications that are made generally available to our shareholders. The depository will make such notices, reports and communications available to holders of ADSs and, upon our request, will mail to all record holders of ADSs the information contained in any notice of a shareholders’ meeting received by the depository from us.

**I. Subsidiary Information**

For a list of our principal subsidiaries, see “Item 4. Information on the Company—C. Organizational Structure.”

**J. Annual Report to Security Holders**

Not applicable.

## ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

### Foreign Exchange Risk

We are exposed to foreign exchange risks arising from various currency exposures. While a majority of our revenues and expenses are denominated in U.S. dollars, some of our expenses and revenues are dominated in various other foreign currencies, such as Renminbi, Euro, Singapore dollars, Japanese yen, Indonesian rupiah, Vietnamese dong, Thai baht, Malaysian ringgit, Turkish lira, among other currencies. We do not rely on any single currency as we earn revenue in different local currencies across our markets and keep a significant cash position in U.S. dollars.

Our expenses may become higher and our revenue and operating metrics may become lower than would be the case if exchange rates were stable or if we were operating and reporting in one currency. For example, if the U.S. dollar weakens relative to currencies in our local markets, our revenue and operating expenses will be higher than if currencies had remained constant. Likewise, if the U.S. dollar strengthens relative to currencies in our local markets, our revenue and operating expenses will be lower than if currencies had remained constant. Movements in foreign currency exchange rates may have a material adverse effect on our results of operations, which may cause our financial and operational metrics reported in the U.S. dollar to be not fully representative of the underlying business performance. We believe that our diversification in geographic coverage benefits our shareholders over the long-term. We had used and may enter into derivative financial instruments including the forward exchange contracts to hedge our exposure to potential foreign currency risks. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in Jurisdictions We Operate—Fluctuations in foreign currency exchange rates may adversely affect our operational and financial results, which we report in U.S. dollars.”

As of December 31, 2022, we had RMB-denominated cash and cash equivalents, restricted cash and cash equivalents, short-term deposits and short-term investments of RMB5,287.0 million. A 10% depreciation of Renminbi against the U.S. dollars based on the foreign exchange rate on December 31, 2022 would result in a decrease of US\$75.9 million in cash and cash equivalents, restricted cash and cash equivalents, short-term deposits and short-term investments. A 10% appreciation of Renminbi against the U.S. dollars based on the foreign exchange rate on December 31, 2022 would result in an increase of US\$75.9 million in cash and cash equivalents, restricted cash and cash equivalents, short-term deposits and short-term investments.

### Interest Rate Risk

Our exposure to interest rate risk primarily relates to the interest income generated by excess cash, which is mostly held in interest-bearing bank deposits. Interest-earning instruments carry a degree of interest rate risk. We have not been exposed to, nor do we anticipate being exposed to, material risks due to changes in market interest rates. However, our future interest income may fall short of expectations due to changes in market interest rates. A hypothetical one percentage point decrease in interest rates would have resulted in a decrease of US\$15.3 million in our interest income for the year ended December 31, 2022.

## ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

### A. Debt Securities

Not applicable.

### B. Warrants and Rights

Not applicable.

### C. Other Securities

Not applicable.

**D. American Depositary Shares**

**Fees and Charges Our ADS holders May Have to Pay**

As an ADS holder, you will be required to pay the following service fees to the depositary bank:

<b>Service</b>	<b>Fees</b>
• Issuance of ADSs (e.g., an issuance upon a deposit of Shares, upon a change in the ADS(s)-to-Share(s) ratio, or for any other reason), excluding issuances as a result of distributions described in paragraph (4) below	Up to US\$5.00 per 100 ADSs (or fraction thereof) issued
• Cancellation of ADSs (e.g., a cancellation of ADSs for Delivery of deposited Shares, upon a change in the ADS(s)-to-Share(s) ratio, or for any other reason)	Up to US\$5.00 per 100 ADSs (or fraction thereof) cancelled
• Distribution of cash dividends or other cash distributions (e.g., upon a sale of rights and other entitlements)	Up to US\$5.00 per 100 ADSs (or fraction thereof) held
• Distribution of ADSs pursuant to (i) stock dividends or other free stock distributions, or (ii) an exercise of rights to purchase additional ADSs	Up to US\$5.00 per 100 ADSs (or fraction thereof) held
• Distribution of securities other than ADSs or rights to purchase additional ADSs (e.g., spin-off shares)	Up to US\$5.00 per 100 ADSs (or fraction thereof) held
• ADS Services	Up to US\$5.00 per 100 ADSs (or fraction thereof) held on the applicable record date(s) established by the Depositary

As an ADS holder, you will also be responsible for the following ADS charges:

- (i) taxes (including applicable interest and penalties) and other governmental charges;
- (ii) the registration fees as may from time to time be in effect for the registration of Class A common shares on the share register and applicable to transfers of Class A common shares to or from the name of the custodian, the depositary bank or any nominees upon the making of deposits and withdrawals, respectively;
- (iii) certain cable, telex and facsimile transmission and delivery expenses;
- (iv) the expenses and charges incurred by the depositary bank in the conversion of foreign currency;
- (v) the fees and expenses incurred by the depositary bank in connection with compliance with exchange control regulations and other regulatory requirements applicable to Class A common shares, ADSs and ADRs; and
- (vi) the fees and expenses incurred by the depositary bank, the custodian, or any nominee in connection with the servicing or delivery of deposited property.

ADS fees and charges for (i) the issuance of ADSs and (ii) the cancellation of ADSs will be payable by the person for whom the ADSs are so issued by the depository bank (in the case of ADS issuances) and by the person for whom ADSs are being cancelled (in the case of ADS cancellations). In the case of ADSs issued by the depository bank into DTC or presented to the depository via DTC, the ADS issuance and cancellation fees and charges will be payable by the DTC participant(s) receiving the ADSs from the depository bank or the DTC participant(s) holding the ADSs being cancelled, as the case may be, on behalf of the beneficial owner(s) and will be charged by the DTC participant(s) to the account(s) of the applicable beneficial owner(s) in accordance with the procedures and practices of the DTC participant(s) as in effect at the time. ADS fees and charges in respect of distributions and the ADS service fee are payable by holders as of the applicable ADS record date established by the depository bank. In the case of distributions of cash, the amount of the applicable ADS fees and charges is deducted from the funds being distributed. In the case of (i) distributions other than cash and (ii) the ADS service fee, the applicable holders as of the ADS record date established by the depository bank will be invoiced for the amount of the ADS fees and charges and such ADS fees may be deducted from distributions made to holders. For ADSs held through DTC, the ADS fees and charges for distributions other than cash and the ADS service fee may be deducted from distributions made through DTC, and may be charged to the DTC participants in accordance with the procedures and practices prescribed by DTC from time to time and the DTC participants in turn charge the amount of such ADS fees and charges to the beneficial owners for whom they hold ADSs.

In the event of refusal to pay the depository bank fees, the depository bank may, under the terms of the deposit agreement, refuse the requested service until payment is received or may set off the amount of the depository bank fees from any distribution to be made to the ADS holder. Certain of the depository fees and charges (such as the ADS service fee) may become payable shortly after the closing of the ADS offering. Note that the fees and charges you may be required to pay may vary over time and may be changed by us and by the depository bank. You will receive prior notice of such changes. The depository bank may reimburse us for certain expenses incurred by us in respect of the ADR program, by making available a portion of the ADS fees charged in respect of the ADR program or otherwise, upon such terms and conditions as we and the depository bank agree from time to time.

#### **Fees and Other Payments Made by the Depository to Us**

Citibank, N.A., as our depository, has agreed to reimburse us for a portion of certain expenses we incur that are related to establishment and maintenance of the ADS program, including investor relations expenses. There are limits on the amount of expenses for which the depository will reimburse us, but the amount of reimbursement available to us is not related to the amount of fees the depository collects from investors. Further, the depository has agreed to reimburse us certain fees payable to the depository by holders of ADSs. For the year ended December 31, 2022, we were entitled to reimbursement of an insignificant amount for our expenses incurred in connection with the establishment and maintenance of our ADS program.

### **PART II**

#### **ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES**

None.

#### **ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS**

See “Item 10. Additional Information” for a description of the rights of securities holders, which remain unchanged.

## **ITEM 15. CONTROLS AND PROCEDURES**

### **Evaluation of Disclosure Controls and Procedures**

As required by Rule 13a-15(b) under the Exchange Act, our management, including our chief executive officer, and our general manager of finance, performed an evaluation of the effectiveness of our disclosure controls and procedures, as that term is defined in Rules 13a-15(e) of the Exchange Act, as of the end of the period covered by this annual report. Based on that evaluation, our management has concluded that our disclosure controls and procedures as of December 31, 2022, were effective in ensuring that the information required to be disclosed by us in the reports that we file and furnish under the Exchange Act was recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and that the information required to be disclosed by us in the reports that we file or submit under the Exchange Act is accumulated and communicated to our management, including our chief executive officer and general manager of finance, to allow timely decisions regarding required disclosure.

### **Management's Annual Report on Internal Control over Financial Reporting**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with Generally Accepted Accounting Principles (GAAP) in the United States of America and includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of our company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with GAAP, and that receipts and expenditures of our company are being made only in accordance with authorizations of our management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of the unauthorized acquisition, use or disposition of our company's assets that could have a material effect on the consolidated financial statements. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risks that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management conducted an evaluation of the effectiveness of our company's internal control over financial reporting as of December 31, 2022 based on the framework in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2022.

### **Attestation Report of the Independent Registered Public Accounting Firm**

PricewaterhouseCoopers LLP, our independent registered public accounting firm, audited the effectiveness of our company's internal control over financial reporting as of December 31, 2022, as stated in its report, which appears on page F-2 of this Form 20-F.

### **Changes in Internal Control Over Financial Reporting**

There has been no change in our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Rule 13a-15 or Rule 15d-15 that occurred during the year ended December 31, 2022 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## **ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT**

Our board of directors has determined that Mr. Peter Andrew Schloss is our audit committee financial expert, who is an independent director under the standards set forth in Nasdaq Stock Market Rule 5605(a)(2) and Rule 10A-3 of the Exchange Act. Mr. Schloss is the chairman of our audit committee.

**ITEM 16B. CODE OF ETHICS**

Our board of directors has adopted a code of business conduct and ethics that applies to our directors, officers, employees and agents, including certain provisions that specifically apply to our chief executive officers, chief technology officer, general manager of finance, vice presidents and any other persons who perform similar functions for us, as amended and restated from time to time. In May 2020, our board of directors approved the amendment and restatement of our code of business conduct and ethics. We have filed our amended and restated code of business conduct and ethics, representing the currently effective one, as an exhibit to our annual report on Form 20-F, and have posted a copy of our amended and restated code of business conduct and ethics on our website at <http://ir.joyy.com/corporate-governance>.

**ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The following table sets forth the aggregate fees in connection with certain professional services rendered by our independent registered public accounting firms and their affiliates, for the years indicated. We did not pay any other fees to our independent registered public accounting firm during the periods other than those indicated below.

	<u>For the Year Ended December 31,</u>	
	<u>2021</u>	<u>2022<sup>(2)</sup></u>
	<u>(US\$ in thousands)</u>	
Audit fees <sup>(1)</sup>	2,772	4,053

- (1) "Audit fees" means the aggregate fees billed for professional services rendered by our independent registered public accounting firm for the annual audit and the quarterly reviews of our consolidated financial statements, audit of internal controls over financial reporting of our company.
- (2) On September 2, 2022, we engaged PricewaterhouseCoopers LLP as our independent registered public accounting firm, replacing PricewaterhouseCoopers Zhong Tian LLP. The fees for 2022 are fees payable to PricewaterhouseCoopers LLP. See also "Item 16F. Change in Registrant's Certifying Accountant."

The policy of our audit committee is to pre-approve all audit and non-audit services provided by our independent registered public accounting firms and its affiliates, including audit services, audit-related services, tax services and other services, other than those for de minimis services which are approved by the audit committee prior to the completion of the audit. Our audit committee has approved all of our audit and non-audit fees for the year ended December 31, 2022.

**ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES**

Not applicable.

**ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS**

Our board of directors approved a share repurchase plan, or the September 2021 Share Repurchase Plan, on September 9, 2021, under which we may repurchase up to US\$200 million of our ADSs or common shares over the next 12 months. The September 2021 Share Repurchase Plan was publicly announced on the same date. The September 2021 Share Repurchase Plan expired already and we repurchased approximately US\$199.9 million of our shares under the September 2021 Share Repurchase Plan.

Our board of directors further approved an additional share repurchase plan, or the November 2021 Share Repurchase Plan, on November 16, 2021, under which we may repurchase up to US\$1 billion of our ADSs or common shares over the next 12 months. The November 2021 Share Repurchase Plan was publicly announced on November 17, 2021. As approved by our board of directors on November 28, 2022, we are authorized to continue to use the unutilized quota under the November 2021 Share Repurchase Plan, which amounted to US\$800 million, for another 12-month period beginning from November 29, 2022, the date on which we announced such arrangement.

In 2022, we purchased an aggregate of approximately 4.2 million ADSs under our share repurchase plans. The table below is a summary of the shares repurchased by us in 2022. All shares were repurchased in the open market pursuant to the September 2021 Share Repurchase Plan, the November 2021 Share Repurchase Plan and its renewal arrangement.

<u>Period</u>	<u>Total Number of ADSs Purchased</u>	<u>Average Price Paid Per ADS</u>	<u>Total Number of ADSs Purchased as Part of the Publicly Announced Plan</u>	<u>Approximate Dollar Value of ADSs that May Yet Be Purchased Under the Plan</u>
January 2022	485,542	44.41	5,362,761	942,771
February 2022	57,960	44.62	5,420,721	940,185
March 2022	1,515,613	36.95	6,936,334	884,181
April 2022	68,001	35.91	7,004,335	881,739
May 2022	220,689	35.77	7,225,024	873,846
June 2022	58,649	29.75	7,283,673	872,101
September 2021	539,628	26.08	3,699,210	857,963
October 2022	1,279,277	24.84	4,978,487	826,191
November 2022	—	—	—	800,000
<b>Total</b>	<b>4,225,359</b>	<b>32.68</b>	<b>—</b>	<b>800,000</b>

#### ITEM 16F. CHANGES IN REGISTRANT'S CERTIFYING ACCOUNTANT

To conform to our globalized business operations, the audit committee of our board of directors and the board of directors of our company approved the engagement of PricewaterhouseCoopers LLP, or PwC Singapore, on September 2, 2022, replacing our former auditor, PricewaterhouseCoopers Zhong Tian LLP, or PwC China, as our independent registered public accounting firm to audit our annual consolidated financial statements and our internal control over financial reporting for the fiscal year ended December 31, 2022. The change of our independent registered public accounting firm had been approved by the audit committee of our board, and the decision was not made due to any disagreements between us and PwC China.

The reports of PwC China on our consolidated financial statements for the fiscal years ended December 31, 2020 and 2021 did not contain an adverse opinion or a disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope or accounting principle.

During the fiscal years ended December 31, 2020 and 2021 and the subsequent interim period through September 2, 2022, there have been no (i) disagreements between us and PwC China on any matter of accounting principles or practices, financial statement disclosure, or audit scope or procedure, which disagreements if not resolved to the satisfaction of PwC China would have caused them to make reference thereto in their reports on the consolidated financial statements for such years, or (ii) reportable events as defined in Item 16F(a)(1)(v) of the instructions to Form 20-F.

We have provided PwC China with a copy of the disclosures hereunder and required under Item 16F of Form 20-F and requested from PwC China a letter addressed to the SEC indicating whether it agrees with such disclosures. A copy of PwC China's letter dated April 27, 2023 is filed hereto as Exhibit 16.1.

During each of the fiscal years ended December 31, 2020 and 2021 and the subsequent interim period through September 2, 2022, neither we nor anyone on behalf of us has consulted with PwC Singapore regarding (i) the application of accounting principles to a specific transaction, either completed or proposed, or the type of audit opinion that might be rendered on our consolidated financial statements, and neither a written report nor oral advice was provided to us that PwC Singapore concluded was an important factor considered by us in reaching a decision as to any accounting, audit, or financial reporting issue, (ii) any matter that was the subject of a disagreement pursuant to Item 16F(a)(1)(iv) of the instructions to Form 20-F, or (iii) any reportable event pursuant to Item 16F(a)(1)(v) of the instructions to Form 20-F.

#### ITEM 16G. CORPORATE GOVERNANCE

As a Cayman Islands company listed on the Nasdaq Global Select Market, we are subject to the Nasdaq Global Select Market corporate governance requirements. However, Nasdaq Global Select Market rules permit a foreign private issuer like us to follow the corporate governance practices of its home country. Certain corporate governance practices in the Cayman Islands, which is our home country, may differ significantly from the Nasdaq Global Select Market corporate governance requirements.

We relied on the exemption available to foreign private issuers to the requirement that each member of the compensation committee and the corporate governance and nominating committee be an independent director, following our home country practice in the Cayman Islands. Our compensation committee is chaired by a non-independent director, Mr. David Xueling Li, whose extensive experience in talent management and human resource in the internet industry is considered to be valuable for the functioning of our compensation committee. One of the members of our corporate governance and nominating committee, Mr. Qin Liu, is a non-independent director, whose extensive experience is considered to be valuable for functioning of our corporate governance and nominating committee. We also relied on home country practice exemption and did not hold an annual general meeting of shareholders within one year after the end of our fiscal year-end or solicit proxies or provide proxy statements for all meetings of shareholders and provide copies of proxy solicitation to Nasdaq. If we continue to rely on the above and other exemptions available to foreign private issuers in the future, our shareholders may be afforded less protection than they otherwise would under the Nasdaq Global Select Market corporate governance requirements applicable to U.S. domestic issuers. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our ADSs—We are a foreign private issuer within the meaning of the rules under the Exchange Act, and as such we are exempt from certain provisions applicable to United States domestic public companies.”

**ITEM 16H. MINE SAFETY DISCLOSURE**

Not applicable.

**ITEM 16I. DISCLOSURE REGARDING FOREIGN JURISDICTION THAT PREVENT INSPECTIONS**

On December 16, 2021, the PCAOB issued a report to notify the SEC of its determination that the PCAOB was unable to inspect or investigate completely registered public accounting firms headquartered in mainland China and Hong Kong, and our former auditor was subject to that determination.

In May 2022, JOYY Inc. was conclusively listed by the SEC as a Commission-Identified Issuer under the Holding Foreign Companies Accountable Act, or the HFCAA, following the filing of our annual report on Form 20-F for the fiscal year ended December 31, 2021.

To conform to our globalized business operations, the audit committee of our board of directors and the board of directors of our company approved the engagement of PwC Singapore in September 2022, replacing our former auditor, as our independent registered public accounting firm headquartered in a jurisdiction where the PCAOB has historically been able to inspect and investigate completely. As a result, we do not expect to be identified as a Commission-Identified Issuer under the HFCAA after we file this annual report on Form 20-F. Also, on December 15, 2022, the PCAOB issued a report that vacated its December 16, 2021 determination and removed mainland China and Hong Kong from the list of jurisdictions where it is unable to inspect or investigate completely registered public accounting firms.

To the best of our knowledge, no Cayman Islands governmental entities own any shares of JOYY Inc. as of the date of this annual report.

To the best of our knowledge, no governmental entities of mainland China own any shares of JOYY Inc., its subsidiaries or the variable interest entities as of the date of this annual report. Therefore, governmental entities of mainland China do not have a controlling financial interest in JOYY Inc., its subsidiaries or the variable interest entities as of the date of this annual report.

No member of the board of directors of JOYY Inc. or our operating entities is an official of the Chinese Communist Party as of the date of this annual report.

The currently effective memorandum and articles of association of JOYY Inc. and the equivalent organizing documents of our operating entities do not contain any charter of the Chinese Communist Party.

**ITEM 16J. INSIDER TRADING POLICIES**

Not applicable.

**PART III**

**ITEM 17. FINANCIAL STATEMENTS**

We have elected to provide financial statements pursuant to Item 18.

**ITEM 18. FINANCIAL STATEMENTS**

The consolidated financial statements of JOYY Inc. are included at the end of this annual report.

**ITEM 19. EXHIBITS**

<b>Exhibit Number</b>	<b>Description of Document</b>
1.1	<a href="#">Third Amended and Restated Memorandum and Articles of Association of the Registrant (incorporated herein by reference to Exhibit 3.1 to the current report on Form 6-K (File No. 001-35729), filed with the Securities and Exchange Commission on December 27, 2021)</a>
2.1	<a href="#">Registrant's Specimen American Depositary Receipt (incorporated herein by reference to Exhibit 4.1 to the registration statement on Form F-1, as amended (File No. 333-184414), initially filed with the Securities and Exchange Commission on October 15, 2012)</a>
2.2	<a href="#">Registrant's Specimen Certificate for Common Shares (incorporated herein by reference to Exhibit 4.2 to the registration statement on Form F-1, as amended (File No. 333-184414), initially filed with the Securities and Exchange Commission on October 15, 2012)</a>
2.3	<a href="#">Form of Deposit Agreement, among the Registrant, the depository and holder of the American Depositary Receipts (incorporated herein by reference to Exhibit 4.3 to the registration statement on Form F-1, as amended (File No. 333-184414), initially filed with the Securities and Exchange Commission on October 15, 2012)</a>
2.4	<a href="#">Amended and Restated Deposit Agreement dated May 21, 2018 among the Registrant, Citibank N.A., as depository, and holders and beneficial owners of American Depositary Shares evidenced by American Depositary Receipts issued thereunder (incorporated by reference to Exhibit 4.3 to the registration statement on Form S-8 (File No. 333-229099), filed with the Securities and Exchange Commission on December 31, 2018)</a>
2.5*	<a href="#">Description of Securities</a>
4.1	<a href="#">2009 Employee Equity Incentive Scheme of the Registrant, as amended and restated. (incorporated herein by reference to Exhibit 10.1 to the registration statement on Form F-1, as amended (File No. 333-184414), initially filed with the Securities and Exchange Commission on October 15, 2012)</a>
4.2	<a href="#">Amended and Restated 2011 Share Incentive Plan of the Registrant (incorporated herein by reference to Exhibit 99.1 to the current report on Form 6-K (File No. 001-35729), filed with the Securities and Exchange Commission on July 2, 2021)</a>
4.3	<a href="#">Form of Indemnification Agreement with the Registrant's directors and officers (incorporated herein by reference to Exhibit 10.3 to the registration statement on Form F-1, as amended (File No. 333-184414), initially filed with the Securities and Exchange Commission on October 15, 2012)</a>
4.4	<a href="#">Form of Employment Agreement between the Registrant and an executive officer of the Registrant (incorporated herein by reference to Exhibit 10.4 to the registration statement on Form F-1, as amended (File No. 333-184414), initially filed with the Securities and Exchange Commission on October 15, 2012)</a>
4.5	<a href="#">English translation of Equity Pledge Agreements dated January 15, 2021 among Guangzhou BaiGuoYuan, BaiGuoYuan Technology and the shareholder of Guangzhou BaiGuoYuan (incorporated herein by reference to Exhibit 4.15 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>

<b>Exhibit Number</b>	<b>Description of Document</b>
4.6	<a href="#">English translation of Exclusive Service Agreement dated January 15, 2021 between Guangzhou BaiGuoYuan and BaiGuoYuan Technology (incorporated herein by reference to Exhibit 4.16 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.7	<a href="#">English translation of Exclusive Option Agreements dated January 15, 2021 among Guangzhou BaiGuoYuan, BaiGuoYuan Technology and the shareholder of Guangzhou BaiGuoYuan (incorporated herein by reference to Exhibit 4.17 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.8	<a href="#">English translation of Shareholder Voting Rights Proxy Agreements dated January 15, 2021 among Guangzhou BaiGuoYuan, BaiGuoYuan Technology and the shareholder of Guangzhou BaiGuoYuan (incorporated herein by reference to Exhibit 4.18 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.9	<a href="#">English translation of Equity Pledge Agreements dated January 15, 2021 among Guangzhou Qianxun, BaiGuoYuan Technology and each of shareholders of Guangzhou Qianxun (incorporated herein by reference to Exhibit 4.19 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.10	<a href="#">English translation of Exclusive Service Agreement dated January 15, 2021 between Guangzhou Qianxun and BaiGuoYuan Technology (incorporated herein by reference to Exhibit 4.20 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.11	<a href="#">English translation of Exclusive Option Agreements dated January 15, 2021 among Guangzhou Qianxun, BaiGuoYuan Technology and each of shareholders of Guangzhou Qianxun (incorporated herein by reference to Exhibit 4.21 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.12	<a href="#">English translation of Shareholder Voting Rights Proxy Agreements dated January 15, 2021 among Guangzhou Qianxun, BaiGuoYuan Technology and each of shareholders of Guangzhou Qianxun (incorporated herein by reference to Exhibit 4.22 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.13	<a href="#">English translation of Equity Pledge Agreements dated January 15, 2021 among Guangzhou Shangying Internet Technology Co., Ltd. (“Guangzhou Shangying”), BaiGuoYuan Technology and each of shareholders of Guangzhou Shangying (incorporated herein by reference to Exhibit 4.23 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.14	<a href="#">English translation of Exclusive Service Agreement dated January 15, 2021 between Guangzhou Shangying and BaiGuoYuan Technology (incorporated herein by reference to Exhibit 4.24 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.15	<a href="#">English translation of Exclusive Option Agreements dated January 15, 2021 among Guangzhou Shangying, BaiGuoYuan Technology and each of shareholders of Guangzhou Shangying (incorporated herein by reference to Exhibit 4.25 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.16	<a href="#">English translation of Shareholder Voting Rights Proxy Agreements dated January 15, 2021 among Guangzhou Shangying, BaiGuoYuan Technology and each of shareholders of Guangzhou Shangying (incorporated herein by reference to Exhibit 4.26 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.17	<a href="#">English translation of Partnership Interest Pledge Agreements dated January 15, 2021 among Guangzhou Fangu Internet Technology L.P. (“Guangzhou Fangu”), BaiGuoYuan Technology and each of partners of Guangzhou Fangu (incorporated herein by reference to Exhibit 4.27 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>

<b>Exhibit Number</b>	<b>Description of Document</b>
4.18	<a href="#">English translation of Exclusive Service Agreement dated January 15, 2021 between Guangzhou Fangu and BaiGuoYuan Technology (incorporated herein by reference to Exhibit 4.28 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.19	<a href="#">English translation of Exclusive Option Agreements dated January 15, 2021 among Guangzhou Fangu, BaiGuoYuan Technology and each of partners of Guangzhou Fangu (incorporated herein by reference to Exhibit 4.29 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.20	<a href="#">English translation of Partner Voting Rights Proxy Agreements dated January 15, 2021 among Guangzhou Fangu, BaiGuoYuan Technology and each of partners of Guangzhou Fangu (incorporated herein by reference to Exhibit 4.30 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.21	<a href="#">English translation of Partnership Interest Pledge Agreements dated January 15, 2021 among Guangzhou Wanyin Internet Technology L.P. (“Guangzhou Wanyin”), BaiGuoYuan Technology and each of partners of Guangzhou Wanyin (incorporated herein by reference to Exhibit 4.31 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.22	<a href="#">English translation of Exclusive Service Agreement dated January 15, 2021 between Guangzhou Wanyin and BaiGuoYuan Technology (incorporated herein by reference to Exhibit 4.32 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.23	<a href="#">English translation of Exclusive Option Agreements dated January 15, 2021 among Guangzhou Wanyin, BaiGuoYuan Technology and each of partners of Guangzhou Wanyin (incorporated herein by reference to Exhibit 4.33 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.24	<a href="#">English translation of Partner Voting Rights Proxy Agreements dated January 15, 2021 among Guangzhou Wanyin, BaiGuoYuan Technology and each of partners of Guangzhou Wanyin (incorporated herein by reference to Exhibit 4.34 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.25	<a href="#">English translation of Equity Pledge Agreements dated December 9, 2020 among Guangzhou Ruicheng Internet Technology Co., Ltd. (“Guangzhou Ruicheng”), Guangzhou Huanju Shidai and each of shareholders of Guangzhou Ruicheng (incorporated herein by reference to Exhibit 4.35 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.26	<a href="#">English translation of Exclusive Service Agreement dated December 9, 2020 between Guangzhou Ruicheng and Guangzhou Huanju Shidai (incorporated herein by reference to Exhibit 4.36 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.27	<a href="#">English translation of Exclusive Option Agreements dated December 9, 2020 among Guangzhou Ruicheng, Guangzhou Huanju Shidai and each of shareholders of Guangzhou Ruicheng (incorporated herein by reference to Exhibit 4.37 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.28	<a href="#">English translation of Shareholder Voting Rights Proxy Agreements dated December 9, 2020 among Guangzhou Ruicheng, Guangzhou Huanju Shidai and each of shareholders of Guangzhou Ruicheng (incorporated herein by reference to Exhibit 4.38 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.29	<a href="#">English translation of Equity Pledge Agreements dated December 9, 2020 among Guangzhou Xuancheng Internet Technology Co., Ltd. (“Guangzhou Xuancheng”), Guangzhou Huanju Shidai and each of shareholders of Guangzhou Ruicheng (incorporated herein by reference to Exhibit 4.39 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>

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<b>Exhibit Number</b>	<b>Description of Document</b>
4.30	<a href="#">English translation of Exclusive Service Agreement dated December 9, 2020 between Guangzhou Xuancheng and Guangzhou Huanju Shidai (incorporated herein by reference to Exhibit 4.40 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.31	<a href="#">English translation of Exclusive Option Agreements dated December 9, 2020 among Guangzhou Xuancheng, Guangzhou Huanju Shidai and each of shareholders of Guangzhou Xuancheng (incorporated herein by reference to Exhibit 4.41 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.32	<a href="#">English translation of Shareholder Voting Rights Proxy Agreements dated December 9, 2020 among Guangzhou Xuancheng, Guangzhou Huanju Shidai and each of shareholders of Guangzhou Xuancheng (incorporated herein by reference to Exhibit 4.42 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.33	<a href="#">English translation of Partnership Interest Pledge Agreements dated December 9, 2020 among Guangzhou Xuanyi Internet Technology L.P. (“Guangzhou Xuanyi”), Guangzhou Huanju Shidai and each of partners of Guangzhou Xuanyi (incorporated herein by reference to Exhibit 4.43 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.34	<a href="#">English translation of Exclusive Service Agreement dated December 9, 2020 between Guangzhou Xuanyi and Guangzhou Huanju Shidai (incorporated herein by reference to Exhibit 4.44 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.35	<a href="#">English translation of Exclusive Option Agreements dated December 9, 2020 among Guangzhou Xuanyi, Guangzhou Huanju Shidai and each of partners of Guangzhou Xuanyi (incorporated herein by reference to Exhibit 4.45 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.36	<a href="#">English translation of Partner Voting Rights Proxy Agreements dated December 9, 2020 among Guangzhou Xuanyi, Guangzhou Huanju Shidai and each of partners of Guangzhou Xuanyi (incorporated herein by reference to Exhibit 4.46 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.37	<a href="#">English translation of Partnership Interest Pledge Agreements dated December 9, 2020 among Guangzhou Yueyi Internet Technology L.P. (“Guangzhou Yueyi”), Guangzhou Huanju Shidai and each of partners of Guangzhou Yueyi (incorporated herein by reference to Exhibit 4.47 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.38	<a href="#">English translation of Exclusive Service Agreement dated December 9, 2020 between Guangzhou Yueyi and Guangzhou Huanju Shidai (incorporated herein by reference to Exhibit 4.48 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.39	<a href="#">English translation of Exclusive Option Agreements dated December 9, 2020 among Guangzhou Yueyi, Guangzhou Huanju Shidai and each of partners of Guangzhou Yueyi (incorporated herein by reference to Exhibit 4.49 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.40	<a href="#">English translation of Partner Voting Rights Proxy Agreements dated December 9, 2020 among Guangzhou Yueyi, Guangzhou Huanju Shidai and each of partners of Guangzhou Yueyi (incorporated herein by reference to Exhibit 4.50 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.41	<a href="#">English summary of Contract for State-owned Construction Land Use Rights Assignment, dated August 20, 2015, by and between Guangzhou Land Resources and Real Estate Administration Bureau and Guangzhou Huaduo (incorporated herein by reference to Exhibit 4.27 from our annual report on Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 28, 2016)</a>

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<b>Exhibit Number</b>	<b>Description of Document</b>
4.42	<a href="#">Amended and Restated Shareholders Agreement dated as of March 8, 2018 between HUYA Inc. and other parties thereto (incorporated herein by reference to Exhibit 4.37 from our annual report on Form 20-F (File No.001-35729), filed with the Securities and Exchange Commission on April 26, 2018)</a>
4.43	<a href="#">Indenture, dated June 24, 2019 constituting \$500 million 0.75% Convertible Senior Notes due 2025 (incorporated by reference to Exhibit 4.64 to the Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 27, 2020)</a>
4.44	<a href="#">Indenture, dated June 24, 2019 constituting \$500 million 1.375% Convertible Senior Notes due 2026 (incorporated by reference to Exhibit 4.65 to the Form 20-F (File No. 001-35729), filed with the Securities and Exchange Commission on April 27, 2020)</a>
4.45	<a href="#">2019 Share Incentive Awards Arrangement (incorporated herein by reference to Exhibit 10.1 from our Form S-8 filed with the Securities and Exchange Commission on September 30, 2019)</a>
4.46	<a href="#">Amended and Restated Share Purchase Agreement among the Buyer as defined therein, Baidu (Hong Kong) Limited, JOYY Inc. and certain investors party thereto, dated February 7, 2021 (incorporated herein by reference to Exhibit 4.105 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 28, 2021)</a>
4.47	<a href="#">English summary of Contract for State-owned Construction Land Use Right Assignment dated February 26, 2021, by and between Foshan Natural Resources Bureau and Foshan Tusheng Network Technology Co., Ltd. (incorporated herein by reference to Exhibit 4.110 to the annual report on Form 20-F (File 001-35729), filed with the Securities and Exchange Commission on April 29, 2022)</a>
8.1*	<a href="#">List of Significant Subsidiaries and Variable Interest Entities</a>
11.1*	<a href="#">Amended and Restated Code of Business Conduct and Ethics of the Registrant</a>
12.1*	<a href="#">Certification by Principal Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</a>
12.2*	<a href="#">Certification by Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002</a>
13.1**	<a href="#">Certification by Principal Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</a>
13.2**	<a href="#">Certification by Principal Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002</a>
15.1*	<a href="#">Consent of Maples and Calder (Hong Kong) LLP</a>
15.2*	<a href="#">Consent of Fangda Partners</a>
15.3*	<a href="#">Consent of PricewaterhouseCoopers LLP, an independent registered public accounting firm</a>
15.4*	<a href="#">Consent of PricewaterhouseCoopers Zhong Tian LLP, an independent registered public accounting firm</a>
16.1*	<a href="#">Letter from PricewaterhouseCoopers Zhong Tian LLP to the Securities and Exchange Commission, dated April 27, 2023, pertaining to the change in independent public accounting firm</a>
101.INS*	Inline XBRL Instance Document—the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document

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<b>Exhibit Number</b>	<b>Description of Document</b>
101.DEF*	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104*	Cover Page Interactive Data File—the cover page XBRL tags are embedded within the Exhibit 101 Inline XBRL document set

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\* Filed with this annual report on Form 20-F

\*\* Furnished with this annual report on Form 20-F

**SIGNATURES**

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

JOYY INC.

By: /s/ David Xueling Li

Name: David Xueling Li

Title: Chairman and Chief Executive Officer

Date: April 27, 2023

**PART I**

**JOYY INC.**

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## **Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Shareholders of JOYY Inc.

### ***Opinions on the Financial Statements and Internal Control over Financial Reporting***

We have audited the accompanying consolidated balance sheet of JOYY Inc. and its subsidiaries (the “Company”) as of December 31, 2022, and the related consolidated statements of comprehensive income, of changes in shareholders’ equity and of cash flows for the year then ended, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and the results of its operations and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the COSO.

### ***Basis for Opinions***

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Annual Report on Internal Control over Financial Reporting appearing under Item 15. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

### ***Definition and Limitations of Internal Control over Financial Reporting***

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

### ***Critical Audit Matters***

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

#### *Goodwill impairment assessment - Bigo reporting unit*

As described in Note 16 to the consolidated financial statements, the Company's consolidated goodwill balance was US\$2,649 million as of December 31, 2022, and the goodwill associated with the Bigo reportable segment, which only includes the Bigo reporting unit, was US\$1,854 million. Management conducts a goodwill impairment test at the reporting unit level at least annually in the fourth quarter, or more frequently when events or circumstances occur indicating that the recorded goodwill may be impaired. The impairment test compares the fair value of a reporting unit with its carrying value, with an impairment charge recorded for the amount by which the carrying amount exceeds the reporting unit's fair value up to a maximum amount of the goodwill balance for the reporting unit. For reporting units evaluated using a quantitative assessment including the Bigo reporting unit, the fair values are determined using an income approach. The income approach determines fair value based on discounted cash flow models derived from the reporting units' long-term forecasts which included a five-year future cash flow projection and an estimated terminal value. As disclosed by management, determining fair value requires the exercise of significant judgment, including judgments about appropriate revenue growth rates, the estimated terminal value using a terminal year long-term future growth rate and discount rate.

The principal considerations for our determination that performing procedures relating to the goodwill impairment assessment of the Bigo reporting unit is a critical audit matter are (i) there was significant judgment by management when determining the fair value measurement of the reporting unit; (ii) significant audit effort was necessary to perform procedures and evaluate audit evidence related to management's cash flow projections and significant assumptions related to the revenue growth rates, the estimated terminal value using a terminal year long-term future growth rate and the discount rate; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained from these procedures.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures related to the goodwill impairment assessment of the Bigo reporting unit included testing the effectiveness of controls relating to management's goodwill impairment assessment, including controls over the determination of the fair value of the Company's reporting unit and controls over development of the significant assumptions including the respective revenue growth rates, estimated terminal value using a terminal year long-term future growth rate and discount rate. These procedures also included, among others, testing management's process for developing the fair value estimate; evaluating the appropriateness of the income approach; testing the completeness and accuracy of underlying data used in the models; and evaluating the reasonableness of significant assumptions used by management, including the revenue growth rates, the estimated terminal value using a terminal year long-term future growth rate and the discount rate. Evaluating management's assumptions related to the revenue growth rates involved evaluating whether the assumptions used by management were reasonable considering (i) the current and past performance of the reporting unit, (ii) the consistency with external market and industry data, (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. The discount rate was evaluated by considering the cost of capital of comparable businesses and other industry factors. Professionals with specialized skill and knowledge were used to assist in the evaluation of the Company's models and certain significant assumptions, including the discount rate.

*Revenue recognition — identification of distinct performance obligations and estimate of their standalone selling price*

As described in Note 2(u) to the consolidated financial statements, the Company's sources of revenue include live streaming and others. The Company's consolidated revenues were US\$2,412 million for the year ended December 31, 2022, of which US\$2,226 million were revenues from live streaming. Management identifies multiple distinct performance obligations in certain contracts of its live streaming business. Customers receive a series of services, virtual items and virtual rights by entering into these contracts with the Company. Management determines the distinct performance obligations and the allocable portion of the transaction price for each identified distinct performance obligation and recognizes revenue upon transfer of control of the promised services in an amount that reflects the consideration the Company expects to receive in exchange for those services. Management exercises significant judgment in determining the distinct performance obligations and related allocable portions of the transaction price which is dependent on the contractual terms for each type of contract with multiple distinct performance obligations.

The principal considerations for our determination that performing procedures relating to the identification of and the determination of allocation of transaction price of performance obligations and contracts with multiple performance obligations is a critical audit matter are that there was significant judgment by management in identifying the distinct performance obligations and estimating the standalone selling price of each distinct performance obligation due to the complexity of the contracts. Certain services are provided to customers over time and have the same pattern of transfer to customers. Management exercises judgement in determining the number of distinct performance obligations by accounting for services that have the same pattern of transfer to customers as a single performance obligation. Certain distinct performance obligations are not separately sold by the Company. Management exercises judgement in determining the standalone selling price of these distinct performance obligations. This in turn led to significant auditor judgment and effort in performing procedures and in evaluating management's significant judgment in determining whether the distinct performance obligations were appropriately identified and whether the standalone selling price of each distinct performance obligation was appropriately estimated.

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Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to the revenue recognition process, including identification of distinct performance obligations and estimate of standalone selling prices used to allocate transaction price to distinct performance obligations in its contracts with customers. These procedures also included, among others, on a test basis: (i) testing the completeness and accuracy of management’s identification of the distinct performance obligations by evaluating customer arrangements, (ii) testing management’s process for estimating standalone selling price which included testing the completeness and accuracy of input data used and evaluating the reasonableness of significant assumptions used by management, principally including market and pricing conditions and other observable inputs such as historical pricing practices and (iii) testing management’s process for determining the appropriate amount of revenue recognition based on the performance obligations identified in relevant contracts.

/s/ PricewaterhouseCoopers LLP  
Singapore  
April 27, 2023

We have served as the Company’s auditor since 2022.

## **Report of Independent Registered Public Accounting Firm**

To the Board of Directors and Shareholders of JOYY Inc.

### ***Opinion on the Financial Statements***

We have audited the consolidated balance sheet of JOYY Inc. and its subsidiaries (the “Company”) as of December 31, 2021, and the related consolidated statements of comprehensive income, of changes in shareholders’ equity and of cash flows for each of the two years in the period ended December 31, 2021, including the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2021 in conformity with accounting principles generally accepted in the United States of America.

### ***Change in Accounting Principle***

As discussed in Note 2(s) to the consolidated financial statements, the Company adopted a change in the manner in which it accounts for convertible bonds in 2021.

### ***Basis for Opinion***

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/PricewaterhouseCoopers Zhong Tian LLP  
Guangzhou, the People’s Republic of China  
April 29, 2022

We served as the Company’s auditor from 2011 to 2022.

**CONSOLIDATED BALANCE SHEETS AS OF DECEMBER 31, 2021 AND 2022**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	<b>As of December 31,</b>	
	<u>2021</u>	<u>2022</u>
	US\$	US\$
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	1,837,185	1,214,449
Restricted cash and cash equivalents	297,022	303,370
Short-term deposits	1,604,198	2,360,545
Restricted short-term deposits	285	47,741
Short-term investments	946,543	362,640
Accounts receivable, net of allowance of US\$12,426 and US\$20,670 as of December 31, 2021 and 2022, respectively	114,372	117,927
Amounts due from related parties, net of allowance of US\$476 and US\$5 as of December 31, 2021 and 2022, respectively	56,984	1,794
Financing receivables, net of allowance of US\$20,317 and US\$18,556 as of December 31, 2021 and 2022, respectively	—	—
Prepayments and other current assets, net of allowance of US\$14,444 and US\$13,141 as of December 31, 2021 and 2022, respectively	213,733	236,183
<b>Total current assets</b>	<u>5,070,322</u>	<u>4,644,649</u>
<b>Non-current assets</b>		
Investments	1,022,455	660,404
Property and equipment, net	365,392	343,201
Land use rights, net	370,052	330,005
Intangible assets, net	312,082	398,300
Right-of-use assets, net	16,565	33,196
Goodwill	1,958,263	2,649,307
Other non-current assets	4,881	12,591
<b>Total non-current assets</b>	<u>4,049,690</u>	<u>4,427,004</u>
<b>Total assets</b>	<u>9,120,012</u>	<u>9,071,653</u>
<b>Liabilities, mezzanine equity and shareholders' equity</b>		
<b>Current liabilities</b> (including amounts of the consolidated VIEs without recourse to the Company of US\$173,347 and US\$172,174 as of December 31, 2021 and 2022, respectively)		
Accounts payable	18,011	56,000
Deferred revenue	60,910	86,014
Advances from customers	3,426	3,532
Income taxes payable	65,738	78,103
Accrued liabilities and other current liabilities	2,345,838	2,360,002
Amounts due to related parties	6,931	3,225
Lease liabilities due within one year	11,041	12,451
Short-term loans	—	37,270
Convertible bonds	—	435,087
<b>Total current liabilities</b>	<u>2,511,895</u>	<u>3,071,684</u>

**CONSOLIDATED BALANCE SHEETS AS OF DECEMBER 31, 2021 AND 2022 (CONTINUED)**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	As of December 31,	
	2021 US\$	2022 US\$
<b>Non-current liabilities</b> (including amounts of the consolidated VIEs without recourse to the Company of US\$22,422 and US\$20,164 as of December 31, 2021 and 2022, respectively)		
Convertible bonds	924,077	401,173
Lease liabilities	5,734	21,601
Deferred revenue	6,422	9,765
Deferred tax liabilities	36,214	64,262
Other non-current liabilities	7,372	436
<b>Total non-current liabilities</b>	<u>979,819</u>	<u>497,237</u>
<b>Total liabilities</b>	<u>3,491,714</u>	<u>3,568,921</u>
<b>Commitments and contingencies (Note 30)</b>		
<b>Mezzanine equity</b>	65,833	91,366
<b>Shareholders' equity</b>		
Class A common shares (US\$0.00001 par value; 10,000,000,000 and 10,000,000,000 shares authorized, 1,317,840,464 shares issued and 1,146,336,305 shares outstanding as of December 31, 2021; 1,317,840,464 shares issued and 1,066,177,028 shares outstanding as of December 31, 2022, respectively)	13	13
Class B common shares (US\$0.00001 par value; 1,000,000,000 and 1,000,000,000 shares authorized, 326,509,555 and 326,509,555 shares issued and outstanding as of December 31, 2021 and December 31, 2022, respectively)	3	3
Treasury Shares (US\$0.00001 par value; 171,504,159 and 251,663,436 shares held as of December 31, 2021 and December 31, 2022, respectively)	(526,724)	(655,141)
Additional paid-in capital	3,246,523	3,277,978
Statutory reserves	26,804	32,536
Retained earnings	2,712,534	2,685,063
Accumulated other comprehensive income (loss)	69,175	(162,235)
<b>Total JOYY Inc.'s shareholders' equity</b>	<u>5,528,328</u>	<u>5,178,217</u>
Non-controlling interests	34,137	233,149
<b>Total shareholders' equity</b>	<u>5,562,465</u>	<u>5,411,366</u>
<b>Total liabilities, mezzanine equity and shareholders' equity</b>	<u>9,120,012</u>	<u>9,071,653</u>

The accompanying notes are an integral part of these consolidated financial statements.

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	For the year ended December 31,		
	2020 US\$	2021 US\$	2022 US\$
<b>Net revenues</b>			
Live streaming	1,815,826	2,476,790	2,225,518
Others	102,318	142,261	185,998
<b>Total net revenues</b>	<u>1,918,144</u>	<u>2,619,051</u>	<u>2,411,516</u>
Cost of revenues <sup>(1)</sup>	<u>(1,378,146)</u>	<u>(1,781,150)</u>	<u>(1,559,388)</u>
<b>Gross profit</b>	<u>539,998</u>	<u>837,901</u>	<u>852,128</u>
<b>Operating expenses <sup>(1)</sup></b>			
Research and development expenses	(302,818)	(279,781)	(261,807)
Sales and marketing expenses	(505,389)	(468,407)	(400,435)
General and administrative expenses	(146,666)	(221,731)	(141,826)
Goodwill impairment	—	—	(14,830)
<b>Total operating expenses</b>	<u>(954,873)</u>	<u>(969,919)</u>	<u>(818,898)</u>
Gain on disposal of business	—	4,959	—
Other income	8,095	20,376	17,505
<b>Operating (loss) income</b>	<u>(406,780)</u>	<u>(106,683)</u>	<u>50,735</u>
Interest expense	(75,555)	(14,475)	(12,770)
Interest income and investment income	89,078	91,233	93,148
Foreign currency exchange (losses) gains, net	(17,472)	(13,377)	11,666
Gain (loss) on disposal and deemed disposal of investments	272,281	(23,762)	4,113
Gain (loss) on fair value changes of investments	160,849	(15,435)	424,304
(Loss) gain on extinguishment of debt and derivative	(6,277)	5,291	63,378
Other non-operating expenses	(2,467)	(381)	—
<b>Income (loss) before income tax expenses</b>	<u>13,657</u>	<u>(77,589)</u>	<u>634,574</u>
Income tax expenses	<u>(27,825)</u>	<u>(25,745)</u>	<u>(34,575)</u>
<b>(Loss) income before share of loss in equity method investments, net of income taxes</b>	<u>(14,168)</u>	<u>(103,334)</u>	<u>599,999</u>
Share of loss in equity method investments, net of income taxes	<u>(7,634)</u>	<u>(26,217)</u>	<u>(498,431)</u>
<b>Net (loss) income from continuing operations</b>	<u>(21,802)</u>	<u>(129,551)</u>	<u>101,568</u>
<b>Net income from discontinued operations</b>	<u>1,401,670</u>	<u>35,567</u>	<u>—</u>
<b>Net income (loss)</b>	<u>1,379,868</u>	<u>(93,984)</u>	<u>101,568</u>
Net (loss) income attributable to the non-controlling interest shareholders and the mezzanine equity classified non-controlling interest shareholders	<u>(6,971)</u>	<u>13,691</u>	<u>27,323</u>
<b>Net income (loss) attributable to controlling interest of JOYY Inc.</b>	<u>1,372,897</u>	<u>(80,293)</u>	<u>128,891</u>
<b>Including:</b>			
Net (loss) income from continuing operations attributable to controlling interest of JOYY Inc.	(18,741)	(115,860)	128,891
Net income from discontinued operations attributable to controlling interest of JOYY Inc.	1,391,638	35,567	—
Accretion of subsidiaries' redeemable convertible preferred shares to redemption value	(5,564)	(5,236)	(5,426)
Cumulative dividend on subsidiary's Series A Preferred Shares	(4,000)	(4,000)	(4,000)
<b>Net income (loss) attributable to common shareholders of JOYY Inc.</b>	<u>1,363,333</u>	<u>(89,529)</u>	<u>119,465</u>
<b>Including:</b>			
Net (loss) income from continuing operations attributable to common shareholders of JOYY Inc.	(28,305)	(125,096)	119,465
Net income from discontinued operations attributable to common shareholders of JOYY Inc.	1,391,638	35,567	—
Other comprehensive income (loss):			
Foreign currency translation adjustments, net of nil tax	215,363	58,887	(246,959)
<b>Comprehensive income (loss) attributable to the common shareholders of JOYY Inc.</b>	<u>1,578,696</u>	<u>(30,642)</u>	<u>(127,494)</u>

**CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022 (CONTINUED)**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	For the year ended December 31,		
	2020 US\$	2021 US\$	2022 US\$
<b>Net income (loss) per ADS*</b>			
—Basic	17.04	(1.14)	1.66
Continuing operations	(0.35)	(1.60)	1.66
Discontinued operations	17.39	0.46	—
—Diluted	17.04	(1.14)	1.59
Continuing operations	(0.35)	(1.60)	1.59
Discontinued operations	17.39	0.46	—
Weighted average number of ADS used in calculating net income (loss) per ADS			
—Basic			
Continuing operations	80,009,988	78,100,800	71,969,510
Discontinued operations	80,009,988	78,100,800	71,969,510
—Diluted			
Continuing operations	80,009,988	78,100,800	82,272,422
Discontinued operations	80,009,988	78,100,800	82,272,422
<b>Net income (loss) per common share*</b>			
—Basic	0.85	(0.06)	0.08
Continuing operations	(0.02)	(0.08)	0.08
Discontinued operations	0.87	0.02	—
—Diluted	0.85	(0.06)	0.08
Continuing operations	(0.02)	(0.08)	0.08
Discontinued operations	0.87	0.02	—
Weighted average number of common shares used in calculating net income (loss) per common share			
—Basic			
Continuing operations	1,600,199,759	1,562,016,001	1,439,390,191
Discontinued operations	1,600,199,759	1,562,016,001	1,439,390,191
—Diluted			
Continuing operations	1,600,199,759	1,562,016,001	1,645,448,440
Discontinued operations	1,600,199,759	1,562,016,001	1,645,448,440

\* Each ADS represents 20 common shares.

(1) Share-based compensation was allocated in cost of revenues and operating expenses as follows:

	For the year ended December 31,		
	2020 US\$	2021 US\$	2022 US\$
Cost of revenues	5,797	8,089	8,185
Research and development expenses	42,646	24,053	25,170
Sales and marketing expenses	1,311	1,285	777
General and administrative expenses	42,406	(45)	9,964

The accompanying notes are an integral part of these consolidated financial statements.

**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	Class A common shares		Class B common shares		Treasury shares Amount US\$	Additional paid-in capital US\$	Statutory reserves US\$	Retained earnings US\$	Accumulated other comprehensive income (loss) US\$	Total JOYY Inc.'s shareholders' equity US\$	Non-controlling interests US\$	Total shareholders' equity US\$
	Number of shares	Amount US\$	Number of shares	Amount US\$								
<b>Balance as of December 31, 2019</b>	1,293,162,504	13	326,509,555	3	(23,712)	3,321,554	22,882	1,574,465	(155,392)	4,739,813	767,163	5,506,976
Adoption of ASC 326	—	—	—	—	—	—	—	(1,469)	—	(1,469)	(269)	(1,738)
Issuance of common shares for vested restricted shares and restricted share units	12,363,420	—	—	—	—	—	—	—	—	—	—	—
Net forfeiture of restricted shares	(13,886)	—	—	—	—	—	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	111,204	—	—	—	111,204	13,154	124,358
Appropriation to statutory reserves	—	—	—	—	—	—	4,445	(4,445)	—	—	—	—
Capital injection in subsidiaries from non- controlling interest shareholders	—	—	—	—	—	—	—	—	—	—	1,500	1,500
Issuance of Huya's common shares for exercised share options	—	—	—	—	—	(36)	—	—	(5)	(41)	129	88
Repurchase of common shares	(33,165,820)	—	—	—	(115,816)	12,231	—	—	—	(103,585)	—	(103,585)
Repurchase of non-controlling interest and redeemable non-controlling interests	—	—	—	—	—	1,242	—	—	—	1,242	(3,255)	(2,013)
Non-controlling interest arising from an acquisition	—	—	—	—	—	—	—	—	—	—	5,058	5,058
Deconsolidation of Huya	—	—	—	—	—	—	(9,502)	9,502	(34,707)	(34,707)	(781,591)	(816,298)
Other equity changes from equity method investments	—	—	—	—	—	10,563	—	3,417	(6,788)	7,192	—	7,192
Dividends declared	—	—	—	—	—	—	—	(67,021)	—	(67,021)	(333)	(67,354)
Deemed contribution from non- controlling interest shareholders	—	—	—	—	—	86	—	—	—	86	(86)	—
Net income attributable to JOYY Inc. and non-controlling interest shareholders	—	—	—	—	—	—	—	1,372,897	—	1,372,897	6,971	1,379,868
Accretion of subsidiaries' redeemable convertible preferred shares to redemption value	—	—	—	—	—	—	—	(5,564)	—	(5,564)	(244)	(5,808)
Foreign currency translation adjustments, net of nil tax	—	—	—	—	—	—	—	—	215,363	215,363	(2,700)	212,663
<b>Balance as of December 31, 2020</b>	<u>1,272,346,218</u>	<u>13</u>	<u>326,509,555</u>	<u>3</u>	<u>(139,528)</u>	<u>3,456,844</u>	<u>17,825</u>	<u>2,881,782</u>	<u>18,471</u>	<u>6,235,410</u>	<u>5,497</u>	<u>6,240,907</u>

**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022 (CONTINUED)**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	Class A common shares		Class B common shares		Treasury shares	Additional paid-in capital	Statutory reserves	Retained earnings	Accumulated other comprehensive income (loss)	Total JOYY Inc.'s shareholders' equity	Non-controlling interests	Total shareholders' equity
	Number of shares	Amount US\$	Number of shares	Amount US\$	Amount US\$	US\$	US\$	US\$	US\$	US\$	US\$	US\$
<b>Balance as of December 31, 2020</b>	1,272,346,218	13	326,509,555	3	(139,528)	3,456,844	17,825	2,881,782	18,471	6,235,410	5,497	6,240,907
Adoption of ASU 2020-06	—	—	—	—	—	(299,398)	—	86,659	—	(212,739)	—	(212,739)
Issuance of common shares for vested restricted shares and restricted share units	3,631,640	—	—	—	—	—	—	—	—	—	—	—
Transfer from treasury shares to issued common shares for vested restricted share units	1,442,020	—	—	—	5,788	(5,788)	—	—	—	—	—	—
Acquisition of subsidiaries	—	—	—	—	—	53,327	—	—	—	53,327	26,731	80,058
Net forfeiture of restricted shares	(773,813)	—	—	—	—	—	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	31,691	—	—	—	31,691	—	31,691
Appropriation to statutory reserves	—	—	—	—	—	—	8,979	(8,979)	—	—	—	—
Capital injection in subsidiaries from non-controlling interest shareholders	—	—	—	—	—	(3,357)	—	—	—	(3,357)	9,313	5,956
Other equity changes from equity method investments	—	—	—	—	—	13,267	—	(1)	(8,183)	5,083	—	5,083
Repurchase of common shares	(130,309,760)	—	—	—	(392,984)	—	—	—	—	(392,984)	—	(392,984)
Repurchase of non-controlling interest and redeemable non-controlling interests	—	—	—	—	—	(63)	—	—	—	(63)	(154)	(217)
Deconsolidation of subsidiaries	—	—	—	—	—	—	—	—	—	—	7,148	7,148
Dividends declared	—	—	—	—	—	—	—	(161,398)	—	(161,398)	(47)	(161,445)
Net income attributable to JOYY Inc. and non-controlling interest shareholders	—	—	—	—	—	—	—	(80,293)	—	(80,293)	(13,691)	(93,984)
Accretion of subsidiaries' redeemable convertible preferred shares to redemption value	—	—	—	—	—	—	—	(5,236)	—	(5,236)	(102)	(5,338)
Foreign currency translation adjustments, net of nil tax	—	—	—	—	—	—	—	—	58,887	58,887	(558)	58,329
<b>Balance as of December 31, 2021</b>	<u>1,146,336,305</u>	<u>13</u>	<u>326,509,555</u>	<u>3</u>	<u>(526,724)</u>	<u>3,246,523</u>	<u>26,804</u>	<u>2,712,534</u>	<u>69,175</u>	<u>5,528,328</u>	<u>34,137</u>	<u>5,562,465</u>

**CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022 (CONTINUED)**

(All amounts in thousands, except share, ADS, per share and per ADS data)

	Class A common shares		Class B common shares		Treasury shares Amount US\$	Additional paid-in capital US\$	Statutory reserves US\$	Retained earnings US\$	Accumulated other comprehensive income (loss) US\$	Total JOYY Inc.'s shareholders' equity US\$	Non-controlling interests US\$	Total shareholders' equity US\$
	Number of shares	Amount US\$	Number of shares	Amount US\$								
<b>Balance as of December 31, 2021</b>	1,146,336,305	13	326,509,555	3	(526,724)	3,246,523	26,804	2,712,534	69,175	5,528,328	34,137	5,562,465
Issuance of common shares for vested restricted shares and restricted share units	780,263	—	—	—	—	—	—	—	—	—	—	—
Transfer from treasury shares to issued common shares for vested restricted share units	3,567,640	—	—	—	10,260	(10,260)	—	—	—	—	—	—
Share-based compensation	—	—	—	—	—	42,446	—	—	—	42,446	1,650	44,096
Appropriation to statutory reserves	—	—	—	—	—	—	5,732	(5,732)	—	—	—	—
Share of changes in the equity method investments' capital accounts	—	—	—	—	—	146	—	(14)	15,549	15,681	—	15,681
Repurchase of common shares	(84,507,180)	—	—	—	(138,677)	—	—	—	—	(138,677)	—	(138,677)
Dividends declared	—	—	—	—	—	—	—	(145,190)	—	(145,190)	(63)	(145,253)
Net income attributable to JOYY Inc. and non-controlling interest shareholders	—	—	—	—	—	—	—	128,891	—	128,891	(27,323)	101,568
Accretion of subsidiaries' redeemable convertible preferred shares to redemption value	—	—	—	—	—	—	—	(5,426)	—	(5,426)	(108)	(5,534)
Exercise/settlement of RSU's in subsidiaries	—	—	—	—	—	(877)	—	—	—	(877)	932	55
Noncontrolling interest arising from an acquisition	—	—	—	—	—	—	—	—	—	—	222,741	222,741
Foreign currency translation adjustments, net of nil tax	—	—	—	—	—	—	—	—	(246,959)	(246,959)	1,183	(245,776)
<b>Balance as of December 31, 2022</b>	<u>1,066,177,028</u>	<u>13</u>	<u>326,509,555</u>	<u>3</u>	<u>(655,141)</u>	<u>3,277,978</u>	<u>32,536</u>	<u>2,685,063</u>	<u>(162,235)</u>	<u>5,178,217</u>	<u>233,149</u>	<u>5,411,366</u>

The accompanying notes are an integral part of these consolidated financial statements.

**CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022**

(All amounts in thousands)

	For the year ended December 31,		
	2020 US\$	2021 US\$	2022 US\$
<b>Cash flows from operating activities</b>			
Net income (loss)	1,379,868	(93,984)	101,568
Net income from discontinued operations	(1,401,670)	(35,567)	—
Adjustments to reconcile net income to net cash provided by operating activities			
Depreciation of property and equipment	77,464	108,686	83,396
Amortization of acquired intangible assets and land use rights	109,422	67,233	65,204
Amortization of right-of-use assets	16,492	7,009	14,779
Expected credit loss of receivables	9,392	5,206	14,553
Loss (gain) on disposal of property and equipment, intangible assets and other long-term assets	2,776	366	(4,118)
Impairment of investments	6,186	93,632	—
Impairment of intangible assets	—	—	1,356
Impairment of goodwill	—	—	14,830
Share-based compensation	92,160	33,382	44,096
Share of loss in equity method investments, net of income taxes	7,634	26,217	498,431
(Gain) loss on disposal and deemed disposal of investments	(272,281)	23,762	(4,113)
Gain on disposal of business	—	(4,959)	—
Cash dividend received from equity investees	347	6,953	848
Deferred income taxes, net	12,616	(9,805)	(1,935)
Foreign currency exchange losses (gains), net	17,472	13,377	(11,666)
Interest expense	64,520	9,158	12,770
Investment loss (income)	2,785	(3,630)	1,360
(Gain) loss on fair value changes of investments	(160,849)	15,435	(424,304)
Loss (gain) on extinguishment of debt and derivative	6,277	(5,291)	(63,378)
Changes in operating assets and liabilities, net of business acquisition and disposal of subsidiaries			
Accounts receivable	(55,753)	28,064	(20,201)
Interest receivables recorded in financing receivables	(368)	23	9
Prepayments and other assets	(32,827)	(8,082)	(33,357)
Amounts due from related parties	(2,233)	(20,702)	7,247
Lease liabilities	(15,085)	(7,930)	(12,343)
Amounts due to related parties	4,379	2,761	(41,268)
Accounts payable	(11,768)	(18,516)	19,052
Deferred revenue	38,994	(3,150)	8,594
Advances from customers	(1,352)	2,623	(2,589)
Income taxes payable	(3,431)	3,388	17,610
Accrued liabilities and other current liabilities	106,116	(89,532)	30,063
Net cash (used in) provided by continuing operating activities	(2,717)	146,127	316,494
Net cash provided by discontinued operating activities	497,863	64,289	—
Net cash provided by operating activities	495,146	210,416	316,494
<b>Cash flows from investing activities</b>			
Placements of short-term deposits	(1,193,968)	(1,707,825)	(4,425,191)
Maturities of short-term deposits	1,358,884	1,483,449	3,711,568
Placements of short-term investments	(909,531)	(1,970,387)	(418,578)
Maturities of short-term investments	926,590	1,507,304	889,905
Purchase of property and equipment	(150,970)	(70,820)	(69,022)
Purchase of intangible assets and land use right	(1,974)	(114,057)	(197)
Cash paid for investments	(206,559)	(89,681)	(175,719)
Cash received from disposal of investments	826,750	156,479	15,174
Acquisition of businesses, net of cash, cash equivalents and restricted cash acquired	(4,673)	7,049	27,926
Repayments from (payments on behalf of) related parties, net	(333)	(4,537)	(36,522)
Loans to related parties	(723)	(34,203)	(28,062)
Loans to employees and third parties	(8,135)	(9,526)	(1,025)
Repayments of loans from employees, related parties and third parties	28,938	2,225	1,385
Principal collection from financing receivables	13,307	240	174
Proceeds from disposal of property and equipment	828	3,244	7,508
Others	11,739	(5,811)	(9,608)
Net cash provided by (used in) continuing investing activities	690,170	(846,857)	(510,284)
Net cash provided by discontinued investing activities	92,371	1,636,450	—
Net cash provided by (used in) investing activities	782,541	789,593	(510,284)

**CONSOLIDATED STATEMENTS OF CASH FLOWS FOR THE YEARS ENDED DECEMBER 31, 2020, 2021 AND 2022  
(CONTINUED)**

(All amounts in thousands)

	<b>For the year ended December 31,</b>		
	<b>2020</b>	<b>2021</b>	<b>2022</b>
	US\$	US\$	US\$
<b>Cash flows from financing activities</b>			
Capital contributions from the non-controlling interest shareholders	1,526	5,508	17,045
Dividends paid to shareholders	(64,558)	(160,143)	(145,925)
Dividends paid to non-controlling interests in a subsidiary	(326)	(47)	—
Purchase of non-controlling interests and redeemable non-controlling interests	(2,615)	(216)	—
Purchase of capped call option in relation to repurchase of common shares	12,264	—	—
Proceeds from bank borrowings	155,708	39,676	44,504
Repayment of bank borrowings	(132,850)	(147,618)	(11,718)
Repurchase of common shares	(106,024)	(398,637)	(138,079)
Cash paid on extinguishment of convertible bonds	—	(62,059)	(87,736)
Deemed contribution from Huya	141	—	—
Net cash used in continuing financing activities	<u>(136,734)</u>	<u>(723,536)</u>	<u>(321,909)</u>
Net cash provided by discontinued financing activities	1,232	—	—
Net cash used in financing activities	<u>(135,502)</u>	<u>(723,536)</u>	<u>(321,909)</u>
Net increase (decrease) in cash, cash equivalents and restricted cash	1,142,185	276,473	(515,699)
Cash, cash equivalents and restricted cash at the beginning of the year	652,427	1,819,571	2,134,492
Effect of exchange rate changes on cash, cash equivalents and restricted cash	24,959	38,448	(53,233)
<b>Cash, cash equivalents and restricted cash at the end of the year</b>	<b>1,819,571</b>	<b>2,134,492</b>	<b>1,565,560</b>
Less: Cash, cash equivalents and restricted cash of held for sales at the end of the year	31,600	—	—
Cash, cash equivalents and restricted cash of continuing operations at the end of the year	<u>1,787,971</u>	<u>2,134,492</u>	<u>1,565,560</u>

	<b>For the year ended December 31,</b>		
	<b>2020</b>	<b>2021</b>	<b>2022</b>
	US\$	US\$	US\$

**Supplemental disclosure of cash flows information of continuing operation:**

—Cash paid for interest, net of amounts capitalized	(14,324)	(15,485)	(8,706)
—Income taxes paid	(67,796)	(29,929)	(19,150)

**Supplemental disclosures of non-cash investing and financing activities of continuing operation:**

—Accrued capital expenditure	15,946	10,407	29,501
—Disposal of investments and business	—	819	144

The accompanying notes are an integral part of these consolidated financial statements.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 1. Organization and principal activities

#### (a) Organization and principal activities

JOYY Inc. (the “Company” or “JOYY”), together with its subsidiaries, its VIEs (also referred to as VIEs and their subsidiaries as a whole, where appropriate) (collectively, the “Group”), is a leading global social media platform, offering users around the world a uniquely engaging and immersive experience across various video-based products and services, such as live streaming, short-form videos and video communication.

On April 3, 2020, the Company signed an agreement with Linen Investment Limited, a wholly owned subsidiary of Tencent Holdings Limited (“Tencent”) to sell its 16,523,819 Class B ordinary shares of HUYA Inc. (NYSE: HUYA) (“Huya”), a subsidiary of the Group, for a cash consideration of approximately US\$262.6 million, pursuant to Tencent’s exercise of its option to purchase additional shares of Huya. Upon the closing of the share transfer, the Group held 68,374,463 Class B ordinary shares of Huya, representing approximately 31.2% equity interest and 43.0% of the total voting power calculated based on the total issued and outstanding shares of Huya after this transaction. As a result, Huya ceased to be a subsidiary of the Group and the Group accounted for the investment in Huya using the equity method. The details of this disposal are disclosed in Note 3(b).

On August 10, 2020, the Company entered into a definitive share transfer agreement with Linen Investment Limited to sell its 30,000,000 Class B ordinary shares of Huya for a cash consideration of approximately US\$810.0 million. Upon the closing of such share transfer, the Company held 38,374,463 Class B ordinary shares of Huya, representing approximately 17.5% equity interest and 24.1% of the total voting power calculated based on the total issued and outstanding shares of Huya after this transaction.

On November 16, 2020, the Company entered into definitive agreements with Baidu, Inc. (Nasdaq: BIDU) (“Baidu”). Pursuant to the agreements, Baidu would acquire JOYY’s domestic video-based entertainment live streaming business (“YY Live”), which includes YY mobile app, YY.com website and PC YY, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. Out of the total cash consideration of US\$3.6 billion, consideration of US\$300 million is subject to adjustment based on the achievement of certain conditions of YY Live. Subsequently, the sale was substantially completed on February 8, 2021, with certain matters, including necessary regulatory approvals with respect to this transaction from government authorities, remaining to be completed in the future. The details of this disposal are disclosed in Note 3(a).

Starting from January 1, 2021, the Company changed its reporting currency from RMB to US\$ since a majority of Company’s revenues and expenses are now denominated in U.S. dollar after the disposal of YY Live business. The alignment of the reporting currency with the underlying operations better illustrates the Company’s results of operations for each period. The Company has applied the change of reporting currency retrospectively to its financial statements as presented as well as the notes thereto.

#### (b) Initial Public Offering

The Company completed its initial public offering (“IPO”) on November 21, 2012 on the “NASDAQ Global Select Market”.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**1. Organization and principal activities (continued)**

**(c) Principal subsidiaries and VIEs**

The details of the principal subsidiaries and VIEs through which the Company conducts its business operations as of December 31, 2022 are set out below:

Name	Place of incorporation	Date of incorporation or acquisition	% of direct or indirect economic ownership	Principal activities
<b>Principal subsidiaries</b>				
Duowan Entertainment Corporation (“Duowan BVI”)	British Virgin Islands (“BVI”)	November 6, 2007	100 %	Investment holding
Huanju Shidai Technology (Beijing) Co., Ltd. (“Beijing Huanju Shidai”)	PRC	March 19, 2008	100 %	Investment holding
Guangzhou Huanju Shidai Information Technology Co., Ltd. (“Guangzhou Huanju Shidai”)	PRC	December 2, 2010	100 %	Software development
HAGO Singapore PTE. LTD. (“Hago Singapore”)	Singapore	May 7, 2018	100 %	Internet value added services
Bigo Inc.	Cayman Islands	March 4, 2019	100 %	Investment holding
Bigo Technology Pte. Ltd. (“Bigo Singapore”)	Singapore	March 4, 2019	100 %	Investment holding, operation of live streaming platform
Bigo (Hong Kong) Limited (“Bigo HK”)	Hong Kong	March 4, 2019	100 %	Investment holding
Guangzhou BaiGuoYuan Information Technology Co., Ltd. (“BaiGuoYuan Technology”)	PRC	March 4, 2019	100 %	Software development and provision of information technology services
<b>Principal VIEs</b>				
Guangzhou Huaduo Network Technology Co., Ltd. (“Guangzhou Huaduo”)	PRC	April 11, 2005		Holder of internet content provider licenses and internet value added services
Guangzhou BaiGuoYuan Network Technology Co., Ltd. (“Guangzhou BaiGuoYuan”)	PRC	March 4, 2019		Holder of internet content provider licenses and internet value added services

**(d) Variable Interest Entities**

To comply with PRC laws and regulations that prohibit or restrict foreign ownership of companies that provide internet-content, the Group conducts its operations primarily through its principal VIEs, Guangzhou Huaduo and Guangzhou BaiGuoYuan, which hold the internet value-added service license and approvals to provide such internet services in the PRC. The Company, via its subsidiaries Beijing Huanju Shidai and BaiGuoYuan Technology, controlled Guangzhou Huaduo and Guangzhou BaiGuoYuan, respectively, through the exercise of contractual agreements discussed below.

Before the disposal of Huya in April 2020, the Group also conducted its operations through its principal VIE, Guangzhou Huya Information Technology Co., Ltd. (“Guangzhou Huya”), which holds the internet value-added service license and approvals to provide such internet services in the PRC.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**1. Organization and principal activities (continued)**

**(d) Variable Interest Entities (continued)**

**(i) VIE agreements amongst Beijing Huanju Shidai, Guangzhou Huaduo and its nominee shareholders**

The following is a summary of the contractual arrangements entered among Beijing Huanju Shidai, Guangzhou Huaduo and its nominee shareholders:

- Exclusive Technology Support and Technology Services Agreement

Under the exclusive technology support and technology services agreement between Beijing Huanju Shidai and Guangzhou Huaduo, Beijing Huanju Shidai has the exclusive right to provide to Guangzhou Huaduo technology support and technology services related to all technologies needed for its business. Beijing Huanju Shidai owns the exclusive intellectual property rights created as a result of the performance of this agreement. The service fee payable by Guangzhou Huaduo to Beijing Huanju Shidai is determined by various factors, including the expenses Beijing Huanju Shidai incurs for providing such services and Guangzhou Huaduo's revenues, and the amount of service fee is ultimately (unilaterally) determined by Beijing Huanju Shidai. The term of this agreement will expire in 2028 and may be extended with Beijing Huanju Shidai's written confirmation prior to the expiration date. Beijing Huanju Shidai is entitled to terminate the agreement at any time by providing 30 days' prior written notice to Guangzhou Huaduo.

- Exclusive Business Cooperation Agreement

Under the exclusive business cooperation agreement between Beijing Huanju Shidai and Guangzhou Huaduo, Beijing Huanju Shidai has the exclusive right to provide to Guangzhou Huaduo technology support, business support and consulting services related to the services provided by Guangzhou Huaduo, the scope of which is to be determined by Beijing Huanju Shidai from time to time. Beijing Huanju Shidai owns the exclusive intellectual property rights created as a result of the performance of this agreement. The service fee payable by Guangzhou Huaduo to Beijing Huanju Shidai is a certain percentage of its earnings. The term of this agreement will expire in 2038 and may be extended with Beijing Huanju Shidai's written confirmation prior to the expiration date. Beijing Huanju Shidai is entitled to terminate the agreement at any time by providing 30 days' prior written notice to Guangzhou Huaduo.

- Exclusive Option Agreement

The parties to the exclusive option agreement are Beijing Huanju Shidai, Guangzhou Huaduo and each of the shareholders of Guangzhou Huaduo. Under the exclusive option agreement, each of the shareholders of Guangzhou Huaduo irrevocably granted Beijing Huanju Shidai or its designated representative(s) an exclusive option to purchase, to the extent permitted under PRC law, all or part of his or its equity interests in Guangzhou Huaduo. Beijing Huanju Shidai or its designated representative(s) have sole discretion as to when to exercise such options, either in part or in full. Without Beijing Huanju Shidai's prior written consent, Guangzhou Huaduo's shareholders shall not sell, transfer, mortgage or otherwise dispose their equity interests in Guangzhou Huaduo. The term of this agreement is ten years and may be extended at Beijing Huanju Shidai's sole discretion.

- Powers of Attorney

Pursuant to the irrevocable power of attorney executed by each shareholder of Guangzhou Huaduo, each such shareholder appointed Beijing Huanju Shidai as its attorney-in-fact to exercise such shareholders' rights in Guangzhou Huaduo, including, without limitation, the power to vote on its behalf on all matters of Guangzhou Huaduo requiring shareholder approval under PRC laws and regulations and the articles of association of Guangzhou Huaduo. Each power of attorney will remain in force until the shareholder ceases to hold any equity interest in Guangzhou Huaduo.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**1. Organization and principal activities (continued)**

**(d) Variable Interest Entities (continued)**

**(i) VIE agreements amongst Beijing Huanju Shidai, Guangzhou Huaduo and its nominee shareholders (continued)**

- Share Pledge Agreement

Pursuant to the share pledge agreement between Beijing Huanju Shidai and the shareholders of Guangzhou Huaduo, the shareholders of Guangzhou Huaduo have pledged all of their equity interests in Guangzhou Huaduo to Beijing Huanju Shidai to guarantee the performance by Guangzhou Huaduo and its shareholders' performance of their respective obligations under the exclusive business cooperation agreement, exclusive option agreement, exclusive technology support and technology services agreement and powers of attorney. If Guangzhou Huaduo and/or its shareholders breach their contractual obligations under those agreements, Beijing Huanju Shidai, as pledgee, will be entitled to certain rights, including the right to sell the pledged equity interests.

**(ii) VIE agreements amongst BaiGuoYuan Technology, Guangzhou BaiGuoYuan and its nominee shareholders**

The following is a summary of the contractual arrangements entered among BaiGuoYuan Technology, Guangzhou BaiGuoYuan and its nominee shareholders.

- Exclusive Business Cooperation Agreement

Under the exclusive business cooperation agreement between BaiGuoYuan Technology and Guangzhou BaiGuoYuan, BaiGuoYuan Technology has the exclusive right to provide Guangzhou BaiGuoYuan technology support, business support and consulting services related to the services provided by Guangzhou BaiGuoYuan, the scope and service fees of which is to be determined by BaiGuoYuan Technology from time to time. BaiGuoYuan Technology owns the exclusive intellectual property rights created as a result of the performance of this agreement. BaiGuoYuan Technology receives substantially all of the economic interest returns generated by Guangzhou BaiGuoYuan. The term of this agreement will not expire unless with BaiGuoYuan Technology's written confirmation to terminate the agreement.

- Exclusive Option Agreement

The parties to the exclusive option agreement are BaiGuoYuan Technology, Guangzhou BaiGuoYuan and each of the shareholders of Guangzhou BaiGuoYuan. Under the exclusive option agreement, each of the shareholders of Guangzhou BaiGuoYuan irrevocably granted BaiGuoYuan Technology or its designated representative(s) an exclusive option to purchase, to the extent permitted under the PRC laws, all or part of his or its equity interests in Guangzhou BaiGuoYuan. BaiGuoYuan Technology or its designated representative(s) have sole discretion as to when to exercise such options, either in part or in full. Without BaiGuoYuan Technology's prior written consent, Guangzhou BaiGuoYuan's shareholders shall not sell, transfer, mortgage or otherwise dispose their equity interests in Guangzhou BaiGuoYuan. The term of this agreement is ten years and may be extended at BaiGuoYuan Technology's sole discretion.

- Powers of Attorney

Pursuant to the irrevocable power of attorney executed by each shareholder of Guangzhou BaiGuoYuan, each such shareholder appointed BaiGuoYuan Technology as its attorney-in-fact to exercise such shareholders' rights in Guangzhou BaiGuoYuan, including, without limitation, the power to vote on its behalf on all matters of Guangzhou BaiGuoYuan requiring shareholders' approval under the PRC laws and regulations and the articles of association of Guangzhou BaiGuoYuan. Each power of attorney will remain in force until the shareholder ceases to hold any equity interest in Guangzhou BaiGuoYuan.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**1. Organization and principal activities (continued)**

**(d) Variable Interest Entities (continued)**

**(ii) VIE agreements amongst BaiGuoYuan Technology, Guangzhou BaiGuoYuan and its nominee shareholders (continued)**

- Share Pledge Agreement

Pursuant to the share pledge agreement between BaiGuoYuan Technology and the shareholders of Guangzhou BaiGuoYuan, the shareholders of Guangzhou BaiGuoYuan have pledged all of their equity interests in Guangzhou BaiGuoYuan to BaiGuoYuan Technology to guarantee the performance by Guangzhou BaiGuoYuan and its shareholders' performance of their respective obligations under the exclusive business cooperation agreement, exclusive option agreement and powers of attorney. If Guangzhou BaiGuoYuan and/or its shareholders breach their contractual obligations under those agreements, BaiGuoYuan Technology, as pledgee, will be entitled to voting right and the right to sell the pledged equity interests.

Through the aforementioned contractual agreements, Guangzhou Huaduo, Guangzhou BaiGuoYuan and Guangzhou Huya are considered VIEs in accordance with Generally Accepted Accounting Principles in the United States ("U.S. GAAP") because the Company, through Beijing Huanju Shidai, BaiGuoYuan Technology and Huya Technology, respectively, has the ability to:

- exercise effective control over Guangzhou Huaduo, Guangzhou BaiGuoYuan and Guangzhou Huya;
- receive substantially all of the economic benefits and residual returns, and absorb substantially all the risks and expected losses from these VIEs as if it were their sole shareholder; and
- have an exclusive option to purchase all of the equity interests in these VIEs.

**(iii) VIE agreements amongst Huya Technology (defined as below), Guangzhou Huya and its nominee shareholders**

In 2017, Huya undertook a reorganization (the "Huya Reorganization") through setting up Guangzhou Huya Technology Co., Ltd. ("Huya Technology"), a wholly owned subsidiary, and entering into a series of VIE agreements with Guangzhou Huya and its nominee shareholders. The Huya Reorganization was completed on July 10, 2017.

The following is a summary of the contractual arrangements entered among Huya Technology, Guangzhou Huya and its nominee shareholders for the year ended December 31, 2020:

- Exclusive Business Cooperation Agreement

Huya Technology and Guangzhou Huya entered into exclusive business cooperation agreement under which Guangzhou Huya engages Huya Technology as its exclusive provider of technology support, business support and consulting services. Guangzhou Huya shall pay to Huya Technology service fees, which is determined by Huya Technology at its sole discretion. Huya Technology shall have exclusive and proprietary rights and interests in all rights, ownership, interests and intellectual properties arising from the performance of the agreement. During the term of the agreement, Guangzhou Huya shall not accept any consultations and/or services provided by any third party and shall not cooperate with any third party for the provision of identical or similar services without prior consent of Huya Technology. The term of this agreement is ten years and will be extended for ten years automatically after expiration, unless otherwise agreed by both parties in a written agreement. Huya Technology is entitled to terminate the agreement at any time by providing 30 days' prior written notice to Guangzhou Huya.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 1. Organization and principal activities (continued)

#### (d) Variable Interest Entities (continued)

##### (iii) VIE agreements amongst Huya Technology, Guangzhou Huya and its nominee shareholders (continued)

- Exclusive Purchase Option Agreement

Under the exclusive purchase option agreement, the nominee shareholders of Guangzhou Huya have granted Huya Technology or its designated representative(s) irrevocably an exclusive option to purchase, to the extent permitted under PRC law, all or part of their equity interests in Guangzhou Huya at the lowest price permitted by the laws of the PRC applicable at the time of exercise. Huya Technology or its designated representative(s) have sole discretion as to when to exercise such options, either in part or in full. Without Huya Technology's prior written consent, the nominee shareholders shall not sell, transfer, mortgage or otherwise dispose their equity interests in Guangzhou Huya. The term of this agreement is ten years and may be extended for another ten years at Huya Technology's sole discretion. Huya Technology is entitled to terminate the agreement at any time by providing 30 days' prior written notice to Guangzhou Huya.

- Equity Pledge Agreement

Pursuant to the equity pledge agreement, the nominee shareholders of Guangzhou Huya have pledged all of their equity interests in Guangzhou Huya to Huya Technology to guarantee the performance by Guangzhou Huya and its nominee shareholders' performance of their respective obligations under the exclusive business cooperation agreement, exclusive purchase option agreement, and powers of attorney. The nominee shareholders shall not transfer or assign the equity interests, the rights and obligations in the equity pledge agreement or create or permit to create any pledges which may have an adverse effect on the rights or benefits of Huya Technology without Huya Technology's written consent. If Guangzhou Huya and/or its nominee shareholders breach their contractual obligations under those agreements, Huya Technology, as pledgee, will be entitled to sell the pledged equity interests.

- Power of Attorney

Pursuant to the irrevocable power of attorney, Huya Technology is authorized by each of the nominee shareholders as its attorney-in-fact to exercise such nominee shareholders' rights in Guangzhou Huya, including, without limitation, the power to vote on its behalf on all matters of Guangzhou Huya requiring nominee shareholder approval under PRC laws and regulations and the articles of association of Guangzhou Huya and rights to information relating to all business aspects of Guangzhou Huya. The term of this agreement is ten years and will be automatically extended for one more year indefinitely. Huya Technology has sole discretion to terminate the agreement at any time by providing 30 days' prior written notice to Guangzhou Huya.

In addition to the aforementioned contractual agreements, Beijing Huanju Shidai also entered into similar contractual agreements with Beijing Tuda Science and Technology Co., Ltd. ("Beijing Tuda"). Guangzhou Huanju Shidai also entered into similar contractual agreements with Guangzhou Xuancheng Network Technology Co., Ltd. ("Guangzhou Xuancheng"), Guangzhou Yueyi Network Technology Partnership (LP) ("Guangzhou Yueyi"), Guangzhou Xuanyi Network Technology Partnership (LP) ("Guangzhou Xuanyi") and Guangzhou Ruicheng Network Technology Co., Ltd. ("Guangzhou Ruicheng"). Guangzhou Wangxing Information Technology Co., Ltd. ("Guangzhou Wangxing") also entered into similar contractual agreements with Chengdu Yunbu Network Technology Co., Ltd. ("Chengdu Yunbu"), Chengdu Luota Network Technology Co., Ltd. ("Chengdu Luota") and Chengdu Jiyue Network Technology Co., Ltd. ("Chengdu Jiyue"). BaiGuoYuan Technology also entered into similar contractual agreements with Guangzhou Shangying Network Technology Co., Ltd. ("Guangzhou Shangying"), Guangzhou Fangu Network Technology Partnership (LP) ("Guangzhou Fangu"), Guangzhou Wanyin Network Technology Partnership (LP) ("Guangzhou Wanyin") and Guangzhou Qianxun Network Technology Co., Ltd. ("Guangzhou Qianxun"). Through these contractual agreements, Beijing Tuda, Guangzhou Xuancheng, Guangzhou Yueyi, Guangzhou Xuanyi, Guangzhou Ruicheng, Chengdu Yunbu, Chengdu Luota, Chengdu Jiyue, Guangzhou Shangying, Guangzhou Fangu, Guangzhou Wanyin and Guangzhou Qianxun are considered VIEs of the Group. The VIEs disclosed in this paragraph are not material and do not have any significant impact on the Company's results and financial position.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 1. Organization and principal activities (continued)

#### (d) Variable Interest Entities (continued)

In accordance with the aforementioned agreements, the Company has power to direct activities of the VIEs, and can have assets transferred out of the VIEs. These agreements provide the Company with a controlling financial interest in each of the VIEs (as well as being the primary beneficiary for each) and provide basis for the consolidation of the financial results of each VIE under US GAAP (ASC 810). The Company considers that there is no asset in the VIEs that can be used only to settle obligations of the VIEs, except for registered capital and PRC statutory reserves of the VIEs amounting to US\$989,061 as of December 31, 2022. The VIEs were incorporated as limited liability companies under the PRC Company Law and in accordance with the PRC Company Law, the creditors do not have recourse to the general credit of the Company for all the liabilities of the VIEs as the Company does not have direct legal ownership over the VIEs.

Currently there is no contractual arrangement that could require the Company to provide additional financial support to the VIEs. As the Company is conducting its PRC internet value-added services business through the VIEs, the Company will, if needed, provide such support on a discretionary basis in the future, which could expose the Company to a loss.

There is no VIE where the Company has variable interest but is not the primary beneficiary.

Please refer to Note 4(a) for the consolidated financial information of the Group's VIEs as of December 31, 2020, 2021 and 2022.

### 2. Principal accounting policies

#### (a) Basis of presentation

The consolidated financial statements of the Group have been prepared in accordance with the U.S. GAAP to reflect the financial position, results of operations and cash flows of the Group. Significant accounting policies followed by the Group in the preparation of the consolidated financial statements are summarized below.

#### (b) Consolidation

The Group's consolidated financial statements include the financial statements of the Company, its subsidiaries and VIEs for which the Company or its subsidiaries is the primary beneficiary. All transactions and balances among the Company, its subsidiaries and VIEs have been eliminated upon consolidation.

A subsidiary is an entity in which the Company, directly or indirectly, controls more than one half of the voting powers; or has the power to appoint or remove the majority of the members of the board of directors; or to cast a majority of votes at the meeting of directors; or has the power to govern the financial and operating policies of the investee under a statute or agreement among the shareholders or equity holders.

A VIE is an entity in which the Company, or its subsidiary, through contractual agreements, bears the risks of, and enjoys the rewards normally associated with ownership of the entity, and therefore the Company or its subsidiary is the primary beneficiary of the entity. In determining whether the Company or its subsidiaries are the primary beneficiary, the Company considered whether it has the power to direct activities that are significant to the VIEs economic performance, and also the Company's obligation to absorb losses of the VIEs that could potentially be significant to the VIEs or the right to receive benefits from the VIEs that could potentially be significant to the VIEs. Beijing Huanju Shidai, Huya Technology, BaiGuoYuan Technology, Guangzhou Wangxing and ultimately the Company hold all the variable interests of the VIEs and have been determined to be the primary beneficiaries of the VIEs. As a result of the share transfer to Tencent on April 3, 2020, the Group no longer consolidate the results of operations of Huya.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (b) Consolidation (continued)

The Company deconsolidates its subsidiaries or business in accordance with ASC 810 as of the date the Company ceased to have a controlling financial interest in the subsidiaries.

The Company accounts for the deconsolidation of its subsidiaries or business by recognizing a gain or loss in net income/loss attributable to the Company in accordance with ASC 810. This gain or loss is measured at the date the subsidiaries are deconsolidated as the difference between (a) the aggregate of the fair value of any consideration received, the fair value of any retained non-controlling interest in the subsidiaries being deconsolidated, and the carrying amount of any non-controlling interest in the subsidiaries being deconsolidated, including any accumulated other comprehensive income/loss attributable to the non-controlling interest, and (b) the carrying amount of the assets and liabilities of the subsidiaries being deconsolidated.

#### (c) Use of estimates

The preparation of the Company's consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, mezzanine equity and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period in the consolidated financial statements and accompanying notes. Actual results could differ materially from such estimates. The Company believes that the assessment of the revenue recognition for contracts with multiple performance obligations, income taxes, expected credit loss of receivables, purchase price allocation in a business combination, estimated useful lives of intangible assets, impairment assessment of goodwill, long-lived assets and intangible assets, and subsequent adjustments due to significant observable price change for the equity investments without readily determinable fair values and not accounted for by the equity method, represent critical accounting policies that reflect the more significant judgments and estimates used in the preparation of its consolidated financial statements.

Management bases the estimates on historical experience and on various other assumptions that are believed to be reasonable, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results could differ from these estimates.

#### (d) Foreign currency translation

The Group uses US\$ as its reporting currency. The functional currency of the Company and its subsidiaries incorporated in the Cayman Islands, British Virgin Islands, Hong Kong, Singapore, United States, India, Egypt and other regions is US\$ or their respective local currency, while the functional currency of the other subsidiaries incorporated in Mainland China is Renminbi ("RMB"). In the consolidated financial statements, the financial information of the Company and its subsidiaries, which use RMB or their respective local currency as their functional currency, have been translated into US\$. Assets and liabilities are translated at the exchange rates on the balance sheet date, equity amounts are translated at historical exchange rates, and revenues, expenses, gains, and losses are translated using the average exchange rate for the period. Translation adjustments arising from these are reported as foreign currency translation adjustments and are shown as a component of other comprehensive income or loss in the statement of comprehensive income.

Foreign currency transactions denominated in currencies other than functional currency are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Monetary assets and liabilities denominated in foreign currencies at the balance sheet date are remeasured at the applicable rates of exchange in effect at that date. Foreign exchange gains and losses resulting from the settlement of such transactions and from remeasurement at year-end are recognized in foreign currency exchange gains/losses, net in the consolidated statement of comprehensive income.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (e) Cash and cash equivalents and restricted cash

Cash includes currency on hand and deposits held by financial institutions that can be added to or withdrawn without limitation. Cash equivalents represent short-term and highly liquid investments placed with banks, which have both of the following characteristics:

- i) Readily convertible to known amounts of cash throughout the maturity period;
- ii) So near their maturity that they present insignificant risk of changes in value because of changes in interest rates.

The Group considers all highly liquid investments with original maturities of three months or less as cash equivalents.

Cash, cash equivalents and restricted cash presented on the consolidated statements of cash flows included cash, cash equivalents, restricted cash and restricted cash within restricted short-term deposits in the consolidated balance sheets.

#### (f) Short-term deposits

Short-term deposits represent time deposits placed with banks with original maturities between three months and one year. Interest earned is recorded as interest income in the consolidated statements of comprehensive income during the periods presented.

#### (g) Long-term deposits

Long-term deposits represent time deposits placed with banks with original maturities more than one year. Interest earned is recorded as interest income in the consolidated statements of comprehensive income during the periods presented.

#### (h) Short-term investments

For investments in financial instruments with a variable interest rate indexed to the performance of underlying assets, the Group elected the fair value method at the date of initial recognition and carried these investments subsequently at fair value. Changes in fair values are reflected in the consolidated statements of comprehensive income.

#### (i) Accounts receivable

In June 2016, the FASB issued ASU 2016-13: Financial Instruments-Credit Losses (Topic 326), which requires entities to measure all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. This replaces the existing incurred loss model and is applicable to the measurement of credit losses on financial assets measured at amortized cost. The Group adopted ASU 2016-13 from January 1, 2020 and maintains an allowance for credit losses in accordance with Topic 326 and records the allowance for credit losses as an offset to accounts receivable. The Company assesses collectability by reviewing accounts receivable on a collective basis where similar characteristics exist, primarily based on similar business line, service or product offerings and on an individual basis when the Company identifies specific customers with known disputes or collectability issues. The Company using modified-retrospective transition approach with a cumulative-effect adjustment to shareholders' equity amounting to US\$1.7 million recognized as of January 1, 2020.

#### (j) Financing receivables

Financing receivables represent receivables derived from finance business, including micro-credit personal loans and corporate loans. The Group has ceased to extend credit in finance business since 2019. Financing receivables are recorded at amortized cost, reduced by a valuation allowance estimated as of the balance sheet date. The amortized cost is equal to the unpaid principal amount, accrued interest receivables and net deferred origination costs. The origination costs are the direct costs attributable to originating the financing charged by third-party companies. The cash flows related to the principal of finance business are included in the investing activities category in the consolidated statement of cash flows.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (j) Financing receivables (continued)

The Group assesses the allowance for credit losses on financing receivables at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. The Group adopted ASU 2016-13 from January 1, 2020 and maintains an allowance for credit losses in accordance with Topic 326 and records the allowance for credit losses as an offset to financing receivable. The Company assesses collectability by reviewing financing receivable on a collective basis where similar characteristics exist, primarily based on similar business line, service or product offerings and on an individual basis when the Company identifies specific customers with known disputes or collectability issues.

#### (k) Investments

##### *Equity Investments Accounted for Using the Equity Method*

The Group accounts for its equity investment over which it has significant influence but does not own a majority equity interest or otherwise control using the equity method. The Group adjusts the carrying amount of the investment and recognizes investment income or loss for share of the earnings or loss of the investee after the date of investment. The Group assesses its equity investment for other-than-temporary impairment (which would require an adjustment to estimated fair value) by considering factors including, but not limited to, current economic and market conditions, operating performance of the entities, including current earnings trends and undiscounted cash flows, and other entity-specific information. The fair value determination, particularly for investment in privately held entities, requires judgment to determine appropriate estimates and assumptions. Changes in these estimates and assumptions could affect the calculation of the fair value of the investment and determination of whether any identified impairment is other-than-temporary.

##### *Equity Investments with Readily Determinable Fair Values*

Equity investments with readily determinable fair values are measured and recorded at fair value using the market approach based on the quoted prices in active markets at the reporting date. The Group classifies the valuation techniques that use these inputs as Level 1 of fair value measurements. Gains or losses arising from changes in fair value of these investments are recorded in earnings.

##### *Equity Investments without Readily Determinable Fair Values*

Equity investments without readily determinable fair values and not accounted for under the equity method are recorded at cost, less impairment, adjusted for subsequent observable price changes on a nonrecurring basis, and report changes in the carrying value of the equity investments in current earnings. Changes in the carrying value of the equity investments are required to be made whenever there are observable price changes in orderly transactions for the identical or similar investment of the same issuer. The implementation guidance notes that an entity should make a “reasonable effort” to identify price changes that are known or that can reasonably be known.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(k) Investments (continued)**

*Available-for-sale debt investments*

Available-for-sale debt investment of the Group are redeemable preference shares issued by private companies that is redeemable at the Group's option, which is measured at fair value. Interest income is recognized in earnings. All other changes in the carrying amount of this debt investment are recognized in other comprehensive income (loss).

**(l) Property and equipment**

Property and equipment are stated at historical cost less accumulated depreciation and impairment loss, if any. Depreciation is calculated using the straight-line method over their estimated useful lives. Residual rate is determined based on the economic value of the property and equipment at the end of the estimated useful lives as a percentage of the original cost.

	<b>Estimated useful lives</b>	<b>Residual rate</b>
Buildings	40 years	0 %
Servers, computers and equipment	3-5 years	0%-5 %
Leasehold improvements	Shorter of lease term or 5 years	0 %
Renovation of buildings	10 years	0 %
Motor vehicles	4 years	0%-5 %
Furniture, fixture and office equipment	3-5 years	0%-5 %

Expenditures for maintenance and repairs are expensed as incurred. The gain or loss on the disposal of property and equipment is the difference between the net sales proceeds and the carrying amount of the relevant assets and is recognized in the consolidated statements of comprehensive income.

All direct and indirect costs that are related to the construction of property and equipment and incurred before the assets are ready for their intended use are capitalized as construction in progress. Construction in progress is transferred to specific property and equipment items and depreciation of these assets commences when they are ready for their intended use.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****2. Principal accounting policies (continued)****(n) Intangible assets**

Intangible assets mainly consist of trademark, customer relationships, non-compete agreement, operating rights, software, domain names, technology, license and others. Identifiable intangible assets are carried at acquisition cost less accumulated amortization and impairment loss, if any. Finite-lived intangible assets are tested for impairment if impairment indicators arise. Amortization of finite-lived intangible assets is computed using the straight-line method over their estimated useful lives, which are as follows:

	<u>Estimated useful lives</u>
Trademark	6 - 10 years
Customer relationships	3 years
Licenses	15 years
Non-compete agreement	1 year
Operating rights	Shorter of the economic life or contract terms
Software	1-5 years
Domain names	10-15 years
Technology	5 - 6 years
Others	Shorter of the economic life or contract terms

**(o) Land use rights**

Land use rights are carried at cost less accumulated amortization. Amortization of the land use rights is made on straight-line basis over 40 years from the date when the Group first obtained the land use rights certificate from the local authorities. In 2021, we entered into a long-term borrowing agreement with the Agricultural Bank of China as borrower. The loan was pledged by our entitlement to the rental income from such building and our land use right to the parcel of land located in Guangzhou, which amounted to US\$227.6 million as of December 31, 2022. In 2021 and 2022, we drew down an aggregate principal amount of US\$12.4 million under such loan facility. As of December 31, 2022, the total payments due for our loan obligations amounted to US\$0.4 million.

**(p) Impairment of long-lived assets**

For long-lived assets other than investments and goodwill whose impairment policy is discussed elsewhere in the financial statements, the Group evaluates for impairment whenever events or changes (triggering events) indicate that the carrying amount of an asset may no longer be recoverable. The Group assesses the recoverability of the long-lived assets by comparing the carrying value of the long-lived assets to the estimated undiscounted future cash flows expected to receive from use of the assets group and their eventual disposition. Such assets are considered to be impaired if the sum of the expected undiscounted cash flows is less than the carrying amount of the assets. The impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the fair value of the assets. The Group tests impairment of long-lived assets at the asset group level when impairment indicator appeared and recognizes impairment in the event that the carrying value exceeds the fair value of each reporting unit.

The impairment charges of long-lived assets recorded in general and administrative expenses for the years ended December 31, 2020, 2021 and 2022 were amounting to nil, nil, and US\$1,356 respectively.

**(q) Goodwill**

Goodwill represents the excess of the purchase price over the amounts assigned to the fair value of the assets acquired and the liabilities assumed of an acquired business.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (r) Annual test for impairment of goodwill

The Group assesses goodwill for impairment in accordance with ASC Subtopic 350-20, Intangibles—Goodwill and Other: Goodwill (“ASC 350-20”), which requires that goodwill be tested for impairment at the reporting unit level at least annually and more frequently upon the occurrence of certain events, as defined by ASC 350-20. A reporting unit is defined as an operating segment or one level below an operating segment referred to as a component. The Group determines its reporting units by first identifying its operating segments, and then assesses whether any components of these segments constituted a business for which discrete financial information is available and where the Company’s segment manager regularly reviews the operating results of that component. The Group determined that it has three reporting units.

In January 2017, the FASB issued ASU 2017-04, simplifying the Test for Goodwill Impairment, which simplifies the accounting for goodwill impairment by eliminating Step two from the goodwill impairment test. If the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, versus determining an implied fair value in Step two to measure the impairment loss. The Group adopted this guidance on a prospective basis on January 1, 2020 with no material impact on its consolidated financial statements and related disclosures as a result of adopting the new standard.

The Group has the option to assess qualitative factors first to determine whether it is necessary to perform the quantitative impairment test in accordance with ASC 350-20. If the Group believes, as a result of the qualitative assessment, that it is more-likely-than-not that the fair value of the reporting unit is less than its carrying amount, the quantitative impairment test described above is required. Otherwise, no further testing is required. In the qualitative assessment, the Group considers primary factors such as industry and market considerations, overall financial performance of the reporting unit, and other specific information related to the operations. The quantitative goodwill impairment test, used to identify both the existence of impairment and the amount of impairment loss, compares the fair value (determined using a discounted cash flow analysis) of a reporting unit with its carrying amount, including goodwill. If the carrying amount of a reporting unit is greater than zero and its fair value exceeds its carrying amount, goodwill of the reporting unit is considered not impaired.

In the annual goodwill impairment quantitative assessment, judgements are made as to the assumptions regarding expected future cash flows and the impact of market conditions on those assumptions. Future events and changing market conditions may impact the assumptions as to revenue, profit margin, growth rate or other factors that may result in changes in the estimates of future cash flows. The Company concluded that the carrying amount of a certain reporting unit exceeded its respective fair value and recorded an impairment charge of US\$14,830 for the year ended December 31, 2022, respectively. Although the Company believes the assumptions that it has used in testing for impairment are reasonable, significant changes in any one of the assumptions could produce a significant adverse impact.

#### (s) Convertible bonds

Before January 1, 2021, the Company determines the appropriate accounting treatment of its convertible bonds in accordance with the terms in relation to the conversion feature, call and put options, and beneficial conversion feature. After considering the impact of such features, the Group may account for such instrument as a liability in its entirety, or separate the instrument into debt and equity components following the respective guidance described under ASC 815 Derivatives and Hedging and ASC 470 Debt. The debt discount, if any, together with related issuance cost are subsequently amortized as interest expense, using the effective interest method, from the issuance date to the earliest conversion date. Interest expenses are recognized in the statement of comprehensive income in the period in which they are incurred.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (s) Convertible bonds (continued)

On January 1, 2021, the Company early adopted ASU 2020-06, “Accounting for Convertible Instruments and Contracts in an Entity’s Own Equity” using modified-retrospective transition approach. Pursuant to ASU 2020-06, the embedded conversion features no longer are separated from the host contract for convertible instruments with conversion features that are not required to be accounted for as derivatives under Topic 815, Derivatives and Hedging, or that do not result in substantial premiums accounted for as paid-in capital. Consequently, a convertible debt instrument will be accounted for as a single liability measured at its amortized cost as long as no other features require bifurcation and recognition as derivatives. Following the adoption of this guidance, the amount previously allocated to additional paid-in capital was reclassified as a liability and a cumulative effect adjustment of US\$86.7 million was credited to retained earnings as of January 1, 2021.

#### (t) Mezzanine equity and non-controlling interests

##### *Mezzanine equity*

For the Company’s majority-owned subsidiaries and consolidated VIEs, a non-controlling interest is recognized to reflect the portion of their equity which is not attributable, directly or indirectly, to the Company. When the non-controlling interest is contingently redeemable upon the occurrence of a conditional event, which is not solely within the control of the Company, the non-controlling interest is classified as mezzanine equity.

In accordance with ASC Subtopic 480-10, the Group calculated, on a cumulative basis from the acquisition date, (i) the amount of accretion that would increase the balance of non-controlling interests to their estimated redemption value over the period from the date of acquisition to the earliest redemption date of the non-controlling interests and (ii) the amount of net profit attributable to non-controlling shareholders of certain subsidiaries based on their ownership percentage. The carrying value of the non-controlling interests as mezzanine equity was adjusted by a cumulative amount equal to the higher of (i) and (ii).

Each type of increase in carrying amount shall be recorded as charges against retained earnings or, in the absence of retained earnings, by charges against additional paid-in capital.

##### *Non-controlling interests*

Non-controlling interests are recognized to reflect the portion of the equity of majority-owned subsidiaries and VIEs which is not attributable, directly or indirectly, to the controlling shareholder.

#### (u) Revenue

##### **Revenue recognition and significant judgments**

Revenues from live streaming are mainly generated from Bigo Live, Likee and Hago platforms. Other revenues are mainly generated from online games, membership, online education, advertising and e-commerce business. Disaggregated revenues are disclosed in Note 33 “Segment Reporting”.

Revenues are recognized when control of the promised virtual items or services is transferred to the Group’s customers, in an amount that reflects the consideration the Group expects to be entitled to in exchange for those virtual items or services.

The Group has a recharge system for users to purchase the Group’s virtual currency. Users can recharge via various online payment platforms provided by third parties. Virtual currency is non-refundable and without expiry. As the virtual currency is often consumed soon after it is purchased based on history of turnover, the Group considers the impact of the breakage amount for virtual currency coupons is insignificant. Unconsumed virtual currency is recorded as deferred revenue. Virtual currencies used to purchase virtual items are recognized as revenue according to the prescribed revenue recognition policies of virtual items addressed below unless otherwise stated.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(u) Revenue (continued)**

**Revenue recognition and significant judgments (continued)**

**(i) Live streaming**

Live streaming mainly consists of Bigo Live, Likee and Hago platforms. It generates revenue from sales of virtual items in the platforms. Users can access the platforms and view the live streaming content showed by the performers. The Group shares a portion of the sales proceeds of virtual items (“revenue sharing fee”) with performers and talent agencies in accordance with their revenue sharing arrangements. Those performers who do not have revenue sharing arrangements with the Group are not entitled to any revenue sharing fee.

The Group evaluates and determines that it is the principal and views users to be its customers. The Group reports live streaming revenues on a gross basis. Accordingly, the amounts billed to users are recorded as revenues and revenue sharing fee paid to performers and talent agencies are recorded as cost of revenues. Where the Group is the principal, it controls the virtual items before they are transferred to users. Its control is evidenced by the Group’s sole ability to monetize the virtual items before they are transferred to users, and is further supported by the Group being primarily responsible to users and having a level of discretion in establishing pricing.

The Group designs, creates and offers various virtual items for sales to users with pre-determined selling price. Sales proceeds are recorded as deferred revenue and recognized as revenue based on the consumption of the virtual items. Virtual items are categorized as consumable and time-based items. Consumable items are consumed upon purchase and use while time-based items could be used for a fixed period of time. Users can purchase and present consumable items to performers to show support for their favorite performers, or purchase time-based virtual items for one or multiple months for a monthly fee, which provide users with recognized status, such as priority speaking rights or special symbols over a period of time. Accordingly, live streaming revenue is recognized immediately when the consumable virtual item is used, or in the case of time-based virtual items, revenue is recognized ratably over the fixed period on a straight-line basis. The Group does not have further obligations to the user after the virtual items are consumed immediately or after the stated period of time for time-based items.

The Group may also enter into contracts that can include various combinations of virtual items, which are generally capable of being distinct and accounted for as separate performance obligations, such as the noble member program. Judgments are required as follow: 1) determining whether those virtual items are considered distinct performance obligations that should be accounted for separately versus together, 2) determining the standalone selling price for each distinct performance obligation, and 3) allocating of the arrangement consideration to the separate accounting of each distinct performance obligation based on their relative standalone selling prices. Certain virtual items are provided to customers over time and have the same pattern of transfer to customers. The Group exercises judgement in determining the number of distinct performance obligations by accounting for services that have the same pattern of transfer to customers as a single performance obligation. In instances where standalone selling price is not directly observable as the Group does not sell the virtual item separately, the Group determines the standalone selling price based on pricing strategies, market factors and strategic objectives. The Group recognizes revenue for each of the distinct performance obligations identified in accordance with the applicable revenue recognition method relevant for that obligation.

As the Group’s live streaming virtual items are generally sold without right of return and the Group does not provide any other credit and incentive to its users, therefore accounting of variable consideration when estimating the amount of revenue to recognize is not applicable to the Group’s live streaming business.

**(ii) Others**

Other revenues mainly generated from advertising, e-commerce business, online games, membership and online education.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (u) Revenue (continued)

##### Revenue recognition and significant judgments (continued)

##### (ii) Others (continued)

##### (1) Advertising revenues

The Group primarily generates advertising revenues from sales of various forms of advertising and provision of promotion campaigns on the live streaming platforms by way of advertisement display or integrated promotion activities in shows and programs on the live streaming platforms. Advertisements on the Group's platforms are generally charged on the basis of duration, and advertising contracts are signed to establish the fixed price and the advertising services to be provided. Where collectability is reasonably assured, advertising revenues from advertising contracts are recognized ratably over the contract period of display.

The Group enters into advertising contracts directly with advertisers or third-party advertising agencies that represent advertisers. Payment terms and conditions vary by contract type, although terms generally include a requirement of payment within 1 to 3 months. Both third-party advertising agencies and direct advertisers are generally billed at the end of the display period and payments are due usually within 3 months. In instances where the timing of revenue recognition differs from the timing of billing, the Group has determined the advertising contracts generally do not include a significant financing component. The primary purpose of the credits terms is to provide customers with simplified and predictable ways of purchasing the Group's advertising services, not to receive financing from its customers or to provide customers with financing.

Certain customers may receive sales incentives in the forms of discounts and rebates to advertisers or advertising agencies based on purchase volume, which are accounted for as variable consideration. The Group estimates these amounts based on the expected amount to be provided to customers considering the contracted rebate rates and estimated sales volume based on historical experience, and reduce revenues recognized. The Group believes that there will not be significant changes to the estimates of variable consideration.

##### (2) E-commerce business revenues

The Company operates several e-commerce platforms providing service solutions for merchants, including a global smart commerce platform that enables merchants to easily build their brands online and sell their products to users around the world.

The Group recognizes revenue when it satisfies the identified performance obligation by rendering the promised service to the customer and when specific criteria have been met. Services are rendered when or as the customers benefit from the services rendered.

The Group also operates an e-commerce platform and displays goods for end customers to select and order. The Group is responsible to arrange delivery of the goods to the end customers after customers place an order in the platforms. The Group recognizes e-commerce business revenue equal to the sales price (net of sales discount) to the end customers when control of the inventory is transferred. Revenues derived from e-commerce business are recorded on a gross basis, because (i) the Group is primarily responsible for fulfilling the promise to provide the specified good, (ii) the Group is subject to inventory risks before the specified goods have been transferred to a customer or after transfer of control to the customers, and (iii) the Group has discretion in establishing the price of the specified goods.

##### (3) Online games revenues

The Group generates revenues from offering virtual items in online games developed by third parties or the Group itself to game players. Users play games through the Group's platform free of charge and are charged for purchases of virtual items, including consumable and perpetual items, which can be utilized in the online games to enhance their game-playing experience. Consumable items represent virtual items that can be consumed by a specific user within a specified period of time. Perpetual items represent virtual items that are accessible to the users' account over the life of the online games.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(u) Revenue (continued)**

**Revenue recognition and significant judgments (continued)**

**(ii) Others (continued)**

**(3) Online games revenues (continued)**

Pursuant to contracts signed between the Group and the respective game developers, game developers own the games' copyrights and other intellectual property, and take primary responsibilities of game development and game operation, including designing, developing and updating of the games related to game content, pricing of virtual items, providing ongoing updates of new contents and bug fixing. The Group's responsibilities under the agreements with the game developers to offer certain standard promotions that include providing access to the platform, announcing the new games to users on the platform, and occasional advertising on the Group's platforms. Therefore, revenues derived from third party developed games are recorded on a net basis, net of the amount paid to game developers.

The Group has adopted a policy to recognize revenues relating to game tokens for third party developed games over the estimated user relationship period with the Group on a game-by-game basis, which is approximately one to six months for the periods presented. The estimated user relationship period is based on data collected from those users who have acquired game tokens. Revenues from in-game payments of each month are recognized over the user relationship period estimated for that game.

**(4) Membership**

The Group operates a membership subscription program where subscription members can have enhanced user privileges. The membership fee is collected up-front from subscribers. The receipt of the revenue is initially recorded as deferred revenue and revenue is recognized ratably over the period of the subscription when services are rendered. Unrecognized portion beyond 12 months from balance sheet date is classified as deferred revenue - non current.

**(5) Online education revenues**

Educational programs and services consist of vocational training, language training courses and K-12 afterschool education courses. The course fee is generally paid in advance and is initially recorded as deferred revenue. Revenue for regular courses is recognized proportionately as the classes are attended, and is reported net of scholarships and course fee refunds. Students are entitled to one trial class of the purchased course and course fee is fully refundable if a student decides not to take the remaining course after the trial class. No refund will be provided to a student who withdraws from a course after the trial period, and revenue is recognized for the amount collected. Course fee refunds were insignificant over the period presented. The Group disposed of its major online education business in 2021.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(u) Revenue (continued)**

**Contract balances**

The Group collects accounts receivable from various online payment platforms, distribution platforms and advertising customers. The allowance of expected credit loss of receivables reflects the Group's best estimate of probable losses inherent in the accounts receivable balance. The Group determines the allowance based on known troubled accounts, historical experience, and other currently available evidence. The activity in the allowance for doubtful accounts for the periods presented is disclosed and detailed in Note 9.

Contract liabilities primarily consists of deferred revenue for unconsumed virtual items and unamortized revenue from virtual items in the Group's platforms, where there is still an obligation to be provided by the Group, which will be recognized as revenue when all of the revenue recognition criteria are met.

The opening balance of deferred revenue related to live streaming business as of January 1, 2021 was US\$65,979. As of December 31, 2021 and 2022, deferred revenue related to live streaming business were US\$64,356 and US\$72,733, respectively. During the years ended December 31, 2021 and 2022, the Group recognized revenue of live streaming business amounted to US\$63,450 and US\$58,425, respectively, which was included in the corresponding contract liability balance at the beginning of the periods.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(u) Revenue (continued)**

**Contract balances (continued)**

The opening balance of deferred revenue related to other revenue as of January 1, 2021 was US\$4,383. As of December 31, 2021 and 2022, deferred revenue related to other revenue were US\$2,976 and US\$23,046, respectively. During the years ended December 31, 2021 and 2022, the Group recognized revenue of other revenue amounted to US\$3,780 and US\$2,485, respectively, that was included in the corresponding contract liability balance at the beginning of the periods.

During the years ended December 31, 2020, 2021 and 2022, the Group does not have any arrangement where the performance obligations have already been satisfied in the past year, but the corresponding revenue is recognized in a later year.

As of December 31, 2022, the aggregate amount of the transaction price allocated to the remaining performance obligation is US\$95,779, the Group expects to recognize US\$86,014 performance obligation as revenue in 2023, the remaining performance obligation is expected to be recognized as revenue in 2024 and after years. However, the amount and timing of revenue recognition is largely driven by customer usage, which can extend beyond the original contractual term.

**(v) Advances from customers and deferred revenue**

Advances from customers and deferred revenue primarily consists of the unamortized game tokens, prepaid subscriptions under the membership program, services fee received from customers that relate to services to be provided in the future and unamortized revenue from virtual items in various channels in the Group's platforms, where there is still an implied obligation to be provided by the Group, which will be recognized as revenue when all of the revenue recognition criteria are met.

**(w) Cost of revenues**

Amounts recorded as cost of revenue relate to direct expenses incurred in order to generate revenue. Such costs are recorded as incurred. Cost of revenues primarily consists of (i) revenue sharing fees and content costs, including payments to various channel owners and performers, and content providers, (ii) bandwidth costs, (iii) payment handling costs, (iv) salary and welfare, (v) technical service fee, (vi) depreciation and amortization expense for servers, other equipment and intangibles directly related to operating the platform, (vii) share-based compensation and (viii) other costs.

The Group reported other taxes and surcharges in cost of revenues.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (x) Research and development expenses

Research and development expenses primarily consist of (i) salary and welfare for research and development personnel, (ii) share-based compensation for research and development personnel, (iii) depreciation of office premise and servers utilized by research and development personnel, and (iv) rental expenses. Costs incurred during the research stage are expensed as incurred. Costs incurred in the development stage, prior to the establishment of technological feasibility, which is when a working model is available, are expensed when incurred.

The Group recognizes internal use software development costs in accordance with guidance on intangible assets and internal use software. This requires capitalization of qualifying costs incurred during the software's application development stage and to expense costs as they are incurred during the preliminary project and post implementation/operation stages. The Group has not capitalized any costs related to internal use software during the years ended December 31, 2020, 2021 and 2022, respectively.

#### (y) Sales and marketing expenses

Sales and marketing expenses primarily consist of (i) advertising and market promotion expenses, (ii) amortization of certain intangible assets from business acquisitions, and (iii) salary and welfare for sales and marketing personnel. The advertising and market promotion expenses amounted to approximately US\$388,504, US\$383,603 and US\$321,424 during the years ended December 31, 2020, 2021 and 2022, respectively.

#### (z) General and administrative expenses

General and administrative expenses primarily consist of (i) share-based compensation for management and administrative personnel, (ii) salary and welfare for general and administrative personnel, (iii) impairment charges (if any), and (iv) professional service fees.

#### (aa) Employee social security and welfare benefits

Employees of the Group in the PRC are entitled to staff welfare benefits including pension, work-related injury benefits, maternity insurance, medical insurance, unemployment benefit and housing fund plans through a PRC government-mandated multi-employer defined contribution plan. The Group is required to accrue for these benefits based on certain percentages of the employees' salaries, up to a maximum amount specified by the local government. The Group is required to make contributions to the plans out of the amounts accrued. The PRC government is responsible for the medical benefits and the pension liability to be paid to these employees and the Group's obligations are limited to the amounts contributed and no legal obligation beyond the contributions made. Employee social security and welfare benefits included as expenses in the accompanying statements of comprehensive income amounted to US\$50,621, US\$67,733 and US\$65,098 for the years ended December 31, 2020, 2021 and 2022, respectively.

#### (bb) Share-based compensation

The Group grants stock-based award, such as, but not limited to, share options, restricted shares, restricted share units of the Company, share options, restricted share units and ordinary shares of the Company's subsidiaries to eligible employees, officers, directors, and non-employee consultants.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(bb) Share-based compensation (continued)**

Awards granted are initially accounted for as equity-classified awards. The related share-based compensation expenses are measured at the grant date fair value of the award and are recognized using the graded vesting method, net of estimated forfeiture rates, over the requisite service period, which is generally the vesting period. Forfeitures are estimated at the time of grant based on historical forfeiture rates and will be revised in the subsequent periods if actual forfeitures differ from those estimates.

For an award with a performance and/or service condition that affects vesting, the performance and/or service condition is not considered in determining the award's fair value on the grant date. Performance and service conditions should be considered when the Group is estimating the quantity of awards that will vest. Compensation cost will reflect the number of awards that are expected to vest and will be adjusted to reflect those awards that do ultimately vest. The Group recognizes compensation cost for awards with performance conditions if and when the Group concludes that it is probable that the performance condition will be achieved, net of an estimate of pre-vesting forfeitures over the requisite service period. The Group reassesses the probability of vesting at each reporting period for awards with performance conditions and adjusts compensation cost based on its probability assessment, unless on certain situations, the Group may not be able to determine that it is probable that a performance condition will be satisfied until the event occurs.

ASU 2017-09, Compensation—Stock Compensation (Topic 718), Scope of Modification Accounting, provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718.

An entity should account for the effects of a modification unless all the followings are met:

- The fair value (or calculated value or intrinsic value, if such an alternative measurement method is used) of the modified award is the same as the fair value (or calculated value or intrinsic value, if such an alternative measurement method is used) of the original award immediately before the original award is modified. If the modification does not affect any of the inputs to the valuation technique that the entity uses to value the award, the entity is not required to estimate the value immediately before and after the modification.
- The vesting conditions of the modified award are the same as the vesting conditions of the original award immediately before the original award is modified.
- The classification of the modified award as an equity instrument or a liability instrument is the same as the classification immediately before the original award is modified.

The current disclosure requirements in Topic 718 apply regardless of whether an entity is required to apply modification accounting under the amendments in this ASU 2017-09.

The Group adopted these amendments to Subtopic 718-10 and there was no impact on the consolidated financial statements for the years presented.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**2. Principal accounting policies (continued)**

**(bb) Share-based compensation (continued)**

The details of the Group's share-based awards are disclosed in Note 26. Fair value determination of these share-based awards is summarized as below:

(1) Restricted share units

In determining the fair value of restricted share units granted, the fair value of the underlying shares of JOYY on the grant dates is applied. The grant date fair value of restricted share units is based on stock price of JOYY in the Nasdaq Global Select Market.

(2) Share options

In determining the fair value of share options granted, a binomial option-pricing model is applied. The determination of the fair value is affected by the stock price of JOYY in the Nasdaq Global Select Market, as well as assumptions regarding a number of complex and subjective variables, including risk-free interest rates, exercise multiples, expected forfeiture rates, the expected share price volatility rates, and expected dividends.

(3) Restricted shares

Upon the acquisition of Bigo, Class A common shares are issued for the replacement awards to Bigo's employees to replace their original share-based awards, namely restricted shares. In determining the fair value of restricted share granted to Bigo's employees, the fair value of the underlying shares of JOYY on the grant dates is applied. The grant date fair value of restricted shares is based on stock price of JOYY in the Nasdaq Global Select Market.

**(cc) Other income**

Other income primarily consists of government grants which represent cash subsidies received from the PRC government by the Group entities. Government grants are originally recorded as deferred revenue when received upfront. After all of the conditions specified in the grants have been met, the grants are recognized as operating income.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (dd) Leases

The Group leases facilities under non-cancellable operating leases expiring on different dates. On January 1, 2019, the Company adopted ASU No. 2016-02 (Topic 842) "Leases" using the optional transition method. Results and disclosure requirements for reporting periods beginning after January 1, 2019 are presented under Topic 842, while prior period amounts have not been adjusted and continue to be reported in accordance with our historical accounting under Topic 840. Under Topic 842, lessees are required to recognize assets and liabilities on the balance sheet for most leases. A contract is or contains a lease if the contract conveys the right to control the use of identified property, plant, or equipment (an identified asset) for a period of time in exchange for consideration. The Company determines whether a contract conveys the right to control the use of an identified asset for a period of time by assessing whether the Company has both the right to obtain substantially all of the economic benefits from use of the identified asset and the right to direct the use of the identified asset.

The Company accounts for short-term leases with terms less than 12 months in accordance with ASC 842-20-25-2 to recognize the lease payments in profit or loss on a straight-line basis over the lease term and variable lease payments in the period in which the obligation for those payments is incurred. The adoption of the standard did not have a significant impact on the Group's consolidated financial statements.

Operating leases are included in operating lease right-of-use assets, current lease liabilities and non-current lease liabilities on the consolidated balance sheets.

##### (i) Right-of-use assets

Right-of-use assets, which mainly comprise of office lease, are initially measured at the present value of the lease payments. Amortization of the right-of-use assets is made over the lease term on a generally straight-line basis.

##### (ii) Lease liabilities

Lease liabilities are lessees' obligations to make the lease payments arising from a lease, measured on a discounted basis.

As a lessee, the weighted average remaining lease terms of the right-of-use assets was 3.38 years and the discount rate for the lease is the rate implicit in the lease unless that rate cannot be readily determined. In that case, the lessee is required to use its incremental borrowing rate. A weighted average incremental borrowing rate of 5.46% was adopted at commencement date in determining the present value of lease payments.

For the year ended December 31, 2021, operating lease cost and short-term lease cost were US\$6,309 and US\$5,651, respectively. There were no other lease cost other than operating lease cost and short-term lease cost for the year ended December 31, 2021. For the year ended December 31, 2021, cash paid for operating leases included in operating cash flows was US\$6,588. For the year ended December 31, 2021, lease liabilities arising from obtaining right-of-use assets was US\$4,531.

For the year ended December 31, 2022, operating lease cost and short-term lease cost were US\$14,519 and US\$9,148, respectively. There were no other lease cost other than operating lease cost and short-term lease cost for the year ended December 31, 2022. For the year ended December 31, 2022, cash paid for operating leases included in operating cash flows was US\$13,740. For the year ended December 31, 2022, lease liabilities arising from obtaining right-of-use assets was US\$19,039.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****2. Principal accounting policies (continued)****(dd) Leases (continued)**

A maturity analysis of the Company's operating lease liabilities and reconciliation of the undiscounted cash flows to the operating lease liabilities recognized on the consolidated balance sheet was as below:

	<u>Office rental</u> US\$
2023	13,342
2024	9,152
2025	7,297
2026 and after	6,363
Total undiscounted cash flows	<u>36,154</u>
Less: imputed interest	<u>(2,102)</u>
Present value of lease liabilities	<u>34,052</u>

**(ee) Income taxes**

Current income taxes are provided on the basis of net income for financial reporting purposes, adjusted for income and expense items which are not assessable or deductible for income tax purposes, in accordance with the regulations of the relevant tax jurisdictions. Deferred income taxes are accounted for using an asset and liability method. Under this method, deferred income taxes are recognized for the tax consequences of temporary differences by applying enacted statutory rates applicable to future years to differences between the financial statement carrying amounts and the tax bases of existing assets and liabilities. The tax base of an asset or liability is the amount attributed to that asset or liability for tax purpose. The effect on deferred taxes of a change in tax rates is recognized in statement of comprehensive income in the period of change. A valuation allowance is provided to reduce the amount of deferred tax assets if it is considered more likely than not that some portion of, or all of the deferred tax assets will not be realized.

*Uncertain tax positions*

The guidance on accounting for uncertainties in income taxes prescribes a more likely than not threshold for financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. Guidance was also provided on derecognition of income tax assets and liabilities, classification of current and deferred income tax assets and liabilities, accounting for interest and penalties associated with tax positions, accounting for income taxes in interim periods, and income tax disclosures. Significant judgment is required in evaluating the Group's uncertain tax positions and determining its provision for income taxes. The Group recognizes interests and penalties, if any, under accrued expenses and other current liabilities on its balance sheet and under other expenses in its statements of comprehensive income. The Group did not recognize any significant interest and penalties associated with uncertain tax positions for the years ended December 31, 2020, 2021 and 2022. As of December 31, 2021 and 2022, the Group did not have any significant unrecognized uncertain tax positions.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (ff) Statutory reserves

The Group's subsidiaries and VIEs established in the PRC are required to make appropriations to certain non-distributable reserve funds.

In accordance with the laws applicable to China's Foreign Investment Enterprises, the Group's subsidiaries registered as wholly owned foreign enterprises have to make appropriations from its after-tax profit (as determined under the Accounting Standards for Business Enterprises as promulgated by the Ministry of Finance of the People's Republic of China ("PRC GAAP")) to reserve funds including general reserve fund, and staff bonus and welfare fund. The appropriation to the general reserve fund must be at least 10% of the after-tax profits calculated in accordance with PRC GAAP. Appropriation is not required if the reserve fund has reached 50% of the registered capital of the company. Appropriation to the staff bonus and welfare fund is at the company's discretion.

In addition, in accordance with the Company Laws of the PRC, the VIEs of the Company registered as PRC domestic companies must make appropriations from its after-tax profit as determined under the PRC GAAP to non-distributable reserve funds including a statutory surplus fund and a discretionary surplus fund. The appropriation to the statutory surplus fund must be at least 10% of the after-tax profits as determined under the PRC GAAP. Appropriation is not required if the surplus fund has reached 50% of the registered capital of the company. Appropriation to the discretionary surplus fund is made at the discretion of the company.

The use of the general reserve fund, statutory surplus fund and discretionary surplus fund are restricted to the offsetting of losses or increasing capital of the respective company. The staff bonus and welfare fund is a liability in nature and is restricted to fund payments of special bonus to staff and for the collective welfare of employees. All these reserves are not allowed to be transferred to the Company in terms of cash dividends, loans or advances, nor can they be distributed except under liquidation.

During the years ended December 31, 2020, 2021 and 2022, appropriations to general reserve fund and statutory surplus fund amounted to US\$4,445, US\$8,979 and US\$5,732, respectively.

#### (gg) Related parties

Parties are considered to be related if one party has the ability, directly or indirectly, to control the other party or exercise significant influence over the other party in making financial and operating decisions. Parties are also considered to be related if they are subject to common control or significant influence, such as a family member or relative, shareholder, or a related corporation.

#### (hh) Dividends

Dividends are recognized when declared.

#### (ii) Income per share

Basic income per share is computed on the basis of the weighted-average number of common shares outstanding during the period under measurement. Diluted income per share is based on the weighted-average number of common shares outstanding and potential common shares. Potential common shares result from the assumed exercise of outstanding share options, restricted shares and restricted share units or other potentially dilutive equity instruments, when they are dilutive under the treasury stock method or the if-converted method.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (jj) Comprehensive income

Comprehensive income is defined as the change in equity of the Company during a period arising from transactions and other events and circumstances excluding transactions resulting from investments by shareholders and distributions to shareholders. Comprehensive income is reported in the consolidated statements of comprehensive income.

As of December 31, 2020, 2021 and 2022, accumulated other comprehensive income/loss of the Group is the foreign currency translation adjustments.

#### (kk) Segment reporting

Operating segments are defined as components of an enterprise engaging in businesses activities for which separate financial information is available that is regularly evaluated by the Group's chief operating decision makers ("CODM") in deciding how to allocate resources and assess performance. The Group's chief operating decision maker has been identified as the Chief Executive Officer, who reviews segment results when making decisions about allocating resources and assessing performance of the Group. The Company operates two reportable segments consisting of: (1) Bigo; and (2) All other.

#### (ll) Recently issued accounting pronouncements

In June 2016, the FASB issued Accounting Standards Update ("ASU") 2016-13: Financial Instruments-Credit Losses (Topic 326), which requires entities to measure all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. This replaces the existing incurred loss model and is applicable to the measurement of credit losses on financial assets measured at amortized cost. This guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Early application will be permitted for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Group adopted ASU 2016-13 from January 1, 2020 using modified-retrospective transition approach with a cumulative-effect adjustment to shareholders' equity amounting to US\$1.7 million recognized as of January 1, 2020.

In January 2020, the FASB issued ASU No. 2020-01, Investments-Equity Securities (Topic 321), Investments-Equity Method and Joint Ventures (Topic 323), and Derivatives and Hedging (Topic 815)-Clarifying the Interactions between Topic 321, Topic 323, and Topic 815 (a consensus of the Emerging Issues Task Force). The amendments in this update clarify the interaction of the accounting for equity securities under Topic 321 and investments accounted for under the equity method of accounting in Topic 323 and the accounting for certain forward contracts and purchased options accounted for under Topic 815. For public business entities, the amendments in this Update are effective for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. For all other entities, the amendments are effective for fiscal years beginning after December 15, 2021, and interim periods within those fiscal years. Early adoption is permitted. The Group adopted the ASU on January 1, 2021, which did not have a material impact on the Group's financial results or financial position.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 2. Principal accounting policies (continued)

#### (II) Recently issued accounting pronouncements (continued)

In August 2020 the FASB issued ASU 2020-06, Accounting for Convertible Instruments and Contracts in an Entity's Own Equity, which focuses on amending the legacy guidance on convertible instruments and the derivatives scope exception for contracts in an entity's own equity. ASU 2020-06 simplifies an issuer's accounting for convertible instruments by reducing the number of accounting models that require separate accounting for embedded conversion features. ASU 2020-06 also simplifies the settlement assessment that entities are required to perform to determine whether a contract qualifies for equity classification. Further, ASU 2020-06 enhances information transparency by making targeted improvements to the disclosures for convertible instruments and earnings-per-share (EPS) guidance, i.e., aligning the diluted EPS calculation for convertible instruments by requiring that an entity use the if-converted method and that the effect of potential share settlement be included in the diluted EPS calculation when an instrument may be settled in cash or shares, adding information about events or conditions that occur during the reporting period that cause conversion contingencies to be met or conversion terms to be significantly changed. This update will be effective for the Company's fiscal years beginning after December 15, 2021, and interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. Entities can elect to adopt the new guidance through either a modified retrospective method of transition or a fully retrospective method of transition. The Company adopted ASU 2020-06 on January 1, 2021 and a cumulative effect adjustment of US\$86.7 million was credited to retained earnings as of January 1, 2021.

In December 2019, the FASB issued ASU 2019-12, "Simplifying the Accounting for Income Taxes" to remove specific exceptions to the general principles in Topic 740 and to simplify accounting for income taxes. The standard is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. For all other entities, the standard is effective for fiscal years beginning after December 15, 2021, and interim periods within fiscal years beginning after December 15, 2022. Early adoption is permitted. The standard is effective for the fiscal year beginning January 1, 2022. The Group adopted the ASU on January 1, 2022, which did not have a material impact on the Group's financial results or financial position.

In March 2020, the FASB issued ASU 2020-04, "Reference Rate Reform: Facilitation of the Effects of Reference Rate Reform on Financial Reporting" in Topic 848. The standard is effective for all entities as of March 12, 2020 through December 31, 2022. The standard provides optional expedients and exceptions for applying generally accepted accounting principles to contracts, hedging relationships, and other transactions affected by reference rate reform if certain criteria are met. The Group adopted the ASU on January 1, 2022, which did not have a material impact on the Group's financial results or financial position.

In November 2021, the FASB issued ASU No. 2021-10, Government Assistance (Topic 832). This ASU requires business entities to disclose information about government assistance they receive if the transactions were accounted for by analogy to either a grant or a contribution accounting model. The disclosure requirements include the nature of the transaction and the related accounting policy used, the line items on the balance sheets and statements of operations that are affected and the amounts applicable to each financial statement line item and the significant terms and conditions of the transactions. The ASU is effective for annual periods beginning after December 15, 2021. The disclosure requirements can be applied either retrospectively or prospectively to all transactions in the scope of the amendments that are reflected in the financial statements at the date of initial application and new transactions that are entered into after the date of initial application. The Group adopted the ASU on January 1, 2022, which did not have a material impact on the Group's financial results or financial position.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**3. Discontinued operations**

**(a) Disposal of YY Live business**

On November 16, 2020, the Company entered into definitive agreements with Baidu to dispose of the YY Live business. As a result, assets and liabilities of this business were classified as assets and liabilities held for sale and the results of YY Live business were presented as discontinued operations, accordingly. The transaction was substantially completed on February 8, 2021 and the Company no longer was able to operate and exert control over the YY Live business, including but not limited to the assets, liabilities, business and employee contracts necessary for the operation of the YY Live business. Accordingly, the Company ceased consolidation of the YY Live business since February 8, 2021 and also ceased to present the results of the YY Live business within discontinued operations since that same date.

The necessary regulatory approvals with respect to this transaction have not been obtained from government authorities as of the date of this annual report and there is no assurance that they will be ultimately obtained. In August 2021, December 2021 and April 2022, the Company and Baidu have agreed to extend the long stop date, which is the closing deadline of the proposed acquisition, indefinitely until the extension is terminated by either party.

As a result of the pending regulatory approvals discussed above, the Company did not recognize any gain from the transaction up to December 31, 2021. Instead, the Company has classified and presented all the related assets and liabilities related to YY Live business amounting to US\$38,194 on a net basis within prepayments and other current assets (Note 11). The total consideration of the transaction is approximately US\$3.6 billion in cash and subject to certain adjustments. The Company received part of the consideration amounting to US\$1.9 billion by December 31, 2022, which was recorded as advance payments received within accrued liabilities and other current liabilities (Note 18). If the transaction is ultimately closed, the Company will recognize the gain related to the disposal of YY Live business transaction. Should the transaction ultimately be terminated and unwound, the return of the advance prepayment would be expected, the details of which would be subject to further discussion of both parties.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****3. Discontinued operations (continued)****(a) Disposal of YY Live business (continued)**

The following tables set forth the assets, liabilities, statement of operations and cash flows of discontinued operations which were included in the Group's consolidated financial statements. The net amount of the assets and liabilities as of December 31, 2021 and 2022 shown below are recorded within prepayments and other current assets in the consolidated balance sheet.

	<b>As of December 31,</b>	
	<b>2021</b>	<b>2022</b>
	US\$	US\$
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	201,393	201,393
Accounts receivable, net	18,239	18,239
Prepayments and other current assets	4,986	4,986
<b>Total current assets</b>	<b>224,618</b>	<b>224,618</b>
<b>Non-current assets</b>		
Deferred tax assets	4,294	4,294
Property and equipment, net	10,356	10,356
Intangible assets, net	7,456	7,456
Other non-current assets	3,814	3,814
<b>Total non-current assets</b>	<b>25,920</b>	<b>25,920</b>
<b>Total assets</b>	<b>250,538</b>	<b>250,538</b>
<b>Liabilities</b>		
<b>Current liabilities</b>		
Accounts payable	1,117	1,117
Deferred revenue	49,495	49,495
Advances from customers	12,663	12,663
Income taxes payable	9,787	9,787
Accrued liabilities and other current liabilities	139,282	139,282
<b>Total current liabilities</b>	<b>212,344</b>	<b>212,344</b>
<b>Total liabilities</b>	<b>212,344</b>	<b>212,344</b>



**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****3. Discontinued operations (continued)****(a) Disposal of YY Live business (continued)**

	<b>For the year ended December 31,</b>	
	<b>2020</b>	<b>2021</b>
	US\$	US\$
Cost of revenues	1,645	(426)
Research and development expenses	6,656	(703)
Sales and marketing expenses	189	(39)
General and administrative expenses	4,928	(175)

**(b) Disposal of Huya**

On April 3, 2020, the Group sold certain of its equity interests of Huya to a wholly owned subsidiary of Tencent following Tencent's exercise of its purchase option on April 3, 2020. As a result, Huya ceased to be a subsidiary of the Group and the Group accounted for the remaining investment in Huya using the equity method. Upon completion of the transaction, Huya was deconsolidated from the Group. As a result, Huya's historical financial results before April 3, 2020 are reflected in the Group's consolidated financial statements as discontinued operations accordingly. Immediately before the disposal, the Group held 38.7% and 53% of equity interests and voting power of Huya, respectively. Immediately after the disposal, the Group held 31.2% and 43% of equity interests and voting power of Huya, respectively. Share of income from the equity investment in Huya from date of disposal to December 31, 2020 and for the year ended December 31, 2021 were US\$2,431 and US\$7,855 respectively, and share of loss of US\$441,834, includes other-than-temporary impairment disclosed in Note 12, for the year ended December 31, 2022, which were recorded within "share of income (loss) in equity method investments, net of income taxes" in the consolidated financial statements.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**3. Discontinued operations (continued)**

**(b) Disposal of Huya (continued)**

The following tables set forth the statement of operations and cash flows of discontinued operations which were included in the Group's consolidated financial statements (in thousands).

	<b>For the year ended December 31, 2020</b>
	US\$
<b>Net revenues</b>	
Live streaming	326,094
Others	19,707
<b>Total net revenues</b>	<b>345,801</b>
Cost of revenues <sup>(1)</sup>	(277,954)
<b>Gross profit</b>	<b>67,847</b>
<b>Operating expenses<sup>(1)</sup></b>	
Research and development expenses	(22,477)
Sales and marketing expenses	(15,279)
General and administrative expenses	(20,743)
<b>Total operating expenses</b>	<b>(58,499)</b>
Other income	1,624
<b>Operating income</b>	<b>10,972</b>
Interest income and investment income	12,293
Foreign currency exchange losses, net	(205)
Gain on fair value changes of investments	310
Other non-operating expenses	(1,435)
<b>Income before income tax expenses</b>	<b>21,935</b>
Income tax expenses	(5,384)
<b>Net income</b>	<b>16,551</b>
Share of income in equity method investments, net of income taxes	(145)
Gain on disposal, net of tax	902,777
<b>Net income from discontinued operations</b>	<b>919,183</b>
	<b>For the year ended December 31, 2020</b>
	US\$
Net cash provided by discontinued operating activities	19,506
Net cash provided by discontinued investing activities	85,552
Net cash provided by discontinued financing activities	1,232

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****3. Discontinued operations (continued)****(b) Disposal of Huya (continued)**

(1) Share-based compensation was allocated in cost of revenues and operating expenses as follows:

	<u>For the year ended December 31,</u> <u>2020</u> US\$
Cost of revenues	2,354
Research and development expenses	5,309
Sales and marketing expenses	375
General and administrative expenses	13,558

**(c) Reconciliation with net income from discontinued operations presented in the consolidated statements of comprehensive income is as below:**

	<u>For the year ended December 31,</u>	
	<u>2020</u>	<u>2021</u>
	US\$	US\$
Net income from discontinued operations of YY Live (Note 3(a))	482,487	35,567
Net income from discontinued operations of Huya (Note 3(b))	919,183	—
Net income from discontinued operations as presented in the consolidated statements of comprehensive income	<u>1,401,670</u>	<u>35,567</u>

**4. Certain risks and concentration****(a) PRC regulations**

Foreign ownership of internet-based businesses is subject to significant restrictions under the current PRC laws and regulations. The PRC government regulates internet access, the distribution of online information and the conduct of online commerce through strict business licensing requirements and other government regulations. These laws and regulations also limit foreign ownership in PRC companies that provide internet information distribution services. Specifically, foreign ownership in an internet information provider or other value-added telecommunication service providers may not exceed 50%. Foreigners or foreign invested enterprises are currently not able to apply for the required licenses for operating online games in the PRC. The Company is incorporated in the Cayman Islands and accordingly, the Company is considered as a foreign invested enterprise under PRC law.

As mentioned in Note 1(d), in order to comply with the PRC laws restricting foreign ownership in the online business in China, the Group operates the online business in China through contractual arrangements with its principal VIEs, namely Guangzhou Huaduo, Guangzhou Huya and Guangzhou BaiGuoYuan. In January 2021, Mr. David Xueling Li and other nominal shareholder transferred in total 100% of the nominee shares of Guangzhou BaiGuoYuan to Guangzhou Qianxun Network Technology Co., Ltd. (“Guangzhou Qianxun”), a VIE of the Company. In February 2021, Beijing Tuda and Mr. David Xueling Li transferred their respective nominee shares in Guangzhou Huaduo to Guangzhou Tuyue Network Technology Co., Ltd. (“Guangzhou Tuyue”), a VIE of the Company. As of December 31, 2022, Guangzhou Tuyue holds the majority of nominee shares of Guangzhou Huaduo., and Guangzhou Qianxun holds 100% of the nominee shares of Guangzhou BaiGuoYuan.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**4. Certain risks and concentration (continued)**

**(a) PRC regulations (continued)**

Guangzhou Huaduo, Guangzhou Huya and Guangzhou BaiGuoYuan hold the licenses and permits necessary to conduct its internet value-added services in the PRC. If the Company had direct ownership of the VIE, it would be able to exercise its rights as a shareholder to effect changes in the board of directors, which in turn could affect changes at the management level, subject to any applicable fiduciary obligations. However, under the current contractual arrangements, it relies on the VIE and its shareholders' performance of their contractual obligations to exercise effective control. In addition, the Group's contractual agreements have terms range from 10 to 30 years, which are subject to Beijing Huanju Shidai, Huya Technology and BaiGuoYuan Technology's unilateral termination right. Under the respective service agreements, Beijing Huanju Shidai, Huya Technology and BaiGuoYuan Technology will provide services including technology support, technology services, business support and consulting services to Guangzhou Huaduo, Guangzhou Huya and Guangzhou BaiGuoYuan, respectively, in exchange for service fees. The amount of service fees payable is determined by various factors, including (a) a percentage of Guangzhou Huaduo, Guangzhou Huya and Guangzhou BaiGuoYuan's revenues or earnings, and (b) the expenses that Beijing Huanju Shidai, Huya Technology and BaiGuoYuan Technology incur for providing such services. Beijing Huanju Shidai, Huya Technology and BaiGuoYuan Technology may charge up to 100% of the income in Guangzhou Huaduo, Guangzhou Huya and Guangzhou BaiGuoYuan and a multiple of the expenses incurred for providing such services, as determined by Beijing Huanju Shidai, Huya Technology and BaiGuoYuan Technology, respectively, from time to time. The service fees payable by Guangzhou Huaduo, Guangzhou Huya and Guangzhou BaiGuoYuan to Beijing Huanju Shidai, Huya Technology and BaiGuoYuan Technology are determined to be up to 100% of the profits of Guangzhou Huaduo, Guangzhou Huya and Guangzhou BaiGuoYuan, with the timing of such payment to be determined at the sole discretion of Beijing Huanju Shidai, Huya Technology and BaiGuoYuan Technology. If fees were incurred, it would be significant to the Company and the operating companies' economic performance because it will be incurred and paid at up to 100% of the earnings of the VIE. Fees incurred would be remitted, subject to further PRC restrictions. None of the VIEs or their shareholders are entitled to terminate the contracts prior to the expiration date, unless under remote circumstances such as a material breach of agreement or bankruptcy as it pertains to the service and business operation agreements and their amendment.

For the years ended December 31, 2020, 2021 and 2022, the Company's wholly owned subsidiaries, mainly including Beijing Huanju Shidai, BaiGuoYuan Technology and Huya Technology, determined the service fees which were charged to the Group's VIEs, respectively. Huya Technology ceased to be a subsidiary of the Company upon the disposal of Huya on April 3, 2020.

Further, the Group believes that the contractual arrangements among the Company's subsidiaries (mainly including Beijing Huanju Shidai, BaiGuoYuan Technology and Huya Technology), the VIEs, and the VIE's shareholders are in compliance with PRC laws and are legally enforceable and binding. However, there are substantial uncertainties regarding the interpretation and application of PRC laws and regulations including those that govern the contractual arrangements, which could limit the Group's ability to enforce these contractual arrangements and if the nominee shareholders of the VIEs were to reduce their interests in the Group, their interest may diverge from that of the Group and that may potentially increase the risk that they would seek to act contrary to the contractual arrangements.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**4. Certain risks and concentration (continued)**

**(a) PRC regulations (continued)**

In March 2019, the National People’s Congress enacted PRC Foreign Investment Law which would be effective starting from January 1, 2020. The Foreign Investment Law does not explicitly classify contractual arrangements as a form of foreign investment, but it contains a catch-all provision under the definition of “foreign investment,” which includes investments made by foreign investors through means stipulated in laws or administrative regulations or other methods prescribed by the State Council. Existing laws or administrative regulations remain unclear whether the contractual arrangements with variable interest entities will be deemed to be in violation of the market access requirements for foreign investment under the PRC laws and regulations. However, the possibility that such entities will be deemed as foreign invested enterprise and subject to relevant restrictions in the future shall not be excluded. If VIEs fall within the definition of foreign investment entities, the Group’s ability to use the contractual arrangements with its VIEs and the Group’s ability to conduct business through the VIEs could be severely limited. The Group’s ability to control the VIEs also depends on the power of attorney that the wholly owned subsidiary of the Group has to vote on all matters requiring shareholder approval in the VIEs. As noted above, the Group believes these power of attorney are legally enforceable but may not be as effective as direct equity ownership. In addition, if the Group’s corporate structure and the contractual arrangements with the VIEs through which the Group conducts its business in the PRC were found to be in violation of any existing or future PRC laws and regulations, the Group’s relevant PRC regulatory authorities could:

- revoke or refuse to grant or renew the Group’s business and operating licenses;
- restrict or prohibit related party transactions between the wholly owned subsidiary of the Group and the VIE;
- impose fines, confiscate income or other requirements which the Group may find difficult or impossible to comply with;
- require the Group to alter, discontinue or restrict its operations;
- restrict or prohibit the Group’s ability to finance its operations, and;
- take other regulatory or enforcement actions against the Group that could be harmful to the Group’s business.

The imposition of any of these restrictions or actions could result in a material adverse effect on the Group’s ability to conduct its business. In such case, the Group may not be able to operate or control the VIEs, which may result in deconsolidation of the VIEs in the Group’s consolidated financial statements. In the opinion of management, the likelihood for the Group to lose such ability is remote based on current facts and circumstances. The Group’s operations depend on the VIEs to honor their contractual arrangements with the Group. These contractual arrangements are governed by PRC law and disputes arising out of these agreements are expected to be decided by arbitration in the PRC. The management believes that each of the contractual arrangements constitutes valid and legally binding obligations of each party to such contractual arrangements under PRC laws. However, the interpretation and implementation of the laws and regulations in the PRC and their application to an effect on the legality, binding effect and enforceability of contracts are subject to the discretion of competent PRC authorities, and therefore there is no assurance that relevant PRC authorities will take the same position as the Group herein in respect of the legality, binding effect and enforceability of each of the contractual arrangements. Meanwhile, since the PRC legal system continues to rapidly evolve, the interpretations of many laws, regulations and rules are not always uniform and enforcement of these laws, regulations and rules involve uncertainties, which may limit legal protections available to the Group to enforce the contractual arrangements should the VIEs or the nominee shareholders of the VIEs fail to perform their obligations under those arrangements.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**4. Certain risks and concentration (continued)**

**(a) PRC regulations (continued)**

The following consolidated financial information of the Group's VIEs and VIEs' subsidiaries was included in the accompanying consolidated financial statements. For purposes of this presentation, activity within and between the VIEs and VIEs' subsidiaries have been eliminated, but transactions with other entities within the Group have been included without elimination. Presentation of the comparative data for 2020 and 2021 have been expanded to conform to the current year presentation.

	December 31,	
	2021	2022
	US\$	US\$
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	433,405	247,497
Restricted cash and cash equivalents	7,364	6,239
Short-term deposits	308,986	362,310
Short-term investments	288,944	36,108
Accounts receivable, net	5,880	5,830
Amounts due from Group companies	263,373	476,689
Amounts due from related parties	9,684	1,114
Prepayments and other current assets	101,173	77,838
<b>Total current assets</b>	<b>1,418,809</b>	<b>1,213,625</b>
<b>Non-current assets</b>		
Investments	235,277	355,261
Property and equipment, net	171,831	221,614
Land use rights, net	370,052	330,005
Intangible assets, net	58,893	49,016
Right of use asset, net	4,911	3,887
Other non-current assets	1,055	7,377
<b>Total non-current assets</b>	<b>842,019</b>	<b>967,160</b>
<b>Total assets</b>	<b>2,260,828</b>	<b>2,180,785</b>
<b>Liabilities</b>		
<b>Current liabilities</b>		
Accounts payable	14,200	29,586
Deferred revenue	13,873	14,328
Advances from customers	1,242	230
Income taxes payable	25,606	25,354
Accrued liabilities and other current liabilities	114,325	85,302
Amounts due to Group companies	131,887	67,698
Amounts due to related parties	1,024	128
Lease liabilities due within one year	3,077	2,232
Short-term loans	—	15,014
<b>Total current liabilities</b>	<b>305,234</b>	<b>239,872</b>
<b>Non-current liabilities</b>		
Lease liabilities	2,096	1,723
Deferred revenue	3,849	5,752
Deferred tax liabilities	9,105	12,253
Other non-current liabilities	7,372	436
<b>Total non-current liabilities</b>	<b>22,422</b>	<b>20,164</b>
<b>Total liabilities</b>	<b>327,656</b>	<b>260,036</b>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**4. Certain risks and concentration (continued)**

**(a) PRC regulations (continued)**

	<b>For the year ended December 31,</b>		
	<b>2020</b>	<b>2021</b>	<b>2022</b>
	US\$	US\$	US\$
Net revenues from Group companies	79,609	109,618	54,587
Net revenues from third parties	396,343	447,471	478,656
Total cost and operating expenses	(1,030,300)	(701,686)	(547,931)
Other items of the consolidated statements of comprehensive income	23,244	22,305	52,054
Net (loss) income from continuing operations	(531,104)	(122,292)	37,366

	<b>For the year ended December 31,</b>		
	<b>2020</b>	<b>2021</b>	<b>2022</b>
	US\$	US\$	US\$
Net cash (used in) provided by operating activities with Group companies	(344,858)	77,319	(47,155)
Net cash (used in) provided by operating activities with third parties	(73,830)	153,715	95,059
<b>Net cash (used in) provided by operating activities</b>	<b>(418,688)</b>	<b>231,034</b>	<b>47,904</b>
Net cash used in investing activities with Group companies	(104,111)	(35,559)	(194,107)
Net cash (used in) provided by investing activities with third parties	(47,787)	170,112	(42,399)
<b>Net cash (used in) provided by investing activities</b>	<b>(151,898)</b>	<b>134,553</b>	<b>(236,506)</b>
Net cash provided by financing activities with Group companies	25,219	5,378	32,753
Net cash provided by (used in) financing activities with third parties	21,690	(97,198)	754
<b>Net cash provided by (used in) financing activities</b>	<b>46,909</b>	<b>(91,820)</b>	<b>33,507</b>

**Transactions between the VIE and other entities in the consolidated group**

For the years ended December 31, 2020, 2021 and 2022, the VIEs earned inter-company revenues from sales of software in the amounts of US\$24,523, nil and US\$1,415, respectively. In addition, the VIEs recognized inter-company cost of revenues and operating expenses in the amounts of US\$41,832, US\$80,402 and US\$54,127 for the years ended December 31, 2020, 2021 and 2022, respectively for the purchase of software. The VIEs also recognized inter-company cost of revenues and operating expenses in the amounts of US\$447,271, US\$35,899 and US\$55,760 for the years ended December 31, 2020, 2021 and 2022, respectively for technical support services. All of these balances and transactions have been eliminated in consolidation. Unsettled balance related to technology service fees payable by VIEs to other group entities amounted to US\$66,811 and US\$325,428 as of December 31, 2021 and 2022, respectively.

**Cash flows between the VIE and other entities in the consolidated group**

For the years ended December 31, 2020, 2021 and 2022, cash paid by the VIEs to Group companies for the settlement of software transactions were US\$53,696, US\$62,499 and US\$52,878, respectively. For the years ended December 31, 2020, 2021 and 2022, cash paid by the VIEs to Group companies for the settlement of technical support fees were US\$369,897, US\$52,119 and US\$56,823, respectively. For the years ended December 31, 2020, 2021 and 2022, cash received by VIEs from Group companies were US\$25,039, US\$129,440 and US\$9,668, respectively, for the revenues earned from Group companies. All of these cash flows have been eliminated in consolidation.

**(b) Foreign exchange risk**

The Group's overseas operations and related investing and financing activities are denominated in US\$. The revenues and expenses of the Group's entities in the PRC are generally denominated in RMB and their assets and liabilities are denominated in RMB. The RMB is not freely convertible into foreign currencies. Remittances of foreign currencies into the PRC or remittances of RMB out of the PRC as well as exchange between RMB and foreign currencies require approval by foreign exchange administrative authorities and certain supporting documentation. The State Administration for Foreign Exchange, under the authority of the People's Bank of China, controls the conversion of RMB into other currencies.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**4. Certain risks and concentration (continued)**

**(c) Credit risk**

Assets that potentially expose the Group to credit risk primarily consist of cash and cash equivalents, restricted cash and cash equivalents, short-term deposits, restricted short-term deposits, short-term investments, accounts receivable, financing receivables, amounts due from related parties and prepayments and other current assets.

As of December 31, 2021 and 2022, substantially all of the Group's cash and cash equivalents, restricted cash and cash equivalents, short-term deposits, restricted short-term deposits and short-term investments were placed with the PRC and international financial institutions. Management chooses these institutions because of their reputations and track records for stability, and their known large cash reserves, and management periodically reviews these institutions' reputations, track records, and reported reserves. Management expects that any additional institutions that the Group uses for its cash and bank deposits will be chosen with similar criteria for soundness. Nevertheless under the PRC law, it is required that a commercial bank in the PRC that holds third party cash deposits should maintain a certain percentage of total customer deposits taken in a statutory reserve fund for protecting the depositors' rights over their interests in deposited money. PRC banks are subject to a series of risk control regulatory standards; PRC bank regulatory authorities are empowered to take over the operation and management of any PRC bank that faces a material credit crisis. The Group believes that it is not exposed to unusual risks as these financial institutions are either PRC banks or international banks with high credit quality. The Group had not experienced any losses on its deposits of cash and cash equivalents and term deposits during the years ended December 31, 2020, 2021 and 2022 and believes that its credit risk to be minimal.

The risk with respect to accounts receivable is mitigated by credit evaluations the Group performs on the payment platforms, game platforms, customers and the ongoing monitoring process of outstanding balances.

The Group is exposed to default risk on its financing receivables. The Group conducts credit evaluations of customers in finance business, either on an individual or collective basis. The Group also considers the value of collateral assets when assessing the collectability of certain financing receivables. Credit risk is controlled by the application of credit approvals, limits and monitoring procedures.

Amounts due from related parties, prepayments and other current assets are typically unsecured. In evaluating the collectability of the balance, the Group considers many factors, including the related parties and third parties' repayment history and their credit-worthiness. An allowance for doubtful accounts is made when collection of the full amount is no longer probable.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****5. Business combination****(a) Acquisition of Shopline Corporation Limited (“Shopline”)**

Shopline is a company that operates an e-commerce online platform, together with other ancillary services including logistics, payments and marketing, to enable and facilitate merchants to establish their e-commerce operations. Prior to this acquisition, the Company had an equity interest in Shopline and was accounted for using the equity method. On August 22, 2022, the Company announced that it has entered into a share subscription agreement with Shopline and the transaction was completed on September 6, 2022 and is accounted for as a business combination. Under the agreement, the Company subscribed for series B preferred shares of Shopline for an aggregate cash consideration of US\$182.9 million. The Company previously held interests in this acquiree before the acquisition and the fair value of the previously held equity interest is considered part of the consideration of this acquisition. After the completion of this acquisition, the Company has an effective shareholding of 70.4% in Shopline, net of potential dilution impact of the employee share option, and Shopline became a subsidiary of the Company.

The following table summarizes the components of the purchase consideration transferred based on the closing price of the Company’s common share as of the acquisition date:

	<u>As of acquisition date</u> US\$
Cash	182,892
Fair value of previously held equity interest in Shopline	440,692
Elimination of preexisting amounts due from Shopline	76,226
Total consideration	<u>699,810</u>

The amount of the preexisting amounts due from Shopline of US\$76,226 was included as part of the consideration, which was effectively eliminated upon the acquisition.

The results of operations since the acquisition dates of the acquiree was not significant to the Group’s consolidated results of operations.

In accordance with ASC 805, the Company’s previously held equity interest in Shopline was re-measured to fair value on the acquisition date, and a re-measurement gain of US\$440,692 was recognized as gain on fair value changes of investments.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****5. Business combination (continued)****(a) Acquisition of Shopline (continued)**

The acquisition was accounted for as a business combination. The Group made estimates and judgements in determining the fair value of the assets acquired and liabilities assumed with the assistance from an independent valuation firm. The consideration was allocated on the acquisition date as follows:

	<u>As of acquisition date</u> US\$
Net tangible assets acquired:	
-Cash and cash equivalents, restricted cash and cash equivalents and restricted short-term deposits	210,030
-Accounts receivables	12,840
-Right-of-use assets, net	12,192
-Prepayments and other current assets	27,286
-Property and equipment, net	2,474
Identifiable intangible assets acquired:	
-Trademark	144,000
-Software	298
-Domain names	254
Accrued liabilities and other liabilities	(113,928)
Lease liabilities	(12,230)
Deferred revenue	(20,336)
Deferred tax liabilities	(28,800)
Goodwill	708,471
Non-controlling interests	(222,741)
Mezzanine Equity	(20,000)
Total	<u>699,810</u>

The Company estimated the fair value of the acquired trademark using the relief from royalty method. The value is estimated as the present value of the after-tax cost savings at an appropriate discount rate. The Company's determination of the fair value of the acquired trademark involved the use of estimates and assumptions related to revenue growth rates, royalty rates and discount rates. The estimated useful lives of the trademark is 10 years.

The fair value of the non-controlling interest was calculated after determination of an overall enterprise value for the Company. The Company, through a third-party valuation expert, determined the enterprise value using the Option Pricing Model ("OPM") Backsolve approach under the market approach.

The goodwill was mainly attributable to intangible assets that cannot be recognized separately as identifiable assets under U.S. GAAP, and mainly comprised (a) the assembled work force and (b) the expected future growth, enhancing world-class user experiences and expansion in global markets as a result of the synergy resulting from the acquisition. The goodwill recognized is not expected to be deductible for income tax purpose.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****5. Business combination (continued)****(a) Acquisition of Shoptline (continued)***Pro forma information of the acquisition*

The following unaudited pro forma information summarizes the results of operations for the year ended December 31, 2021 and 2022 of the Company as if the acquisition had occurred on January 1, 2021. The unaudited pro forma information includes: (i) amortization associated with estimates for the acquired intangible assets and corresponding deferred tax liability; (ii) removal of the share of loss in JOYY's previously held interests in Shoptline accounted for using equity method; (iii) removal of the remeasurement gain of JOYY's previously held interests in Shoptline; (iv) elimination of transaction between Shoptline and the Group; (v) allowance for doubtful accounts related to preexisting amounts due from Shoptline, if any, and (vi) the associated tax impact on these unaudited pro forma adjustments. The following pro forma financial information is presented for informational purposes only and is not necessarily indicative of the results that would have occurred had the acquisition been completed on January 1, 2021, nor is it indicative of future operating results.

	<u>For the year ended December 31,</u>	
	<u>2021</u>	<u>2022</u>
	US\$	US\$
Pro forma net revenues	2,697,395	2,493,333
Pro forma net loss	(122,938)	(415,250)

**(b) Other acquisition**

During the second quarter 2021, the Company completed the acquisition of additional equity interests of an acquiree which is a global online platform operating on online for comics and novels whose major operations and users are outside of China. The consideration for this acquisition was settled by cash of US\$9.6 million and transfer of approximately 19% equity interests in a previously wholly owned subsidiary of the Company which operates a multiuser social networking platform outside of China, to the original shareholders the acquiree. The Company held 25% of equity interests in this acquiree before the acquisition and the fair value of the previously held equity interest is considered part of the consideration of the acquisition. Upon completion of the transaction, the Company's interest in the acquiree increased from 25% to 81% and started to consolidate the acquiree as a subsidiary with non-controlling interests.

The following table summarizes the components of the purchase consideration transferred based on the closing price of the Company's common share as of the acquisition date:

	<u>As of acquisition date</u>
	US\$
Cash	9,611
Fair value of subsidiary's common share issued	53,810
Fair value of previously held equity interest in the acquiree	27,716
Total consideration	<u>91,137</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****5. Business combination (continued)****(b) Other acquisition (continued)**

The acquisition was accounted for as a business combination. The Group made estimates and judgements in determining the fair value of the assets acquired and liabilities assumed with the assistance from an independent valuation firm. The consideration was allocated on the acquisition date as follows:

	<u>As of acquisition date</u>	<u>Amortization period</u>
	US\$	
Net tangible assets acquired:		
-Cash and cash equivalents	7,296	
-Accounts receivables	1,376	
-Other current assets	1,987	
-Property and equipment, net	142	
Identifiable intangible assets acquired:		
-Technology	11,917	6 years
-Trademark	11,839	6 years
-Customer relationships	903	3 years
Accounts payable	(2,268)	
Accrued liabilities and other liabilities	(1,579)	
Deferred tax liabilities	(4,069)	
Goodwill	84,925	
Non-controlling interests	(21,332)	
<b>Total</b>	<u>91,137</u>	

The Company estimated the fair value of acquired technology using the excess earnings method. The value is estimated as the present value of the revenues calculated at an appropriate discount rate. In terms of the fair value of the acquired trademark, the relief from royalty method was used. The value is estimated as the present value of the after-tax cost savings at an appropriate discount rate. The Company's determination of the fair values of acquired technology and trademark acquired involved the use of estimates and assumptions related to revenue growth rates, royalty rates, discount rates and attrition rates.

The goodwill was mainly attributable to intangible assets that cannot be recognized separately as identifiable assets under U.S. GAAP, and mainly comprised the assembled work force and the synergy resulting from the acquisition. The goodwill recognized is not expected to be deductible for income tax purpose.

The fair value of the non-controlling interest was calculated after determination of an overall enterprise value for the Company. The Company, through a third-party valuation expert, determined the enterprise value using income approach.

Pro forma information related to this acquisition has not been included on the basis of relative immateriality to consolidated financial results.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**6. Cash and cash equivalents and restricted cash and cash equivalents**

Cash and cash equivalents represent cash on hand, demand deposits placed with banks or other financial institutions and all highly liquid investments with original maturities of three months or less. Cash and cash equivalents balance as of December 31, 2021 and 2022 primarily consist of the following currencies:

	December 31, 2021		December 31, 2022	
	Amount	US\$ equivalent	Amount	US\$ equivalent
US\$	1,220,064	1,220,064	863,452	863,452
RMB	3,462,640	543,099	2,064,300	296,399
Others	N/A	74,022	N/A	54,598
<b>Total</b>		<u>1,837,185</u>		<u>1,214,449</u>

As of December 31, 2021 and 2022, the Group's restricted cash and cash equivalents were US\$297,022 and US\$303,370, respectively. The restricted cash and cash equivalents primarily consists of amounts deposited and held in escrow account owned by the Group, which was a portion of the consideration received from Baidu, in accordance with the terms set forth in the agreement with Baidu to dispose YY Live business.

**7. Short-term deposits**

Short-term deposits represent time deposits placed with banks with original maturities between three months and one year. The term deposits balance as of December 31, 2021 and 2022 primarily consist of the following currencies:

	December 31, 2021		December 31, 2022	
	Amount	US\$ equivalent	Amount	US\$ equivalent
RMB	2,170,000	340,355	2,623,347	376,668
US\$	1,263,843	1,263,843	1,983,877	1,983,877
<b>Total</b>		<u>1,604,198</u>		<u>2,360,545</u>

**8. Restricted short-term deposits**

As of December 31, 2021, the Group's restricted short-term deposits were US\$285, which was deposits for opening credit card accounts.

As of December 31, 2022, the Group's restricted short-term deposits were US\$47,741, which was mainly pledged as collateral for the banking facilities of US\$47 million.

**9. Accounts receivable, net**

	December 31,	
	2021 US\$	2022 US\$
Accounts receivable, gross	126,798	138,597
Less: allowance for expected credit loss of receivables	(12,426)	(20,670)
Accounts receivable, net	<u>114,372</u>	<u>117,927</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****9. Accounts receivable, net (Continued)**

The following table summarizes the details of the Group's allowance for doubtful accounts:

	<b>For the year ended December 31,</b>		
	<u>2020</u> US\$	<u>2021</u> US\$	<u>2022</u> US\$
Balance at the beginning of the year	(9)	(7,387)	(12,426)
Adoption of ASC326	(652)	—	—
Additions charged to general and administrative expenses, net	(6,726)	(5,039)	(8,484)
Write-off during the year	—	—	240
Balance at the end of the year	<u>(7,387)</u>	<u>(12,426)</u>	<u>(20,670)</u>

**10. Financing receivables, net**

Financing receivables consist of the following:

	<b>December 31,</b>	
	<u>2021</u> US\$	<u>2022</u> US\$
<b>Financing receivables, gross</b>		
Micro-credit personal loans	20,317	18,556
<b>Less: allowance for expected credit loss on financing receivables</b>	<u>(20,317)</u>	<u>(18,556)</u>
<b>Financing receivables, net</b>	<u>—</u>	<u>—</u>

As of December 31, 2021 and 2022, micro-credit personal loans were not guaranteed.

Allowance for expected credit loss for the Group's financing receivables of US\$676, and reversal of allowance for expected credit loss of US\$70, US\$45 was recognized in general and administrative expenses for the year ended December 31, 2020, 2021 and 2022, respectively.

*(1) Micro-credit personal loans*

Micro-credit personal loans provided by the Group are non-accrual financing receivables related to personal loans amounted to US\$20,317 and US\$18,556 as of December 31, 2021 and 2022, respectively, and were past due for over 1 year.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**10. Financing receivables, net (continued)**

*(2) Corporate loans*

A majority of the Group's corporate loan business was in the form of sale-and-leaseback arrangements, under which the Group purchases equipment from third party companies and lease back the equipment to the sellers. In 2019, one lessee was unable to repay the principal amount of approximately US\$2,416 due in January and was default. The Group has brought certain lawsuits against this lessee to the court, claiming the lessee to repay all the outstanding amount. Upon the date of the issuance of the consolidated financial statements for the year ended December 31, 2019, the court has passed the first instance judgment on all of these lawsuits, which supported the Group's claim and ordered the lessee to repay all the outstanding amounts due to the Group. Furthermore, the additional assets of the lessee or its related entity was pledged and preserved as collateral. Based on the Group's assessment on the lessee's finance condition and the recoverable amount from the collateral, the financial receivable cannot be fully recovered. As a result, an allowance for expected credit loss of US\$10,430 was recognized in general and administrative expenses for the year ended December 31, 2019 against the carrying value of the financing receivables. In 2021 and 2022, based on the Group's assessment on the fair value of the pledged assets as of December 31, 2021 and 2022, no further impairment charge was recognized against the carrying value of the financing receivables for the year ended December 31, 2021 and 2022. The Group reclassified the amount due from this lessee from financing receivables to prepayments and other current assets in 2021 considering the fact that the original term of this receivable has ended by December 31, 2021 and the nature of this receivable has changed from financing receivables to other receivables as the expected means of settlement of the receivable has changed. Net amount of the receivable as of December 31, 2021 reclassified to prepayment and other current assets was US\$20,177, which is the difference between the gross amount of US\$30,607 and allowance of US\$10,430 as of December 31, 2021. The Group has ceased the corporate loan business during 2019.

Movement of allowance for expected credit loss on financing receivables (micro-credit personal loans only) is as follows:

	<b>For the year ended December 31,</b>	
	<u>2021</u>	<u>2022</u>
	US\$	US\$
Balance at the beginning of the year	(30,114)	(20,317)
Addition for the year	(633)	1,761
Reclassification to prepayments and other current assets	10,430	—
Balance at the end of the year	<u>(20,317)</u>	<u>(18,556)</u>

**11. Prepayments and other current assets**

	<b>December 31,</b>	
	<u>2021</u>	<u>2022</u>
	US\$	US\$
Interest receivable	22,082	40,280
Value added taxes to be deducted	28,090	31,415
Receivables from payment platforms	24,512	20,210
Employee advances	4,073	2,386
Prepayments and deposits to vendors and content providers	6,126	4,105
Deposits	5,831	5,651
Loans to third parties	7,604	400
Amount due from a lessee of sale-and-leaseback arrangement - net (Note 10)	20,177	18,355
Net assets subject to disposal related to YY Live (Note 3(a))	38,194	38,194
Others	57,044	75,187
<b>Total</b>	<u>213,733</u>	<u>236,183</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**12. Investments**

	<b>December 31,</b>	
	<b>2021</b>	<b>2022</b>
	US\$	US\$
Equity investments accounted for using the equity method (i)	850,557	458,463
Equity investments with readily determinable fair values (ii)	25,480	1,180
Equity investments without readily determinable fair values (iii)	146,418	179,462
Available-for-sale debt investment (iv)	—	21,299
<b>Total</b>	<b>1,022,455</b>	<b>660,404</b>

- (i) Investments have been accounted for under the equity method where the Group has significant influence over these investees and the investments are considered as in-substance common shares.

In 2021 and 2022, the Group acquired minority stakes in a number of privately-held entities with total consideration of US\$56,336 and US\$95,462, respectively. The decrease in investments in 2022 was mainly attributable to the other-than-temporary impairment loss of US\$417.2 million from Huya recognized in share of loss in equity method investments. On April 3, 2020, Huya ceased to be a subsidiary of the Company and the Company deconsolidated its related interest and recognized its investment in Huya as an equity method investment (Note 3(b)). In 2021 and 2022, a net loss from the deemed disposal of Huya was approximately US\$5,450 and US\$5,477, respectively.

The following tables set forth the summarized financial information of the Group's equity method investments:

	<b>December 31,</b>	
	<b>2021</b>	<b>2022</b>
	US\$	US\$
Current assets	2,223,447	1,879,845
Non-current assets	552,085	1,060,160
Current liabilities	601,688	373,980
Non-current liabilities	39,719	33,173

	<b>For the year ended December 31,</b>		
	<b>2020</b>	<b>2021</b>	<b>2022</b>
	US\$	US\$	US\$
Revenues	1,405,623	2,082,821	1,588,732
Gross profit	386,810	466,970	259,169
Net income (loss)	23,563	(81,953)	(103,729)
Net income (loss) attributable to the investees	23,563	(81,953)	(103,729)

- (ii) The Group does not have the ability to exercise significant influence over these investments. Therefore, it has been precluded from applying the equity method of accounting.

In 2021, the Group partially disposed an investment with readily determinable fair values for a cash consideration of US\$128,263. In 2022, the Group disposed an investment with readily determinable fair values for a cash consideration of US\$3,927.

In 2020, 2021 and 2022, fair value gain of US\$144,634, fair value loss of US\$32,773 and fair value loss of US\$20,453 related to investments with readily determinable fair values were recognized in the consolidated statements of comprehensive income (Note 29), respectively.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**12. Investments (continued)**

- (iii) Equity securities without readily determinable fair values and over which the Company has neither significant influence nor control through investments in common stock or in-substance common stock.

In 2021 and 2022, the Group acquired minority preferred shares or ordinary shares of a number of privately-held entities with total consideration of US\$38,806 and US\$23,151, respectively. The ownership interests were less than 20% of the investees' total equities or the ownership interests redeemable upon condition. These equity investments are not considered as debt securities or equity securities that have readily determinable fair values. Accordingly the Company elected to account for these investments at cost less impairments, adjusted by observable price changes.

In 2021, the Group partially disposed an investment without readily determinable fair values, with a consideration of US\$29,050. In 2022, the Group disposed certain investments without readily determinable fair values, with a consideration of US\$4,253 in total.

In 2021, the Group disposed of an equity investment accounted for using the equity method and reinvested on the investment by acquiring majority of equity interests of its overseas entity that became a subsidiary of the Group. Accordingly, the Group recorded an equity investment held by this subsidiary as equity investment without readily determinable fair values amounting to US\$51,775 as of December 31, 2021.

In 2020, fair value gain of US\$14,543 due to the observable price change, were recognized in gain on fair value changes of investments (Note 29). Out of the fair value gain of US\$14,543 for the year ended December 31, 2020, fair value gain of US\$15,498 was unrealized and fair value loss of US\$955 was realized. In 2021, fair value gain of US\$14,045 due to the observable price change, were recognized in gain on fair value changes of investments (Note 29). Out of the fair value gain of US\$14,045 for the year ended December 31, 2021, fair value gain of US\$1,339 was unrealized and fair value gain of US\$12,706 was realized. In 2022, fair value gain of US\$17,089 due to the observable price change, were recognized in gain on fair value changes of investments (Note 29). Out of the fair value gain of US\$17,089 for the year ended December 31, 2022, fair value gain of US\$12,968 was unrealized and fair value gain of US\$4,121 was realized.

The Group assesses the existence of indicators for other-than-temporary impairment of the investments by considering factors including, but not limited to, current economic and market conditions, the operating performance of the entities including current earnings trends and other entity-specific information. In 2020, 2021 and 2022, based on the Group's assessment, an impairment charge of US\$6,186, US\$93,632 and nil was recognized in general and administrative expenses, respectively, against the carrying value of the investments due to significant deterioration in earnings or unexpected changes in business prospects of the investees as compared to the original investment plans.

- (iv) Available-for-sale debt investment are convertible debt instruments issued by private companies and investments in preferred shares that are redeemable at the Group's option, which are measured at fair value.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****13. Property and equipment, net**

Property and equipment consist of the following:

	<b>December 31,</b>	
	<u>2021</u>	<u>2022</u>
	US\$	US\$
<b>Gross carrying amount</b>		
Servers, computers and equipment	319,393	272,809
Buildings	158,119	144,678
Construction in progress	96,552	163,199
Decoration of buildings	16,194	14,825
Leasehold improvements	8,210	7,318
Motor vehicles	6,585	7,915
Furniture, fixture and office equipment	5,229	7,362
Total	<u>610,282</u>	<u>618,106</u>
<b>Less: accumulated depreciation</b>	<u>(244,890)</u>	<u>(274,905)</u>
<b>Property and equipment, net</b>	<u>365,392</u>	<u>343,201</u>

Depreciation expense for the years ended December 31, 2020, 2021 and 2022 were US\$77,464, US\$108,686 and US\$83,396, respectively.

**14. Land use rights, net**

Land use rights consist of the following:

	<b>December 31,</b>	
	<u>2021</u>	<u>2022</u>
	US\$	US\$
<b>Gross carrying amount</b>	415,970	380,797
<b>Less: accumulated amortization</b>	<u>(45,918)</u>	<u>(50,792)</u>
<b>Land use rights, net</b>	<u>370,052</u>	<u>330,005</u>

Amortization expense for the years ended December 31, 2020, 2021 and 2022 were US\$6,957, US\$8,607 and US\$9,053, respectively.

The estimated amortization expenses for each of the following five years are as follows:

	<b>Amortization expense of land use rights</b>
	US\$
2023	8,575
2024	8,575
2025	8,575
2026	8,575
2027	8,575

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****15. Intangible assets, net**

The following table summarizes the Group's intangible assets:

	December 31,	
	2021 US\$	2022 US\$
<b>Gross carrying amount</b>		
Trademark	371,975	515,704
Customer relationships	154,906	154,830
Non-compete agreement	12,100	12,100
Software	8,941	9,071
Operating rights	7,255	6,641
License	9,949	9,108
Technology	14,770	14,513
Domain names	1,518	1,782
Others	1,415	1,405
Total of gross carrying amount	582,829	725,154
<b>Less: accumulated amortization</b>		
Trademark	(102,815)	(145,554)
Customer relationships	(133,921)	(143,500)
Non-compete agreement	(12,100)	(12,100)
Software	(8,270)	(8,426)
Operating rights	(7,144)	(6,539)
License	(1,382)	(1,872)
Technology	(2,988)	(4,834)
Domain names	(644)	(791)
Others	(258)	(397)
Total accumulated amortization	(269,522)	(324,013)
<b>Less: accumulated impairment</b>	(1,225)	(2,841)
<b>Intangible assets, net</b>	312,082	398,300

Amortization expense for the years ended December 31, 2020, 2021 and 2022 were US\$102,465, US\$58,626 and US\$56,151 respectively.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**15. Intangible assets, net (continued)**

The estimated amortization expenses for each of the following five years are as follows:

	<u>Amortization expense of intangible assets</u> US\$
2023	64,017
2024	56,694
2025	55,122
2026	55,118
2027	52,806

The weighted average amortization periods of intangible assets as of December 31, 2021 and 2022 are as below:

	<u>December 31,</u>	
	<u>2021</u>	<u>2022</u>
Trademark	10 years	10 years
Customer relationships	3 years	3 years
License	15 years	15 years
Operating rights	2 years	2 years
Software	3 years	3 years
Domain names	15 years	15 years
Technology	6 years	6 years
Others	10 years	10 years

**16. Goodwill**

The changes in the carrying amount of goodwill for the years ended December 31, 2021 and 2022 are as follows:

	<u>All other</u> US\$	<u>Bigo</u> US\$	<u>Total</u> US\$
Balance as of December 31, 2020 (i)	17,862	1,854,221	1,872,083
Increase in goodwill related to acquisition (ii)	84,925	—	84,925
Foreign currency translation adjustments	1,255	—	1,255
Balance as of December 31, 2021	104,042	1,854,221	1,958,263
Increase in goodwill related to acquisition (ii)	708,471	—	708,471
Impairment (i)	(14,830)	—	(14,830)
Foreign currency translation adjustments	(2,597)	—	(2,597)
Balance as of December 31, 2022	<u>795,086</u>	<u>1,854,221</u>	<u>2,649,307</u>

- (i) The Group performs its annual goodwill impairment test of each reporting unit in the fourth quarter, or more frequently, if certain events or circumstances warrant. Events or changes in circumstances which might indicate potential impairment in goodwill include the entity-specific factors, including, but not limited to, stock price volatility, market capitalization relative to net book value, and projected revenue, market growth and operating results.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**16. Goodwill (continued)**

The Group performed a goodwill impairment analysis in the fourth quarter of 2020, 2021 and 2022. When determining the fair value of the Bigo reporting unit, the Group used the income approach. The income approach determines fair value based on discounted cash flow models derived from the reporting units' long-term forecasts which included a five-year future cash flow projection and an estimated terminal value for the impairment analysis of 2022. The discounted cash flow model included a number of significant unobservable inputs. Key assumptions used to determine the estimated fair value include: (a) the future cash flows forecasts including expected revenue growth, (b) an estimated terminal value using a terminal year long-term future growth rate determined based on the growth prospects of the reporting unit; and (c) a discount rate that reflects the weighted-average cost of capital adjusted for the relevant risk associated with each reporting unit's operations and the uncertainty inherent in the Group's internally developed forecasts. Based on the Group's assessment, the fair value of Bigo reporting unit exceeded their carrying value by around 10%, 10% and 4% of the carrying value of the Bigo reporting unit in 2020, 2021 and 2022, respectively. In addition, management also assessed the reasonableness of the fair value derived from its discounted cash flow analysis after consideration of the Group's net book value and market capitalization.

In the annual goodwill impairment assessment, the Company concluded that the carrying amounts of a reporting unit exceeded their respective fair values and recorded impairment losses of nil, nil and US\$14,830 during the years ended December 31, 2020, 2021 and 2022, respectively.

(ii) The increase in goodwill in 2021 and 2022 was related to the acquisition in Note 5.

**17. Deferred revenue**

	December 31,	
	2021	2022
	US\$	US\$
<b>Deferred revenue, current</b>		
Live streaming	58,425	63,303
Others	2,485	22,711
Total current deferred revenue	<u>60,910</u>	<u>86,014</u>
<b>Deferred revenue, non-current</b>		
Live streaming	5,931	9,430
Others	491	335
Total non-current deferred revenue	<u>6,422</u>	<u>9,765</u>

**18. Accrued liabilities and other current liabilities**

	December 31,	
	2021	2022
	US\$	US\$
Revenue sharing fees and content costs	129,717	106,770
Salaries and welfare	99,725	85,361
Marketing and promotion expenses	58,854	58,600
Value added taxes and other taxes payable	137,142	160,257
Bandwidth costs	19,746	20,171
Consideration received related to disposal of YY Live (Note 3(a))	1,862,750	1,861,299
Others	37,904	67,544
<b>Total</b>	<u>2,345,838</u>	<u>2,360,002</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****19. Short-term loans**

	December 31,	
	2021 US\$	2022 US\$
Short-term loans	—	37,270

The Group entered into several agreements with banks, pursuant to which the Group borrowed loans with total principal amount of RMB259 million (equivalent to US\$37 million) within a banking facility of RMB360 million (equivalent to US\$52 million) in 2022. These loans were all with a maturity of less than one year and the annual interest rates ranged from 1.40% to 2.98%. Short-term deposits of US\$47 million were pledged as collateral for the banking facilities, which were classified as restricted short-term deposits.

**20. Convertible bonds**

	December 31,	
	2021 US\$	2022 US\$
<b>Current</b>		
2025 Convertible Senior Notes	—	435,087
	—	435,087
<b>Non-current</b>		
2025 Convertible Senior Notes	463,319	—
2026 Convertible Senior Notes	460,758	401,173
	924,077	401,173

On June 19, 2019, the Company issued Convertible Senior Notes due 2025 with principal amount of US\$500 million (the “Notes due 2025”) and Convertible Senior Notes due 2026 with principal amount of US\$500 million (the “Notes due 2026”) (collective the “Notes”). The Notes due 2025 and Notes due 2026 bear interest at a coupon rate of 0.75% and 1.375% per year, respectively, and both of them are payable semi-annually in arrears on June 15 and December 15 of each year, beginning on December 15, 2019. The Notes due 2025 will mature on June 15, 2025 and the Notes due 2026 will mature on June 15, 2026. The Notes due 2025 and the Notes due 2026 may be converted, under certain circumstances, based on an initial conversion rate of 10.4271 ADS per US\$1,000 principal amount of the Notes (equivalent to an initial conversion price of approximately US\$95.9 per ADS).

The Notes due 2025 and Notes due 2026 are not redeemable prior to their maturity date, except that the holders of the Notes (the “Holders”) have a noncontingent option to require the Company to repurchase for cash all or any portion of their Notes on June 15, 2023 and June 15, 2024, respectively. The repurchase price will equal 100% of the principal amount of the Notes to be repurchased plus accrued and unpaid interest, if any, to, but excluding, the repurchase date.

Upon conversion, the Company may deliver ADS, cash, or a combination of ADS and cash at the option of the Company itself. Therefore, the Notes due 2025 and Notes due 2026 contains cash conversion features, which was an equity component and need to be bifurcated from the debt component of the Notes. Determination of the carrying amount of the debt component was based on the fair value of a similar debt instrument excluding the embedded conversion feature, by using discounted cash flow method. The equity component related to conversion features were recognized by ascribing the difference between the proceeds and the fair value of the debt component in Additional paid-in capital.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 20. Convertible bonds (continued)

The net proceeds to the Company from the issuance of the Notes due 2025 were US\$491 million. Debt issuance costs of the Notes due 2025 were US\$9 million. Out of the debt issuance costs, US\$7 million was amortized to interest expense from the issuance date (June 19, 2019) to the first put date of the Notes (June 15, 2023) and US\$2 million was allocated as deduction to the equity component. The net proceeds to the Company from the issuance of the Notes due 2026 were US\$491 million. Debt issuance costs of the Notes due 2026 were US\$9 million. Out of the debt issuance costs, US\$6 million was amortized to interest expense from the issuance date (June 19, 2019) to the first put date of the Notes (June 15, 2024) and US\$3 million was allocated as deduction to the equity component.

The value of Notes due 2025 and Notes due 2026 is initially measured by the cash received after deducting the issuance cost and the bifurcation of the conversion features. The Notes due 2025 and Notes due 2026 are subsequently stated at amortized cost. The difference between the principal amount of the Notes due 2025 and Notes due 2026 and the amount of the proceeds allocated to the debt component plus the issuance costs are regarded as a debt discount, which is subsequently amortized through interest expense over the Notes due 2025 and Notes due 2026's expected life using the interest method, respectively.

On January 1, 2021, the Company early adopted ASU 2020-06, "Accounting for Convertible Instruments and Contracts in an Entity's Own Equity" using modified-retrospective transition approach. Pursuant to ASU 2020-06, the embedded conversion features no longer are separated from the host contract for convertible instruments with conversion features that are not required to be accounted for as derivatives under Topic 815, Derivatives and Hedging, or that do not result in substantial premiums accounted for as paid-in capital. Consequently, a convertible debt instrument will be accounted for as a single liability measured at its amortized cost as long as no other features require bifurcation and recognition as derivatives. Following the adoption of this guidance, the amount previously allocated to additional paid-in capital was reclassified as a liability and a cumulative effect adjustment of US\$86.7 million was credited to retained earnings as of January 1, 2021.

During 2021, the Company recognized a net gain on extinguishment of debt of US\$4.0 million net of the write-off of associated unamortized deferred loan costs through repayment of US\$71.1 million of the Notes at a cost of US\$66.7 million.

During 2022, the Company recognized a net gain on extinguishment of debt of US\$7.1 million net of the write-off of associated unamortized deferred loan costs through repayment of US\$90.6 million of the Notes at a cost of US\$83.1 million.

As of December 31, 2021 and 2022, US\$924.1 million and US\$401.2 million have been accounted for as the value of the convertible bonds in non-current liabilities. Interest expense related to the Notes due 2025 and Notes due 2026 recognized during the years ended December 31, 2021 and 2022 was US\$13,332 and US\$2,448, respectively.

Concurrently with the issuance of the Notes, the Company purchased a capped call option ("Purchased Call Option") in the amount of US\$77,000, in order to mitigate the potential future economic dilution associated with the conversion of the Notes and to increase the initial conversion price to US\$127.9 per ADS. Counterparty agreed to sell to the Company up to approximately 10.4 million ADS, which is the number of ADS initially issuable upon conversion of the Notes in full, at a price of US\$95.9 per ADS. The Purchased Call Option will be settled in ADSs and will terminate upon the maturity date of the Notes. Settlement of the Purchased Call Option in ADSs, based on the number of ADSs issued upon conversion of the Notes, on the expiration date would result in the Company receiving shares equivalent to the number of shares issuable by the Company upon conversion of the Notes. In accordance with ASC 815-10-15-83, the Purchased Call Option meets the definition of a derivative instrument. However, the scope exception in accordance with ASC 815-10-15-74 applies to the Purchased Call Option as it is indexed to its own stock, and the Purchased Call Option meets the requirements of ASC 815 and would be classified in stockholders' equity, therefore, the cost paid for Purchased Call Option was accounted for within stockholders' equity, and subsequent changes in fair value will not be recorded.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****21. Cost of revenues**

	<b>For the year ended December 31,</b>		
	<b>2020</b>	<b>2021</b>	<b>2022</b>
	US\$	US\$	US\$
Revenue sharing fees and content costs	812,706	1,158,435	1,020,174
Payment handling costs	190,583	212,655	165,421
Bandwidth costs	120,419	96,536	77,496
Salary and welfare	102,330	116,679	87,629
Depreciation and amortization	61,021	87,339	70,666
Technical service fee	59,325	55,874	63,328
Share-based compensation	5,797	8,089	8,185
Other costs	25,965	45,543	66,489
<b>Total</b>	<b><u>1,378,146</u></b>	<b><u>1,781,150</u></b>	<b><u>1,559,388</u></b>

**22. Other income**

	<b>For the year ended December 31,</b>		
	<b>2020</b>	<b>2021</b>	<b>2022</b>
	US\$	US\$	US\$
Government grants	6,518	16,947	11,534
Others	1,577	3,429	5,971
<b>Total</b>	<b><u>8,095</u></b>	<b><u>20,376</u></b>	<b><u>17,505</u></b>

**23. Income tax****(i) Cayman Islands**

Under the current tax laws of Cayman Islands, the Company and its subsidiaries are not subject to tax on income or capital gains. Besides, upon payment of dividends by the Company to its shareholders, no Cayman Islands withholding tax will be imposed.

**(ii) BVI**

Duowan BVI is exempted from income tax on its foreign-derived income in the BVI.

**(iii) Hong Kong profits tax**

Under the current Hong Kong Inland Revenue Ordinance, the subsidiaries of the Group in Hong Kong are subject to 16.5% Hong Kong profit tax on its taxable income generated from operations in Hong Kong. Additionally, payments of dividends by the subsidiary incorporated in Hong Kong are not subject to any Hong Kong withholding tax.

**(iv) Singapore**

The income tax provision of the Group in respect of its international operations in Singapore was calculated at the tax rate of 17% on the assessable profits, based on the existing legislation, interpretations and practices in respect thereof.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 23. Income tax (continued)

#### (iv) Singapore (continued)

According to the Development and Expansion Incentive (the “Incentive”) pursuant to the provisions of Part IIIB of the Economic Expansion Incentives (Relief from Income Tax) Act, Chapter 86, corporations engaging in new high-value-added projects, expanding or upgrading their operations, or undertaking incremental activities after their pioneer period may apply for their profits to be taxed at a reduced rate of not less than 5% for an initial period of up to ten years. The total tax relief period for each qualifying project or activity is subject to a maximum of 40 years (inclusive of the post-pioneer relief period previously granted, if applicable).

Bigo Singapore applied for the Incentive and received approval in October 2018 and started to enjoy the beneficial tax rate of 5% as the Incentive for the years 2018 through 2022. Bigo Singapore applied for the renewal of Incentive qualification and received approval in December 2022 and is entitled to enjoy the beneficial tax rate from 2023 to 2027. Other Singapore entities were subject to 17% income tax for the periods reported.

#### (v) Mainland China

The Company’s subsidiaries and VIEs in China are governed by the Enterprise Income Tax Law (“EIT Law”), which became effective on January 1, 2008. Pursuant to the EIT Law and its implementation rules, enterprises in China are generally subject to tax at a statutory rate of 25%. Certified High and New Technology Enterprises (“HNTE”) are entitled to a favorable tax rate of 15%, but need to re-apply every three years. During this three-year period, an HNTE must conduct a qualification self-review each year to ensure it meets the HNTE criteria and is eligible for the 15% preferential tax rate for that year. If an HNTE fails to meet the criteria for qualification in any year, the enterprise cannot enjoy the preferential tax rate in that year, and must instead use the regular 25% EIT rate.

Certain PRC subsidiaries and VIEs, including Guangzhou Huanju Shidai, Guangzhou BaiGuoYuan and BaiGuoYuan Technology, etc. are qualified HNTEs and enjoy a reduced tax rate of 15% for the years presented. An entity could re-apply for the HNTE certificate when the prior certificate expires. Historically, most of the Company’s subsidiaries and VIEs successfully re-applied for the certificates when the prior ones expired.

According to a policy promulgated by the State Tax Bureau of the PRC and effective from 2008 onwards, enterprises engaged in research and development activities are entitled to claim an additional tax deduction amounting to 50% of the qualified research and development expenses incurred in determining its tax assessable profits for that year. The additional tax deducting amount of the qualified research and development expenses have been increased from 50% to 75%, effective from 2018 onwards, according to a new tax incentives policy promulgated by the State Tax Bureau of the PRC in September 2018 (“Super Deduction”).

Qualified subsidiaries and VIEs of the Group claimed the Super Deduction in ascertaining the tax assessable profits for the periods reported.

The EIT Law also imposes a withholding income tax of 10% on dividends distributed by an Foreign Invested Enterprise (“FIE”) to its immediate holding company outside of China, if such immediate holding company is considered as a non-resident enterprise without any establishment or place within China or if the received dividends have no connection with the establishment or place of such immediate holding company within China, unless such immediate holding company’s jurisdiction of incorporation has a tax treaty with China that provides for a different withholding arrangement. The Cayman Islands, where the Company incorporated, does not have such tax treaty with China. According to the arrangement between the mainland China and Hong Kong Special Administrative Region on the Avoidance of Double Taxation and Prevention of Fiscal Evasion in August 2006, dividends paid by an FIE in China to its immediate holding company in Hong Kong will be subject to withholding tax at a rate of no more than 5% (if the foreign investor owns directly at least 25% of the shares of the FIE). In accordance with accounting guidance, all undistributed earnings are presumed to be transferred to the parent company and are subject to the withholding taxes. All FIEs are subject to the withholding tax from January 1, 2008. The presumption may be overcome if the Group has sufficient evidence to demonstrate that the undistributed dividends will be re-invested and the remittance of the dividends will be postponed indefinitely.

Aggregate undistributed earnings and reserves of the Group entities located in the PRC that are available for distribution to the Company as of December 31, 2021 and 2022 are approximately US\$2,530,305 and US\$2,385,325, respectively.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****23. Income tax (continued)**

(v) Mainland China (continued)

In 2022, the Group determined to cause one of its PRC subsidiaries, Guangzhou Huanju Shidai, to declare and distribute a cash dividend of part of its stand-alone 2020 earnings, amounted to US\$110,000, to its direct oversea parent company, Duowan BVI. So Guangzhou Huanju Shidai paid for the withholding tax in the amount of US\$11,000 in 2022.

The Group has a plan to indefinitely reinvest its aggregate undistributed earnings and reserves and any future earnings in the PRC for use in the operation. Accordingly, no deferred tax liability on 10% withholding tax of aggregate undistributed earnings and reserves of the Company's subsidiaries located in the PRC has been accrued that would be payable upon the distribution of those amounts to the Company as of December 31, 2021 and 2022.

*Composition of income tax expense*

The current and deferred portions of income tax expense included in the consolidated statements of comprehensive income are as follows:

	<b>For the year ended December 31,</b>		
	<b>2020</b>	<b>2021</b>	<b>2022</b>
	US\$	US\$	US\$
Current income tax expenses	(15,209)	(35,550)	(36,510)
Deferred income tax (expenses) benefit	(12,616)	9,805	1,935
Income tax expenses	<u>(27,825)</u>	<u>(25,745)</u>	<u>(34,575)</u>

The company records annual income tax with regard to a number of tax jurisdictions, including the Mainland China, Singapore and Hong Kong. However, the amount of expense recorded for each respective jurisdiction is immaterial to the consolidated tax provision.

*Reconciliation of the differences between statutory tax rate and the effective tax rate*

The reconciliation of total tax expense computed by applying the respective statutory income tax rate to pre-tax income is as follows:

	<b>2020</b>	<b>2021</b>	<b>2022</b>
Singapore statutory income tax rate (*)	17.0 %	17.0 %	17.0 %
Effect of tax holiday and preferential tax benefit	(163.2)%	20.9 %	(5.3)%
Effect of different tax rates available to different jurisdictions	(60.1)%	47.6 %	(9.5)%
Permanent differences (i)	151.9 %	(66.3)%	6.8 %
Change in valuation allowance	484.7 %	(95.2)%	0.8 %
Effect of Super Deduction available to the Group	(226.6)%	42.8 %	(4.4)%
Effective income tax rate	<u>203.7 %</u>	<u>(33.2)%</u>	<u>5.4 %</u>

\*: As a majority of the Group's businesses is subject to Singapore corporate tax rate, the reconciliation of tax expenses begins at Singapore statutory income tax rate.

(i) Permanent differences mainly arise from expenses not deductible for tax purposes including primarily share-based compensation costs and expenses incurred by subsidiaries and VIEs.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****23. Income tax (continued)***Deferred tax assets and liabilities*

Deferred taxes are measured using the enacted tax rates for the periods in which they are expected to be reversed. The tax effects of temporary differences that give rise to the deferred tax asset balances as of December 31, 2021 and 2022 are as follows:

	<b>December 31,</b>	
	<b>2021</b>	<b>2022</b>
	US\$	US\$
<b>Deferred tax assets:</b>		
Tax loss carried forward	176,009	197,651
Allowance for expected credit loss of receivable, accrued expense and others not currently deductible for tax purposes	33,341	37,991
Deferred revenue	5,346	2,708
Impairment of investment	7,632	4,937
Others	—	4,350
Valuation allowance (i)	(213,688)	(242,051)
Amounts offset by deferred tax liabilities	(8,640)	(5,586)
<b>Total deferred tax assets, net</b>	<u>—</u>	<u>—</u>
<b>Deferred tax liabilities:</b>		
Related to the fair value changes of investments	9,061	10,446
Related to acquired intangible assets	34,013	54,774
Others	1,780	4,628
Amounts offset by deferred tax assets	(8,640)	(5,586)
<b>Total deferred tax liabilities, net</b>	<u>36,214</u>	<u>64,262</u>

- (i) Valuation allowance is provided against deferred tax assets when the Group determines that it is more likely than not that the deferred tax assets will not be utilized in the future. In making such determination, the Group considered factors including future taxable income exclusive of reversing temporary differences and tax loss carry forwards. Valuation allowance was provided for net operating loss carry forward because it was more likely than not that such deferred tax assets would not be realized based on the Group's estimate of its future taxable income. If events occur in the future that allow the Group to realize more of its deferred income tax than the presently recorded amounts, an adjustment to the valuation allowances will result in a decrease in tax expense when those events occur.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****23. Income tax (continued)***Deferred tax assets and liabilities (continued)***Movement of valuation allowance**

	For the year ended December 31,		
	2020 US\$	2021 US\$	2022 US\$
Balance at beginning of the year	(87,106)	(150,252)	(213,688)
Additions	(96,629)	(119,999)	(58,968)
Reversals	33,483	56,563	30,605
Balance at end of the year	<u>(150,252)</u>	<u>(213,688)</u>	<u>(242,051)</u>

*Tax loss carry forwards*

As of December 31, 2022, total tax loss carry forwards of the Company's subsidiaries and VIEs in the PRC amounted to US\$626,692, which were mainly generated by non-HNTEs. The tax losses in PRC can be carried forward for five years to offset future taxable profit, and the period was extended to 10 years for entities qualified as HNTEs. The tax losses of entities in the PRC will expire from 2023 to 2027, if not utilized except for those arose from HNTEs which will expired during the period from 2023 to 2032. The accumulated tax losses of subsidiaries incorporated in Hong Kong, Singapore and other countries, subject to the agreement of the relevant tax authorities, of US\$15,907, US\$362,404 and US\$95,610, respectively, are allowed to be carried forward to offset against future taxable profits. Such carry forward of tax losses in Hong Kong and Singapore have no time limit.

In accordance with Singapore Tax Administration Law, the Singapore tax authorities generally have up to four years to claw back underpaid tax if the year of assessment is 2008 onwards. Accordingly, tax filings of the Group's Singapore subsidiaries for tax years 2019 through 2022 remain subject to the review by the relevant Singapore tax authorities. There were no ongoing tax examinations as of December 31, 2022 by Singapore tax authorities.

In accordance with PRC Tax Administration Law on the Levying and Collection of Taxes, the PRC tax authorities generally have up to five years to claw back underpaid tax plus penalties and interest for PRC entities' tax filings. Accordingly, tax filings of the Group's PRC subsidiaries and VIEs for tax years 2018 through 2022 remain subject to the review by the relevant PRC tax authorities. There were no ongoing tax examinations as of December 31, 2022 by PRC tax authorities.

**24. Mezzanine equity**

In 2018, a subsidiary of the Group issued 500,000,000 shares of redeemable convertible preferred shares for cash consideration of US\$50,000 to certain third-party investors. The Group classifies the redeemable convertible preferred shares as mezzanine equity and records accretion of redemption value in accordance with ASC 480-10. The Group used the interest method for the changes of redemption value over the period from the date of issuance to the earliest redemption date of the non-controlling interests. Accretion of redeemable convertible preferred shares to redemption value of US\$5,000, US\$5,000 and US\$5,000 was recognized for the years ended December 31, 2020, 2021 and 2022.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 25. Common shares and treasury shares

During the year ended December 31, 2020, 12,363,420 Class A common shares were issued for the exercised share options, vested restricted shares and restricted share. The Company also repurchased an aggregate of 1,658,291 ADSs, representing 33,165,820 Class A common shares at an average price of US\$69.8407 per ADS or US\$3.4920 per Class A common share, for aggregate consideration of US\$115.8 million. Since the shares repurchased have not been cancelled, the excess of repurchase price over par value was recorded as treasury shares upon the repurchase date.

As of December 31, 2020, 10,000,000,000 Class A common shares and 1,000,000,000 Class B common shares had been authorized, 1,314,208,824 Class A common shares and 326,509,555 Class B common shares had been issued, 1,272,346,218 Class A common shares and 326,509,555 Class B common shares were outstanding, respectively.

During the year ended December 31, 2021, 3,631,640 Class A common shares were issued for the exercised share options, vested restricted shares and restricted share. In addition, 1,442,020 Class A common shares were transferred out from the treasury shares pool and issued for vested restricted share units during the year ended December 31, 2021. The Company also repurchased an aggregate of 6,515,488 ADSs, representing 130,309,760 Class A common shares at an average price of US\$60.3154 per ADS or US\$3.0158 per Class A common share, for aggregate consideration of US\$393.0 million. Since the shares repurchased have not been cancelled, the excess of repurchase price over par value was recorded as treasury shares upon the repurchase date.

As of December 31, 2021, 10,000,000,000 Class A common shares and 1,000,000,000 Class B common shares had been authorized, 1,317,840,464 Class A common shares and 326,509,555 Class B common shares had been issued, 1,146,336,305 Class A common shares and 326,509,555 Class B common shares were outstanding, respectively.

On September 9, 2021, the Company's board of directors approved a new share repurchase plan (the "September 2021 Share Repurchase Plan"), pursuant to which the Company may repurchase up to US\$200 million of the Company's outstanding ADSs or common shares over the next 12 months. On November 16, 2021, the Company's board of directors further approved an additional share repurchase plan (the "November 2021 Share Repurchase Plan"), pursuant to which the Company may repurchase up to US\$1 billion of the Company's outstanding ADSs or common shares over the next 12 months. As of December 31, 2021, the Company had repurchased approximately US\$235.7 million of its shares.

During the year ended December 31, 2022, 780,263 Class A common shares were issued for the exercised share options, vested restricted shares and restricted share. In addition, 3,567,640 Class A common shares were transferred out from the treasury shares pool and issued for vested restricted share units during the year ended December 31, 2022. The Company also repurchased an aggregate of 4,225,359 ADSs, representing 84,507,180 Class A common shares at an average price of US\$32.6786 per ADS or US\$1.6339 per Class A common share, for aggregate consideration of US\$138.1 million. Since the shares repurchased have not been cancelled, the excess of repurchase price over par value was recorded as treasury shares upon the repurchase date.

As of December 31, 2022, 10,000,000,000 Class A common shares and 1,000,000,000 Class B common shares had been authorized, 1,317,840,464 Class A common shares and 326,509,555 Class B common shares had been issued, 1,066,177,028 Class A common shares and 326,509,555 Class B common shares were outstanding, respectively.

In November 2021, the Company announced that its board of directors has authorized an additional share repurchase plan under which the Company may repurchase up to US\$1 billion of its shares between November 2021 and November 2022 (the "November 2021 Share Repurchase Plan"). In November 2022, the Company's board of directors authorized the continued usage of the unutilized quota under the 2021 Share Repurchase Program, which amounted to US\$800 million then, for another 12-month period beginning from the end of November 2022. In the fourth quarter of 2022, the Company had repurchased US\$31.8 million of its shares, bringing the cumulative repurchases in the full year of 2022 to approximately US\$138.1 million. As of December 31, 2022, the Company had repurchased approximately US\$173.8 million of its shares pursuant to the 2021 Share Repurchase Program, as amended.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****26. Share-based compensation****(a) JOYY's share-based awards****(i) Restricted Share Units**

On September 16, 2011, the board of directors of the Company approved the 2011 Share Incentive Scheme which include share options, restricted share units and restricted shares. In October 2012, the board of directors of the Company resolved that the maximum aggregate number of Class A common shares which may be issued pursuant to all awards under the 2011 Share Incentive Scheme shall be 43,000,000 plus an annual increase of 20,000,000 on the first day of each fiscal year, or such lesser amount of Class A common shares as determined by the board of directors of the Company.

In September 2021, the board of directors of the Company amended and restated the 2011 Share Incentive Scheme ("Amended and Restated 2011 Share Incentive Scheme"), pursuant to which the Company replaced the 2011 Share Incentive Scheme in its entirety and the awards granted and outstanding thereunder remain effective and binding under the Amended and Restated 2011 Share Incentive Scheme. The board of directors of the Company resolved that the maximum aggregate number of Class A common shares which may be issued pursuant to all awards under the Amended and Restated 2011 Share Incentive Scheme shall be 131,950,949 plus an annual increase of 20,000,000 on the first day of each fiscal year, beginning in 2022, or such lesser amount of Class A common shares.

During the years ended December 31, 2020, 2021 and 2022, the Company granted restricted share units to employees of 62,770,405, 9,387,270 and 9,918,014, respectively, pursuant to the 2011 Share Incentive Scheme.

The following table summarizes the restricted share units activity for the years ended December 31, 2020, 2021 and 2022:

	<u>Number of restricted shares units</u>	<u>Weighted average grant-date fair value (US\$)</u>
Outstanding, December 31, 2019	27,113,132	3.9034
Granted	62,770,405	3.6059
Forfeited	(10,312,521)	3.9198
Vested	<u>(6,918,126)</u>	4.3045
Outstanding, December 31, 2020	<u>72,652,890</u>	3.6059
Granted	9,387,270	3.6323
Forfeited	(42,872,565)	3.5461
Vested	<u>(15,139,700)</u>	3.6104
Outstanding, December 31, 2021	<u>24,027,895</u>	3.7202
Granted	9,918,014	1.5065
Forfeited	(8,023,640)	3.4889
Vested	<u>(8,386,702)</u>	3.7594
Outstanding, December 31, 2022	<u>17,535,567</u>	2.5551
Expected to vest as of December 31, 2022	<u>15,234,920</u>	2.5257

For the years ended December 31, 2020, 2021 and 2022, the Company recorded share-based compensation of US\$47,514, US\$21,427 and US\$21,463 in relation to continuing operations using the graded-vesting attribution method.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****26. Share-based compensation (continued)****(a) JOYY's share-based awards (continued)****(i) Restricted Share Units (continued)**

As of December 31, 2022, total unrecognized compensation expense relating to the restricted share units was US\$21,865. The expense is expected to be recognized over a weighted average period of 1.13 years using the graded-vesting attribution method.

**(ii) Restricted Shares**

In connection with the acquisition of Bigo in March 2019, the Group issued common shares to replace Bigo's share incentive scheme.

There are mainly three types of vesting schedule under Bigo's share incentive scheme, which are: i) 50% of the share-based awards will be vested after 24 months of the grant date and the remaining 50% will be vested in two equal installments over the following 24 months, ii) share-based awards will be vested in four equal installments over the following 48 months, and iii) share-based awards will be vested in three equal installments over the following 36 months. After the acquisition, Bigo's share incentive scheme are replaced by JOYY's restricted shares of 38,042,760 without change in vesting terms. The post-acquisition share-based compensation expenses are recognized over the remaining vesting period after the acquisition date.

During the years ended December 31, 2020, 2021 and 2022, the Company granted restricted share to employees of 4,541,086, 7,888,160 and 2,723,629, respectively.

The following table summarizes the restricted shares activity for the years ended December 31, 2020, 2021 and 2022:

	<u>Number of restricted shares</u>	<u>Weighted average grant-date fair value (US\$)</u>
Outstanding, December 31, 2019	38,204,251	3.5267
Granted	4,541,086	3.9739
Forfeited	(4,554,972)	3.5287
Vested	<u>(11,770,000)</u>	3.6290
Outstanding, December 31, 2020	<u>26,420,365</u>	3.5577
Granted	7,888,160	3.0435
Forfeited	(8,661,973)	3.7025
Vested	<u>(10,497,147)</u>	3.4862
Outstanding, December 31, 2021	<u>15,149,405</u>	3.2566
Granted	2,723,629	1.8427
Forfeited	(1,943,365)	3.0494
Vested	<u>(4,994,233)</u>	3.5657
Outstanding, December 31, 2022	<u>10,935,436</u>	2.8002
Expected to vest as of December 31, 2022	<u>9,430,412</u>	2.8289

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****26. Share-based compensation (continued)****(a) JOYY's share-based awards (continued)****(ii) Restricted Shares (continued)**

For the years ended December 31, 2020, 2021 and 2022, the Company recorded share-based compensation for restricted shares in relation to continuing operations of US\$38,618, US\$9,733 and US\$12,602 using the graded-vesting attribution method.

As of December 31, 2022, total unrecognized compensation expense relating to the restricted shares was US\$21,424. The expense is expected to be recognized over a weighted average period of 1.47 years using the graded-vesting attribution method.

**(iii) Share options**

2011 Share Incentive Scheme

*Grant of options*

During the years ended December 31, 2020, 2021 and 2022, no share option had been granted to employees or non-employees.

*Vesting of options*

There are three types of vesting schedule, which are: i) options will be vested in three equal installments over the following 36 months, ii) 50% of the options will be vested after 24 months of the grant date and the remaining 50% will be vested in two equal installments over the following 24 months, and iii) 50% of the options will be vested after 24 months of the grant date and the remaining 50% will be vested in one installments over the following 12 months.

Movements in the number of share options granted and their related weighted average exercise prices are as follows:

	<u>Number of options</u>	<u>Weighted average exercise price (US\$)</u>	<u>Weighted average remaining contractual life (years)</u>	<u>Aggregate intrinsic value (US\$)</u>
Outstanding, January 1, 2020	10,307,400	3.8069	5.45	—
Outstanding, December 31, 2020	10,307,400	3.8069	4.45	3,669
Forfeited	(893,000)	3.8830		
Outstanding, December 31, 2021	9,414,400	3.7997	2.80	—
Outstanding, December 31, 2022	9,414,400	3.7997	1.80	—
Expected to vest as of December 31, 2022	9,414,400	3.7997	1.80	—
Exercisable as of December 31, 2022	7,929,300	3.8492	1.97	—

Forfeitures are estimated at the time of grant. If necessary, forfeitures are revised in subsequent periods if actual forfeitures differ from those estimates.

The aggregate intrinsic value in the table above represents the difference between the Company's common shares as of December 31, 2020, 2021 and 2022 and the exercise price. The total intrinsic value was nil due to the higher exercise price compared to the Company's common shares as of December 31, 2021 and 2022 and the exercise price.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

26. Share-based compensation (continued)

(a) JOYY's share-based awards (continued)

(iii) Share options (continued)

For the years ended December 31, 2020, 2021 and 2022, the Company recorded share-based compensation in relation to continuing operations of US\$5,558, US\$2,222 and US\$1,022 using the graded vesting attribution method.

(b) Other share-based awards

For the years ended December 31, 2020, 2021 and 2022, the Company recorded share-based compensation expense of US\$470, nil and US\$9,009 for other share-based compensation.

27. Basic and diluted net income per share

Basic and diluted net income per share for the years ended December 31, 2020, 2021 and 2022 are calculated as follows:

	For the year ended December 31,		
	2020 US\$	2021 US\$	2022 US\$
<b>Numerator:</b>			
Net (loss) income from continuing operations attributable to common shareholders of JOYY Inc.	(28,305)	(125,096)	119,465
Dilutive effect of convertible bonds	—	—	11,740
<b>Numerator for diluted (loss) income per share from continuing operations</b>	<b>(28,305)</b>	<b>(125,096)</b>	<b>131,205</b>
Net income from discontinued operations attributable to common shareholders of JOYY Inc.	1,391,638	35,567	—
Incremental dilution from Huya <sup>(1)</sup>	(655)	—	—
<b>Numerator for diluted income per share from discontinued operations</b>	<b>1,390,983</b>	<b>35,567</b>	<b>—</b>
<b>Denominator:</b>			
Denominator for basic calculation—weighted average number of Class A and Class B common shares outstanding	1,600,199,759	1,562,016,001	1,439,390,191
Dilutive effect of convertible bonds	—	—	193,704,343
Dilutive effect of restricted stock	—	—	7,524,041
Dilutive effect of restricted share units	—	—	4,829,865
<b>Denominator for diluted calculation</b>	<b>1,600,199,759</b>	<b>1,562,016,001</b>	<b>1,645,448,440</b>
<b>Basic net income (loss) per Class A and Class B common share</b>	<b>0.85</b>	<b>(0.06)</b>	<b>0.08</b>
Continuing operations	(0.02)	(0.08)	0.08
Discontinued operations	0.87	0.02	—
<b>Diluted net income (loss) per Class A and Class B common share</b>	<b>0.85</b>	<b>(0.06)</b>	<b>0.08</b>
Continuing operations	(0.02)	(0.08)	0.08
Discontinued operations	0.87	0.02	—
<b>Basic net income (loss) per ADS*</b>	<b>17.04</b>	<b>(1.14)</b>	<b>1.66</b>
Continuing operations	(0.35)	(1.60)	1.66
Discontinued operations	17.39	0.46	—
<b>Diluted net income (loss) per ADS*</b>	<b>17.04</b>	<b>(1.14)</b>	<b>1.59</b>
Continuing operations	(0.35)	(1.60)	1.59
Discontinued operations	17.39	0.46	—

\* Each ADS represents 20 common shares.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**27. Basic and diluted net income per share (continued)**

(1) In calculation of diluted net income per share, assuming a dilutive effect, all of Huya’s existing unvested restricted share units and unexercised share options are treated as vested and exercised by Huya under the treasury stock method, causing the decrease percentage of the weighted average number of shares held by the Company in Huya. As a result, Huya’s net income (loss) attributable to the Company on a diluted basis decreased accordingly, which is presented as “incremental dilution from Huya” in the table.

For the years ended December 31, 2020, 2021 and 2022, the following shares outstanding were excluded from the calculation of diluted net income (loss) per share, as their inclusion would have been anti-dilutive for the periods prescribed but which could potentially dilute EPS in the future.

	<b>For the year ended December 31,</b>		
	<b>2020</b>	<b>2021</b>	<b>2022</b>
Shares issuable upon exercise of share options	10,307,400	9,414,400	9,414,400
Shares issuable upon exercise of restricted share units	72,652,890	24,027,895	—
Shares issuable upon exercise of restricted share	26,420,365	15,149,405	—
Shares issuable upon conversion of convertible bonds	210,568,000	201,677,195	—

**28. Related party transactions**

The table below sets forth the major related parties and their relationships with the Group:

<b>Major related parties</b>	<b>Relationship with the Group</b>
Guangzhou Sunhongs Corp., Ltd. (“Guangzhou Sunhongs”)	Significant influence exercised by a principal shareholder of the Company
Kingsoft Cloud Holdings Limited (“Kingsoft Cloud”)	Significant influence exercised by a principal shareholder of the Company
Shopline*	Investment with significant influence
Xiaomi Corporation (“Xiaomi Group”)	Controlled by a principal shareholder of the Company
Huya**	Investment with significant influence

\* Since September 6, 2022, Shopline became a subsidiary of the Group and ceased to be a related party of the Group.

\*\* Since April 3, 2020, Huya ceased to be a subsidiary of the Group and the Group accounted for the investment in Huya using the equity method.

During the years ended December 31, 2020, 2021 and 2022, significant related party transactions are as follows:

	<b>For the year ended December 31,</b>		
	<b>2020</b>	<b>2021</b>	<b>2022</b>
	US\$	US\$	US\$
Disposal of investments to related parties	20,271	—	—
Bandwidth service provided by Guangzhou Sunhongs	14,229	3,287	1,513
Promotion expense charged from related parties	2,533	3,149	5,322
Bandwidth service provided by Kingsoft Cloud	2,126	448	—
Loan to related parties	723	34,035	28,062
Purchase of fixed assets from Kingsoft Cloud	427	—	—
Payments on behalf of related parties, net of repayments	335	55,301	36,522
Others	850	2,552	2,862

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****28. Related party transactions (continued)**

As of December 31, 2021 and 2022, the amounts due from/to related parties are as follows:

	December 31,	
	2021	2022
	US\$	US\$
<b>Amounts due from related parties, current</b>		
Amounts due from Shopline	56,316	—
Others	668	1,794
<b>Total</b>	<b>56,984</b>	<b>1,794</b>
<b>Amounts due to related parties</b>		
Due to Huya	4,363	1,262
Due to Xiaomi Group	1,384	1,750
Due to Guangzhou Sunhongs	128	146
Others	1,056	67
<b>Total</b>	<b>6,931</b>	<b>3,225</b>

\*Other receivables and payables from/to related parties are unsecured and payable on demand.

**29. Fair value measurements**

Fair value reflects the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be recorded at fair value, the Group considers the principal or most advantageous market in which it would transact and considers assumptions that market participants would use when pricing the assets or liabilities.

The Group applies a fair value hierarchy that requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. This guidance specifies a hierarchy of valuation techniques, which is based on whether the inputs into the valuation technique are observable or unobservable. The hierarchy is as follows:

Level 1—Valuation techniques in which all significant inputs are unadjusted quoted prices from active markets for assets or liabilities that are identical to the assets or liabilities being measured.

Level 2—Valuation techniques in which significant inputs include quoted prices from active markets for assets or liabilities that are similar to the assets or liabilities being measured and/or quoted prices for assets or liabilities that are identical or similar to the assets or liabilities being measured from markets that are not active. Also, model-derived valuations in which all significant inputs and significant value drivers are observable in active markets are Level 2 valuation techniques.

Level 3—Valuation techniques in which one or more significant inputs or significant value drivers are unobservable. Unobservable inputs are valuation technique inputs that reflect the Group's own assumptions about the assumptions that market participants would use in pricing an asset or liability.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****29. Fair value measurements (continued)**

The fair value guidance describes three main approaches to measure the fair value of assets and liabilities: (1) market approach; (2) income approach and (3) cost approach. The market approach uses prices and other relevant information generated from market transactions involving identical or comparable assets or liabilities. The income approach uses valuation techniques to convert future amounts to a single present value amount. The measurement is based on the value indicated by current market expectations about those future amounts. The cost approach is based on the amount that would currently be required to replace an asset.

When available, the Group uses quoted market prices to determine the fair value of an asset or liability. If quoted market prices are not available, the Group will measure fair value using valuation techniques that use, when possible, current market-based or independently sourced market parameters, such as interest rates and currency rates.

**(a) Fair value measurement on a recurring basis**

The following table summarizes the Company's assets that are measured at fair value on a recurring basis and are categorized using the fair value hierarchy as of December 31, 2021 and 2022:

	As of December 31, 2021			Total
	Level 1	Level 2	Level 3	
<b>Assets</b>				
Short-term investments (i)	212,795	682,697	51,051	946,543
Equity investment with readily determinable fair values (ii)	25,480	—	—	25,480
	<u>238,275</u>	<u>682,697</u>	<u>51,051</u>	<u>972,023</u>
	As of December 31, 2022			Total
	Level 1	Level 2	Level 3	
<b>Assets</b>				
Short-term investments (i)	185,130	177,510	—	362,640
Equity investment with readily determinable fair values (ii)	1,179	—	—	1,179
	<u>186,309</u>	<u>177,510</u>	<u>—</u>	<u>363,819</u>

- (i) Short-term investments represented the investments issued by commercial banks or other financial institutions with a variable interest rate indexed to the performance of underlying assets within one year. For the instruments whose fair value is provided by banks at the end of each period, the Company classifies the valuation techniques that use these inputs as Level 1 of fair value measurements. For the instruments whose fair value is estimated based on quoted prices of similar products provided by banks at the end of each period, the Company classifies the valuation techniques that use these inputs as Level 2 of fair value measurements.
- (ii) Equity investments with readily determinable fair values are valued using the market approach based on the quoted prices in active markets at the reporting date. The Group classifies the valuation techniques that use these inputs as Level 1 of fair value measurements.

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****29. Fair value measurements (continued)****(a) Fair value measurement on a recurring basis (continued)**

The following table presents the changes in Level 3 assets for the years ended December 31, 2020, 2021 and 2022:

	<u>Available-for-sale debt investment</u>
	US\$
Balance as of December 31, 2020	1,000
Impairment	(1,000)
Balance as of December 31, 2021	—
Acquisition	21,299
Balance as of December 31, 2022	<u>21,299</u>

Available-for-sale debt investments do not have readily determinable market value, which were categorized as Level 3 in the fair value hierarchy. The Company uses a combination of valuation methodologies, including market and income approaches based on the Company's best estimate, which is determined by using information including but not limited to the pricing of recent rounds of financing of the investees, future cash flow forecasts, liquidity factors and multiples of a selection of comparable companies. In 2021, the Group has recognized full impairment against this convertible bond considering the recoverability of this convertible bond.

**(b) Fair value measurement on a non-recurring basis**

The Company measures investments without readily determinable fair value on a nonrecurring basis when impairment charges and fair value change due to observable price change are recognized. These nonrecurring fair value measurements use significant unobservable inputs (Level 3). The Company uses a combination of valuation methodologies, including market and income approaches based on the Company's best estimate to determine the fair value of these investments. An observable price change is usually resulting from new rounds of financing of the investees. The Company determines whether the securities offered in new rounds of financing are similar to the equity securities held by the Company by comparing the rights and obligations of the securities. When the securities offered in new rounds of financing are determined to be similar to the securities held by the Company, the Company adjusts the observable price of the similar security to determine the amount that should be recorded as an adjustment in the carrying value of the security to reflect the current fair value of the security held by the Company by using the back-solve method based on the equity allocation model with adoption of some key parameters such as risk-free rate and equity volatility. Inputs used in these methodologies primarily include discount rate, the selection of comparable companies operating in similar businesses and etc. For the years ended December 31, 2020, 2021 and 2022, gain on fair value changes of investment of US\$14,543, US\$14,045 and US\$17,089 due to the observable price change of the investment without readily determinable fair value.

The Group assesses the existence of indicators for other-than-temporary impairment of the investments by considering factors including, but not limited to, current economic and market conditions, the operating performance of the entities including current earnings trends and other entity-specific information. In 2020, 2021 and 2022, based on the Group's assessment, an impairment charge of US\$6,186, US\$93,632 and nil was recognized in general and administrative expenses, respectively, against the carrying value of the investments due to significant deterioration in earnings or unexpected changes in business prospects of the investees as compared to the original investment plans.

Apart from the short-term investments, equity investment measured at fair value through earnings and derivatives, the Company's other financial instruments principally consist of cash and cash equivalent, restricted cash and cash equivalent, short-term deposits, restricted short-term deposits, accounts receivable, financing receivables, other receivables, amounts due to/from related parties, accounts payable, certain accrued expenses and convertible bonds. These financial instruments are recorded at cost which approximates fair value.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 30. Commitments and contingencies

#### (a) Operating lease commitments

The operating lease commitments as of December 31, 2022 amounting to US\$2,023 mainly consist of the short-term lease commitments and leases that have not yet commenced but that create significant rights and obligations for the Company, which are not included in operating lease right-of-use assets and lease liabilities.

#### (b) Capital commitments

As of December 31, 2021 and 2022, the Group had outstanding capital commitments totaling to US\$109,881 and US\$143,471, which consisted of capital expenditures related to properties and additional investments in equity investments, respectively.

#### (c) Litigation

The Company and certain of its current and former officers and directors were named as defendants in a federal putative securities class action filed in November 2021 alleging that they made material misstatements and omissions in documents filed with the SEC regarding certain of the allegations contained in a short seller report. On March 9, 2022, the court granted the motion to dismiss the claims against the Company but plaintiff still has the ability to file a notice of appeal within 30 days from March 9, 2022. The plaintiffs have filed a notice of appeal before the due date. As of the date of this report, the Company is not able to make a reliable estimate of any potential loss from this class action.

In addition to the above, from time to time, the Group is involved in claims and legal proceedings that arise in the ordinary course of business. Based on currently available information, management does not believe that the ultimate outcome of these unresolved matters, individually and in the aggregate, is likely to have a material adverse effect on the Group's financial position, results of operations or cash flows.

### 31. Dividends

On March 16, 2023, the board of directors declared a dividend of US\$0.51 per ADS, or US\$0.0255 per common share, for the fourth quarter of 2022, which is expected to be paid on April 28, 2023 to shareholders of record as of the close of business on April 13, 2023.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

### 32. Restricted net assets

Relevant PRC laws and regulations permit payments of dividends by the Group's subsidiaries and VIEs incorporated in the PRC only out of their retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. In addition, the Company's subsidiaries and VIEs in the PRC are required to annually appropriate 10% of their net after-tax income to the statutory general reserve fund prior to payment of any dividends, unless such reserve funds have reached 50% of their respective registered capital. As a result of these and other restrictions under PRC laws and regulations, the Group's subsidiaries and VIEs incorporated in the PRC are restricted in their ability to transfer a portion of their net assets to the Company either in the form of dividends, loans or advances, which restricted portion as calculated under U.S. GAAP amounted to approximately US\$1,088,061 and US\$989,061 for the Group's VIEs as of December 31, 2021 and 2022, respectively, and US\$210,740 and US\$260,250 for the Group's subsidiaries as of December 31, 2021 and 2022, respectively. Even though the Company currently does not require any such dividends, loans or advances from the PRC entities for working capital and other funding purposes, the Company may in the future require additional cash resources from them due to changes in business conditions, to fund future acquisitions and development, or merely to declare and pay dividends or distributions to our shareholders.

Cash transfers from the Company's PRC subsidiaries to their parent companies outside of China are subject to PRC government control of currency conversion. Shortages in the availability of foreign currency may temporarily restrict the ability of the PRC subsidiaries and consolidated affiliated entities to remit sufficient foreign currency to pay dividends or other payments to the Company, or otherwise satisfy their foreign currency denominated obligations.

Except for the above, there is no other restriction on use of proceeds generated by the Group's subsidiaries and VIEs to satisfy any obligations of the Company.

The Company performed a test on the restricted net assets of subsidiaries and VIEs in accordance with Securities and Exchange Commission Regulation S-X Rule 4-08 (e) (3), "General Notes to Financial Statements" and concluded that the restricted net assets did not exceed 25% of the consolidated net assets of the Company as of December 31, 2022 and the condensed financial information of the Company are not required to be presented.

### 33. Segment Reporting

Historically, there are three segments in the Group, including YY, Huya and Bigo for the year ended December 31, 2019. Starting from the second quarter of 2020, the Company deconsolidated Huya and Huya's historical financial results were reflected in the Company's consolidated financial statements as discontinued operations accordingly. As a result of the definitive agreements entered into with Baidu on the sale of YY Live, YY Live is represented as discontinued operations. YY segment is renamed as "All other" segment and has been recast to exclude the financial numbers of YY Live.

Therefore, there are two segments, including "Bigo" and "All other" for the years ended December 31, 2020, 2021 and 2022.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

33. Segment Reporting (continued)

(a) The following table presents summary information by segment:

For the year ended December 31, 2022:

	Bigo US\$	All other US\$	Elimination <sup>(1)</sup> US\$	Total US\$
<b>Net revenues</b>				
Live streaming	1,905,045	320,473	—	2,225,518
Others	91,976	94,267	(245)	185,998
<b>Total net revenues</b>	<u>1,997,021</u>	<u>414,740</u>	<u>(245)</u>	<u>2,411,516</u>
Cost of revenues <sup>(2)</sup>	(1,249,361)	(310,272)	245	(1,559,388)
<b>Gross profit</b>	<u>747,660</u>	<u>104,468</u>	<u>—</u>	<u>852,128</u>
<b>Operating expenses<sup>(2)</sup></b>				
Research and development expenses	(168,148)	(93,659)	—	(261,807)
Sales and marketing expenses	(311,545)	(88,890)	—	(400,435)
General and administrative expenses	(60,843)	(80,983)	—	(141,826)
Goodwill impairment	—	(14,830)	—	(14,830)
<b>Total operating expenses</b>	<u>(540,536)</u>	<u>(278,362)</u>	<u>—</u>	<u>(818,898)</u>
Other income	12,944	4,561	—	17,505
<b>Operating income (loss)</b>	<u>220,068</u>	<u>(169,333)</u>	<u>—</u>	<u>50,735</u>
Interest expense	(4,458)	(11,922)	3,610	(12,770)
Interest income and investment income	9,592	87,166	(3,610)	93,148
Foreign currency exchange gain (losses), net	13,120	(1,454)	—	11,666
Gain on disposal and deemed disposal of investments	—	4,113	—	4,113
Gain on fair value changes of investment	1,979	422,325	—	424,304
Gain on extinguishment of debt and derivative	—	63,378	—	63,378
<b>Income before income tax expenses</b>	<u>240,301</u>	<u>394,273</u>	<u>—</u>	<u>634,574</u>
Income tax expenses	(14,433)	(20,142)	—	(34,575)
<b>Income before share of loss in equity method investments, net of income taxes</b>	<u>225,868</u>	<u>374,131</u>	<u>—</u>	<u>599,999</u>
Share of loss in equity method investments, net of income taxes	—	(498,431)	—	(498,431)
<b>Net income (loss) from continuing operations</b>	<u>225,868</u>	<u>(124,300)</u>	<u>—</u>	<u>101,568</u>

(1) The elimination mainly consists of revenues and expenses generated from services among Bigo and all other segments, and interest income and interest expenses generated from the loan between Bigo and all other segments.

(2) Share-based compensation was allocated in cost of revenues and operating expenses as follows:

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**33. Segment Reporting (continued)**

(a) The following table presents summary information by segment (continued):

	<u>Bigo</u> US\$	<u>All other</u> US\$	<u>Total</u> US\$
Cost of revenues	3,341	4,844	8,185
Research and development expenses	14,012	11,158	25,170
Sales and marketing expenses	234	543	777
General and administrative expenses	4,416	5,548	9,964

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

**33. Segment Reporting (continued)**

(a) The following table presents summary information by segment (continued):

For the year ended December 31, 2021:

	<u>Bigo</u> US\$	<u>All other</u> US\$	<u>Elimination <sup>(1)</sup></u> US\$	<u>Total</u> US\$
<b>Net revenues</b>				
Live streaming	2,231,366	245,424	—	2,476,790
Others	92,392	49,936	(67)	142,261
<b>Total net revenues</b>	<u>2,323,758</u>	<u>295,360</u>	<u>(67)</u>	<u>2,619,051</u>
Cost of revenues <sup>(2)</sup>	<u>(1,539,188)</u>	<u>(242,029)</u>	<u>67</u>	<u>(1,781,150)</u>
<b>Gross profit</b>	784,570	53,331	—	837,901
<b>Operating expenses<sup>(2)</sup></b>				
Research and development expenses	(204,597)	(75,184)	—	(279,781)
Sales and marketing expenses	(402,476)	(65,931)	—	(468,407)
General and administrative expenses	(56,827)	(164,904)	—	(221,731)
<b>Total operating expenses</b>	<u>(663,900)</u>	<u>(306,019)</u>	<u>—</u>	<u>(969,919)</u>
Gain on disposal of business	—	4,959	—	4,959
Other income	6,929	13,447	—	20,376
<b>Operating income (loss)</b>	<u>127,599</u>	<u>(234,282)</u>	<u>—</u>	<u>(106,683)</u>
Interest expense	(3,460)	(13,468)	2,453	(14,475)
Interest income and investment income	1,316	92,370	(2,453)	91,233
Foreign currency exchange losses, net	(12,444)	(933)	—	(13,377)
Loss on disposal and deemed disposal of investments	—	(23,762)	—	(23,762)
Loss on fair value changes of investment	—	(15,435)	—	(15,435)
(Loss) gain on extinguishment of debt and derivative	(52)	5,343	—	5,291
Other non-operating expenses	—	(381)	—	(381)
<b>Income (loss) before income tax expenses</b>	<u>112,959</u>	<u>(190,548)</u>	<u>—</u>	<u>(77,589)</u>
Income tax expenses	(9,153)	(16,592)	—	(25,745)
<b>Income (loss) before share of loss in equity method investments, net of income taxes</b>	<u>103,806</u>	<u>(207,140)</u>	<u>—</u>	<u>(103,334)</u>
Share of loss in equity method investments, net of income taxes	—	(26,217)	—	(26,217)
<b>Net income (loss) from continuing operations</b>	<u>103,806</u>	<u>(233,357)</u>	<u>—</u>	<u>(129,551)</u>

(1) The elimination mainly consists of revenues and expenses generated from services among Bigo and all other segments, and interest income and interest expenses generated from the loan between Bigo and all other segments.

(2) Share-based compensation was allocated in cost of revenues and operating expenses as follows:

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)**

**33. Segment Reporting (continued)**

(a) The following table presents summary information by segment (continued):

	<u>Bigo</u> US\$	<u>All other</u> US\$	<u>Total</u> US\$
Cost of revenues	5,974	2,115	8,089
Research and development expenses	17,179	6,874	24,053
Sales and marketing expenses	654	631	1,285
General and administrative expenses	(5,297)	5,252	(45)

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)

33. Segment Reporting (continued)

(a) The following table presents summary information by segment (continued):

For the year ended December 31, 2020:

	Bigo US\$	All other US\$	Elimination <sup>(1)</sup> US\$	Total US\$
<b>Net revenues</b>				
Live streaming	1,659,311	156,515	—	1,815,826
Others	73,500	28,818	—	102,318
<b>Total net revenues</b>	<u>1,732,811</u>	<u>185,333</u>	<u>—</u>	<u>1,918,144</u>
Cost of revenues <sup>(2)</sup>	<u>(1,207,124)</u>	<u>(171,022)</u>	<u>—</u>	<u>(1,378,146)</u>
<b>Gross profit</b>	<u>525,687</u>	<u>14,311</u>	<u>—</u>	<u>539,998</u>
<b>Operating expenses<sup>(2)</sup></b>				
Research and development expenses	(194,122)	(108,696)	—	(302,818)
Sales and marketing expenses	(446,521)	(58,868)	—	(505,389)
General and administrative expenses	(85,685)	(60,981)	—	(146,666)
<b>Total operating expenses</b>	<u>(726,328)</u>	<u>(228,545)</u>	<u>—</u>	<u>(954,873)</u>
Other income	<u>3,550</u>	<u>4,545</u>	<u>—</u>	<u>8,095</u>
<b>Operating loss</b>	<u>(197,091)</u>	<u>(209,689)</u>	<u>—</u>	<u>(406,780)</u>
Interest expense	(7,892)	(72,474)	4,811	(75,555)
Interest income and investment income	155	93,734	(4,811)	89,078
Foreign currency exchange losses, net	(17,035)	(437)	—	(17,472)
Gain on disposal and deemed disposal of investments	—	272,281	—	272,281
Gain on fair value changes of investment	—	160,849	—	160,849
Fair value change on derivatives	(281)	(5,996)	—	(6,277)
Other non-operating expenses	(889)	(1,578)	—	(2,467)
<b>(Loss) income before income tax expenses</b>	<u>(223,033)</u>	<u>236,690</u>	<u>—</u>	<u>13,657</u>
Income tax benefits (expense)	<u>9,425</u>	<u>(37,250)</u>	<u>—</u>	<u>(27,825)</u>
<b>(Loss) income before share of loss in equity method investments, net of income taxes</b>	<u>(213,608)</u>	<u>199,440</u>	<u>—</u>	<u>(14,168)</u>
Share of loss in equity method investments, net of income taxes	<u>—</u>	<u>(7,634)</u>	<u>—</u>	<u>(7,634)</u>
<b>Net (loss) income from continuing operations</b>	<u>(213,608)</u>	<u>191,806</u>	<u>—</u>	<u>(21,802)</u>

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS****(All amount in thousands, except share, ADS, per share and per ADS data, unless otherwise stated)****33. Segment Reporting (continued)**

(a) The following table presents summary information by segment (continued):

- (1) The elimination mainly consists of interest income and interest expenses generated from the loan between Bigo and all other segments.
- (2) Share-based compensation was allocated in cost of revenues and operating expenses as follows:

	<u>Bigo</u> US\$	<u>All other</u> US\$	<u>Total</u> US\$
Cost of revenues	4,094	1,703	5,797
Research and development expenses	33,795	8,851	42,646
Sales and marketing expenses	706	605	1,311
General and administrative expenses	33,668	8,738	42,406

(b) The following tables set forth revenues and property and equipment for the Company's geographic operations:

	<u>For the years ended December 31,</u>		
	<u>2020</u> US\$	<u>2021</u> US\$	<u>2022</u> US\$
<b>Revenues:</b>			
Mainland China	336,200	440,797	473,941
Developed countries and regions	639,442	913,947	866,107
Middle East	475,662	621,775	514,992
Southeast Asia and others	466,840	642,532	556,476

Developed countries and region mainly included the United States of America, Great Britain, Japan, South Korea and Australia, Middle East mainly included Saudi Arabia and other countries located in the region, and Southeast Asia and others mainly included countries located in Southeast Asia and India.

	<u>As of December 31,</u>	
	<u>2021</u> US\$	<u>2022</u> US\$
<b>Property and equipment, net:</b>		
Mainland China	282,905	303,204
Singapore	50,289	24,022
Others	32,198	15,975

**Description of rights of each class of securities  
registered under Section 12 of the Securities Exchange Act of 1934 (the “Exchange Act”)**

American Depositary Shares (“ADSs”) each representing twenty Class A common shares of JOYY Inc., (the “we,” “our,” “our company,” or “us”) are listed and traded on the Nasdaq Stock Market and, in connection with this listing (but not for trading), the Class A common shares are registered under Section 12(b) of the Exchange Act. This exhibit contains a description of the rights of (i) the holders of Class A common shares and (ii) the holders of ADSs. Class A common shares underlying the ADSs are held by Citibank, N.A., as depository, and holders of ADSs will not be treated as holders of the Class A common shares.

**Description of Class A Common Shares**

The following is a summary of material provisions of our currently effective third amended and restated memorandum and articles of association (the “Memorandum and Articles of Association”), as well as the Companies Act (As Revised) of the Cayman Islands (the “Companies Act”) insofar as they relate to the material terms of our common shares. Notwithstanding this, because it is a summary, it may not contain all the information that you may otherwise deem important. For more complete information, you should read the entire Memorandum and Articles of Association, which has been filed with the SEC as Exhibit 3.1 to our current report on Form 6-K furnished with the Securities and Exchange Commission on December 27, 2021.

***Type and Class of Securities (Item 9.A.5 of Form 20-F)***

Each Class A common share has US\$0.00001 par value. The number of Class A common shares that have been issued as of the last day of our company’s respective fiscal year is provided on the cover of the annual report on Form 20-F (the “Form 20-F”) of our company. Our Class A common shares may be held in either certificated or uncertificated form. We may not issue shares to bearer.

***Preemptive Rights (Item 9.A.3 of Form 20-F)***

Our shareholders do not have preemptive rights.

***Limitations or Qualifications (Item 9.A.6 of Form 20-F)***

We have a dual-class voting structure such that our common shares consist of Class A common shares and Class B common shares. Each Class A common share shall entitle the holder thereof to one vote on all matters subject to the vote at general meetings of our company, and each Class B common share shall entitle the holder thereof to ten votes on all matters subject to the vote at general meetings of our company. Due to the super voting power of the holders of Class B common shares, the voting power of the holders of Class A common shares may be materially limited.

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***Rights of Other Types of Securities (Item 9.A.7 of Form 20-F)***

Not applicable.

***Rights of Class A Common Shares (Item 10.B.3 of Form 20-F)***

*Common Shares*

Our common shares are divided into Class A common shares and Class B common shares. Holders of our Class A common shares and Class B common shares will have the same rights except for voting and conversion rights. Our common shares are issued in registered form and are issued when registered in our register of members. Our shareholders who are non-residents of the Cayman Islands may freely hold and vote their shares.

*Conversion*

Each Class B common share is convertible into one Class A common share at any time by the holder thereof. Class A common shares are not convertible into Class B common shares under any circumstances. Upon any sale, transfer, assignment or disposition of Class B common shares by a holder to any person or entity which is not an affiliate of such holder and which is not any of our founders or any affiliates of our founders, such Class B common shares shall be automatically and immediately converted into the equivalent number of Class A common shares. In addition, if at any time, Messrs. David Xueling Li, Jun Lei, Tony Bin Zhao and Jin Cao and their affiliates collectively beneficially own less than 5% of the total number of the issued and outstanding Class B common shares, each issued and outstanding Class B common share will be automatically and immediately converted into one Class A common share, and we will not issue any Class B common shares thereafter. Furthermore, if at any time more than 50% of the ultimate beneficial ownership of any holder of Class B common shares (other than our founders or our founders' affiliates) changes, each such Class B common share will be automatically and immediately converted into one Class A common share.

*Dividends*

The holders of our common shares are entitled to such dividends in any currency (including interim dividends, whenever our financial position, in the opinion of our directors, justifies such payment) as may be declared by our company in a general meeting or our directors subject to the Companies Act and our current Memorandum and Articles of association, but no dividend shall be declared in excess of the amount recommended by our board of directors. Dividends may be declared and paid out of our profits, realized or unrealized, or from any reserve set aside from profits which our directors determine is no longer needed. Our board of directors may also declare and pay dividends out of our share premium account or any other fund or account that can be authorized for this purpose in accordance with the Companies Act. However, even if our company has sufficient profits or share premium, it may not pay a dividend if this would result in our company being unable to pay its debts as they fall due in the ordinary course of business.

Except in so far as the rights attaching to, or the terms of issue of, any share otherwise provides, (a) all dividends shall be declared and paid according to the amounts paid up on the shares in respect of which the dividend is paid, but no amount paid up on a share in advance of calls shall

be treated for this purpose as paid up on that share and (b) all dividends shall be apportioned and paid pro rata according to the amounts paid up on the shares during any portion or portions of the period in respect of which the dividend is paid.

Our directors may deduct from any dividend or bonus payable to any shareholder all sums of money (if any) presently payable by such shareholder to us on account of calls or otherwise.

No dividend or other money payable by us on or in respect of any share shall bear interest against us.

In respect of any dividend proposed to be paid or declared on our share capital, our directors may resolve and direct that (a) such dividend be satisfied wholly or in part in the form of an allotment of shares credited as fully paid up, provided that our shareholders entitled thereto will be entitled to elect to receive such dividend (or part thereof if our directors so determine) in cash in lieu of such allotment or (b) the shareholders entitled to such dividend will be entitled to elect to receive an allotment of shares credited as fully paid up in lieu of the whole or such part of the dividend as our directors may think fit. Our shareholders may, upon the recommendation of our directors, by ordinary resolution resolve in respect of any particular dividend that, notwithstanding the foregoing, a dividend may be satisfied wholly in the form of an allotment of shares credited as fully paid up without offering any right to shareholders to elect to receive such dividend in cash in lieu of such allotment.

Any dividend interest or other sum payable in cash to the holder of shares may be paid by check or warrant sent by mail addressed to the holder at his registered address, or addressed to such person and at such addresses as the holder may direct. Every check or warrant shall, unless the holder or joint holders otherwise direct, be made payable to the order of the holder or, in the case of joint holders, to the order of the holder whose name stands first on the register in respect of such shares, and shall be sent at his or their risk and payment of the check or warrant by the bank on which it is drawn shall constitute a good discharge to us.

All dividends unclaimed for one year after having been declared may be invested or otherwise made use of by our board of directors for the benefit of our company until claimed. Any dividend unclaimed after a period of six years from the date of declaration of such dividend shall be forfeited and reverted to us.

Whenever our directors have resolved that a dividend be paid or declared, our directors may further resolve that such dividend be satisfied wholly or in part by the distribution of specific assets of any kind, and in particular of paid up shares, debentures or warrants to subscribe for our securities or securities of any other company. Where any difficulty arises with regard to such distribution, our directors may settle it as they think expedient. In particular, our directors may issue fractional certificates, ignore fractions altogether or round the same up or down, fix the value for distribution purposes of any such specific assets, determine that cash payments shall be made to any of our shareholders upon the footing of the value so fixed in order to adjust the rights of the parties, vest any such specific assets in trustees as may seem expedient to our directors, and appoint any person to sign any requisite instruments of transfer and other documents on behalf of the persons entitled to the dividend, which appointment shall be effective and binding on our shareholders.

### *Voting Rights*

In respect of all matters requiring a shareholders' vote, each Class A common share is entitled to one vote, and each Class B common share is entitled to ten votes, voting together as one class. At any shareholders' meeting, and subject to the voting rights attached to our Class A common shares and Class B common shares as described in this paragraph, on a show of hands, every shareholder present (whether in person or by proxy (or, in the case of a shareholder being a corporation, by its duly authorized representative) or by means of Communications Facilities (as defined in our articles of association), if permitted) shall have one vote and on a poll, every shareholder present (whether in person or by proxy (or, in the case of a shareholder being a corporation, by its duly authorized representative) or by means of Communications Facilities (as defined in our articles of association), if permitted) shall have one vote for each fully paid share of which such shareholder is the holder.

No shareholder shall, unless the board otherwise determines, be entitled to vote or be reckoned in a quorum, in respect of any share, unless such shareholder is duly registered as our shareholder and all calls or installments due by such shareholder to us have been paid.

If a clearing house (or its nominee(s)) or a central depository entity, being a corporation, is a shareholder, it may authorize such person or persons as it thinks fit to act as its representative(s) at any meeting or at any meeting of any class of shareholders, provided that the authorization shall specify the number and class of shares in respect of which each such person is so authorized. A person so authorized is entitled to exercise the same rights and powers on behalf of the clearing house or central depository entity (or its nominee(s)) as if such person was the registered holder of our shares held by the clearing house or central depository entity (or its nominee(s)) including the right to vote individually on a show of hands.

While there is nothing under the laws of the Cayman Islands which specifically prohibits or restricts the creation of cumulative voting rights for the election of directors of our company, it is not a concept that is accepted as a common practice in the Cayman Islands, and our company has made no provisions in our articles of association to allow cumulative voting for such elections.

An ordinary resolution to be passed at a meeting by the shareholders requires a simple majority of the votes cast by those shareholders entitled to vote who are present in person or by proxy at a general meeting of which not less than ten (10) clear days' notice has been duly given, while a special resolution requires a majority of not less than two-thirds of the votes cast by those shareholders entitled to vote who are present in person or by proxy at a general meeting of which not less than ten (10) clear days' notice has been duly given. Provided that, except in the case of an annual general meeting, if it is so agreed by a majority in number of the members having the right to attend and vote at any such meeting, being a majority together holding not less than ninety-five (95) per cent. in nominal value of the shares giving that right and in the case of an annual general meeting, if it is so agreed by all members entitled to attend and vote thereat, a resolution may be proposed and passed as a special resolution at a meeting of which less than ten (10) clear days' notice has been given. A special resolution will be required for important matters such as changing our name or altering the provisions of our current Memorandum and Articles of Association.

### *Transfer of Shares*

Subject to any applicable restrictions set forth in our Memorandum and Articles of Association, including, for example, the board of directors' discretion to refuse to register a transfer of any share (not being a fully paid up share) to a person of whom it does not approve, or any share issued under share incentive plans for employees upon which a restriction on transfer imposed thereby still subsists, or a transfer of any share to more than four joint holders, any of our shareholders may transfer all or any of his or her shares by an instrument of transfer in the usual or common form or in a form prescribed by the Nasdaq Global Select Market or in another form that our directors may approve.

Our directors may decline to register any transfer of any share which is not paid up or on which we have a lien. Our directors may also decline to register any transfer of any share unless:

- the instrument of transfer is lodged with us and is accompanied by the certificate for the shares to which it relates and such other evidence as our directors may reasonably require to show the right of the transferor to make the transfer;
- the instrument of transfer is in respect of only one class of share;
- the instrument of transfer is properly stamped (in circumstances where stamping is required); and
- fee of such maximum sum as the Nasdaq Global Select Market may determine to be payable or such lesser sum as our directors may from time to time require is paid to us in respect thereof.

If our directors refuse to register a transfer, they shall, within three months after the date on which the instrument of transfer was lodged, send to each of the transferor and the transferee notice of such refusal.

The registration of transfers may, after compliance with any notice requirement of the Nasdaq Global Select Market, be suspended and the register closed at such times and for such periods as our directors may from time to time determine; provided, however, that the registration of transfers shall not be suspended nor the register closed for more than 30 days in any year as our directors may determine.

### *Liquidation Rights*

Subject to any class or classes of shares or future shares which are issued with specific rights, privileges or restrictions as to the distribution of available surplus assets on liquidation, (a) if we are wound up and the assets available for distribution among our shareholders are more than sufficient to repay the whole of the capital paid up at the commencement of the winding up, the excess shall be distributed *pari passu* among those shareholders in proportion to the amount paid up at the commencement of the winding up on the shares held by them, respectively, and (b) if we are wound up and the assets available for distribution among the shareholders as such are insufficient to repay the whole of the paid-up capital, those assets shall be distributed so that, as

nearly as may be, the losses shall be borne by the shareholders in proportion to the capital paid up at the commencement of the winding up on the shares held by them, respectively.

If we are wound up (whether the liquidation is voluntary or by the court), the liquidator may with the sanction of our special resolution and any other sanction required by the Companies Act, divide among our shareholders in specie or kind the whole or any part of our assets (whether or not they shall consist of property of the same kind) and may, for such purpose, set such value as the liquidator deems fair upon any property to be divided and may determine how such division shall be carried out as between the shareholders or different classes of shareholders. The liquidator may also vest the whole or any part of these assets in trustees upon such trusts for the benefit of the shareholders as the liquidator shall think fit, but so that no shareholder will be compelled to accept any assets, shares or other securities upon which there is a liability.

The consideration received by each holder of a Class A common share and a holder of a Class B common share will be the same in any liquidation event.

#### *Calls on Common shares and Forfeiture of Common shares*

Subject to our Memorandum and Articles of Association, our directors may from time to time make such calls upon the members in respect of any amounts unpaid on the shares held by them. The shares that have been called upon and remain unpaid after it has become due and payable are subject to forfeiture.

#### *Repurchase Shares*

We are empowered by the Companies Act and our Memorandum and Articles of Association to purchase our own shares on such terms and in such manner as have been approved by our board of directors or by an ordinary resolution of our shareholders. Under the Companies Act, the repurchase of any share may be paid out of our company's profits or out of the proceeds of a new issue of shares made for the purpose of such redemption or repurchase, or out of capital (including share premium account and capital redemption reserve) if our company can, immediately following such payment, pay its debts as they fall due in the ordinary course of business. In addition, under the Companies Act no such share may be repurchased (a) unless it is fully paid up, (b) if such repurchase would result in there being no shares issued and outstanding or (c) if the company has commenced liquidation. In addition, our company may accept the surrender of any fully paid share for no consideration. Our directors may only exercise this power on our behalf, subject to the Companies Act, our Memorandum and Articles of Association and to any applicable requirements imposed from time to time by the Nasdaq Global Select Market, the U.S. Securities and Exchange Commission, or by any other recognized stock exchange on which our securities are listed.

#### ***Requirements to Change the Rights of Holders of Class A Common Shares (Item 10.B.4 of Form 20-F)***

##### *Variation of Rights*

Alterations to our Memorandum and Articles of Association may only be made by special resolution, meaning a majority of not less than two-thirds of votes cast at a shareholders' meeting.

Subject to applicable laws and our Memorandum and Articles of Association, all or any of the special rights for the time being attached to the shares or any class of shares may, unless otherwise provided by the terms of issue of the shares of that class, from time to time be varied, modified or abrogated by a special resolution passed at a separate general meeting of the holders of the shares of that class. All the provisions of our articles of association relating to general meetings shall, mutatis mutandis, apply, but so that:

- separate general meetings of the holders of a class or series of shares may be called only by (i) the chairman of our board of directors, or (ii) a majority of our board of directors (unless otherwise specifically provided by the terms of issue of the shares of such class or series). Our articles of association does not give any shareholder(s) the right to call a class or series meeting;
- the necessary quorum shall be a person or persons (or in the case of a shareholder being a corporation, its duly authorized representative) together holding or representing by proxy not less than one-third in nominal value of the issued shares of that class;
- every holder of shares of the class shall be entitled on a poll to one vote for every such share held by him; and
- any holder of shares of the class present (whether in person or by proxy (or, in the case of a shareholder being a corporation, by its authorized representative) or by means of Communication Facilities (as defined in our articles of association), if permitted) may demand a poll.

The special rights conferred upon the holders of any shares or class of shares shall not, unless otherwise expressly provided in the rights attaching to or the terms of issue of such shares, be deemed to be varied, modified or abrogated by the creation or issue of further shares ranking *pari passu* with such existing shares or class of shares.

***Limitations on the Rights to Own Class A Common Shares (Item 10.B.6 of Form 20-F)***

There are no limitations under the laws of the Cayman Islands or under the Memorandum and Articles of Association that limit the right of non-resident or foreign owners to hold or vote Class A common shares.

***Provisions Affecting Any Change of Control (Item 10.B.7 of Form 20-F)***

*Anti-Takeover Provisions.* Some provisions of our Memorandum and Articles of Association may discourage, delay or prevent a change of control of our company or management that shareholders may consider favorable, including provisions that:

- authorize our board of directors to issue preferred shares in one or more series and to fix their designations, powers, preferences, privileges, and relative participating, optional or special rights and the qualifications, limitations or restrictions, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation

preference, and restrictions of such preferred shares without any further vote or action by our shareholders; and

- limit the ability of shareholders to requisition and convene general meetings of shareholders.

However, under Cayman Islands law, our directors may only exercise the rights and powers granted to them under our Memorandum and Articles of Association for a proper purpose and for what they believe in good faith to be in the best interests of our company.

***Ownership Threshold (Item 10.B.8 of Form 20-F)***

There are no provisions under the laws of the Cayman Islands applicable to our company or under the Memorandum and Articles of Association that require our company to disclose shareholder ownership above any particular ownership threshold.

***Differences Between the Law of Different Jurisdictions (Item 10.B.9 of Form 20-F)***

The Companies Act is modeled after that of England but does not follow recent English statutory enactments and differs from laws applicable to U.S. corporations and their shareholders. Set forth below is a summary of the significant differences between the provisions of the Companies Act applicable to us and the laws applicable to companies incorporated in the United States and their shareholders.

*Mergers and Similar Arrangements.* The Companies Act permits mergers and consolidations between Cayman Islands companies and between Cayman Islands companies and non-Cayman Islands companies. For these purposes, (a) “merger” means the merging of two or more constituent companies and the vesting of their undertaking, property and liabilities in one of such companies as the surviving company, and (b) a “consolidation” means the combination of two or more constituent companies into a consolidated company and the vesting of the undertaking, property and liabilities of such companies to the consolidated company. In order to effect such a merger or consolidation, the directors of each constituent company must approve a written plan of merger or consolidation, which must then be authorized by (a) a special resolution of the shareholders of each constituent company, and (b) such other authorization, if any, as may be specified in such constituent company’s articles of association. The plan must be filed with the Registrar of Companies of the Cayman Islands together with a declaration as to the solvency of the consolidated or surviving company, a list of the assets and liabilities of each constituent company and an undertaking that a copy of the certificate of merger or consolidation will be given to the members and creditors of each constituent company and that notification of the merger or consolidation will be published in the Cayman Islands Gazette. Court approval is not required for a merger or consolidation which is effected in compliance with these statutory procedures.

A merger between a Cayman parent company and its Cayman subsidiary or subsidiaries does not require authorization by a resolution of shareholders of that Cayman subsidiary if a copy of the plan of merger is given to every member of that Cayman subsidiary to be merged unless that member agrees otherwise. For this purpose a company is a “parent” of a subsidiary if it holds

issued shares that together represent at least ninety percent (90%) of the votes at a general meeting of the subsidiary.

The consent of each holder of a fixed or floating security interest over a constituent company is required unless this requirement is waived by a court in the Cayman Islands.

Save in certain limited circumstances, a shareholder of a Cayman constituent company who dissents from the merger or consolidation is entitled to payment of the fair value of his shares (which, if not agreed between the parties, will be determined by the Cayman Islands court) upon dissenting to the merger or consolidation, provide the dissenting shareholder complies strictly with the procedures set out in the Companies Act. The exercise of dissenter rights will preclude the exercise by the dissenting shareholder of any other rights to which he or she might otherwise be entitled by virtue of holding shares, save for the right to seek relief on the grounds that the merger or consolidation is void or unlawful.

Separate from the statutory provisions relating to mergers and consolidations, the Companies Act also contains statutory provisions that facilitate the reconstruction and amalgamation of companies by way of schemes of arrangement, provided that the arrangement is approved by (a) 75% in value of the shareholders or class of shareholders, as the case may be, or (b) a majority in number representing 75% in value of the creditors or each class of creditors, as the case may be, with whom the arrangement is to be made, that are, in each case, present and voting either in person or by proxy at a meeting, or meetings, convened for that purpose. The convening of the meetings and subsequently the arrangement must be sanctioned by the Grand Court of the Cayman Islands. While a dissenting shareholder has the right to express to the court the view that the transaction ought not to be approved, the court can be expected to approve the arrangement if it determines that:

- the statutory provisions as to the required majority vote have been met;
- the shareholders have been fairly represented at the meeting in question and the statutory majority are acting bona fide without coercion of the minority to promote interests adverse to those of the class;
- the arrangement is such that may be reasonably approved by an intelligent and honest man of that class acting in respect of his interest; and
- the arrangement is not one that would more properly be sanctioned under some other provision of the Companies Act.

The Companies Act also contains a statutory power of compulsory acquisition which may facilitate the “squeeze out” of dissentient minority shareholder upon a tender offer. When a tender offer is made and accepted by holders of 90% of the shares affected within four months, the offeror may, within a two-month period commencing on the expiration of such four month period, require the holders of the remaining shares to transfer such shares to the offeror on the terms of the offer. An objection can be made to the Grand Court of the Cayman Islands but this is unlikely to succeed in the case of an offer which has been so approved unless there is evidence of fraud, bad faith or collusion.

If an arrangement and reconstruction is thus approved, or if a tender offer is made and accepted, a dissenting shareholder would have no rights comparable to appraisal rights, save that objectors to a takeover offer may apply to the Grand Court of the Cayman Islands for various orders that the Grand Court of the Cayman Islands has a broad discretion to make, which would otherwise ordinarily be available to dissenting shareholders of Delaware corporations, providing rights to receive payment in cash for the judicially determined value of the shares.

*Shareholders' Suits.* In principle, we will normally be the proper plaintiff to sue for a wrong done to us as a company and as a general rule, a derivative action may not be brought by a minority shareholder. However, based on English authorities, which would in all likelihood be of persuasive authority in the Cayman Islands, there are exceptions to the foregoing principle which permit a minority shareholder to commence a class action against, or derivative actions in the name of, a company, including when:

- a company acts or proposes to act illegally or ultra vires;
- the act complained of, although not ultra vires, could only be effected duly if authorized by more than a simple majority vote that has not been obtained; and
- those who control the company are perpetrating a “fraud on the minority.”

*Indemnification of Directors and Executive Officers and Limitation of Liability.* Cayman Islands law does not limit the extent to which a company’s memorandum and articles of association may provide for indemnification of officers and directors, except to the extent any such provision may be held by the Cayman Islands courts to be contrary to public policy, such as to provide indemnification against civil fraud or the consequences of committing a crime. Our Memorandum and Articles of Association permit indemnification of officers and directors for losses, damages, cost and expenses incurred in their capacities as such unless such losses or damages arise from dishonesty or fraud of such directors or officers. This standard of conduct is generally the same as permitted under the Delaware General Corporation Law for a Delaware corporation.

In addition, we have entered into indemnification agreements with our directors and executive officers that provide such persons with additional indemnification beyond that provided in our Memorandum and Articles of Association.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or persons controlling us under the foregoing provisions, we have been informed that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

*Anti-Takeover Provisions in the Memorandum and Articles of Association.* Some provisions of our current Memorandum and Articles of Association may discourage, delay or prevent a change in control of our company or management that shareholders may consider favorable, including provisions that authorize our board of directors to issue preferred shares in one or more series and to designate the price, rights, preferences, privileges and restrictions of such preferred shares without any further vote or action by our shareholders.

However, under Cayman Islands law, our directors may only exercise the rights and powers granted to them under our Memorandum and Articles of Association, as amended and restated from time to time, for a proper purpose and for what they believe in good faith to be in the best interests of our company.

*Directors' Fiduciary Duties.* Under Delaware corporate law, a director of a Delaware corporation has a fiduciary duty to the corporation and its shareholders. This duty has two components: the duty of care and the duty of loyalty. The duty of care requires that a director act in good faith, with the care that an ordinarily prudent person would exercise under similar circumstances. Under this duty, a director must inform himself of and disclose to shareholders, all material information reasonably available regarding a significant transaction. The duty of loyalty requires that a director acts in a manner he reasonably believes to be in the best interests of the corporation. He must not use his corporate position for personal gain or advantage. This duty prohibits self-dealing by a director and mandates that the best interest of the corporation and its shareholders take precedence over any interest possessed by a director, officer or controlling shareholder and not shared by the shareholders generally. In general, actions of a director are presumed to have been made on an informed basis, in good faith and in the honest belief that the action taken was in the best interests of the corporation. However, this presumption may be rebutted by evidence of a breach of one of the fiduciary duties. Should such evidence be presented concerning a transaction by a director, the director must prove the procedural fairness of the transaction and that the transaction was of fair value to the corporation.

As a matter of Cayman Islands law, a director of a Cayman Islands company is in the position of a fiduciary with respect to the company and therefore it is considered that he owes the following duties to the company — a duty to act bona fide in the best interests of the company, a duty not to make a profit based on his position as director (unless the company permits him to do so) and a duty not to put himself in a position where the interests of the company conflict with his personal interest or his duty to a third party. A director of a Cayman Islands company owes to the company a duty to act with skill and care. It was previously considered that a director need not exhibit in the performance of his duties a greater degree of skill than may reasonably be expected from a person of his knowledge and experience. However, English and Commonwealth courts have moved towards an objective standard with regard to the required skill and care and these authorities are likely to be followed in the Cayman Islands.

*Shareholder Action by Written Consent.* Under the Delaware General Corporation Law, a corporation may eliminate the right of shareholders to act by written consent by amendment to its certificate of incorporation. Our Memorandum and Articles of Association do not allow our shareholders to approve matters to be determined at shareholders' meetings by way of written resolutions without a meeting..

*Shareholder Proposals.* Under the Delaware General Corporation Law, a shareholder has the right to put any proposal before the annual meeting of shareholders, provided it complies with the notice provisions in the governing documents. A special meeting may be called by the board of directors or any other person authorized to do so in the governing documents, but shareholders may be precluded from calling special meetings.

The Companies Act provides shareholders with only limited rights to requisition a general meeting, and does not provide shareholders with any right to put any proposal before a general

meeting. These rights may be provided in a company's articles of association. Our Memorandum and Articles of Association do not allow our shareholders to requisition any extraordinary general meeting of our shareholders and do not provide our shareholders with any other right to put proposals before any annual general meetings or extraordinary general meetings. As a Cayman Islands exempted company, we are not obliged by law to call shareholders' annual general meetings. Our Memorandum and Articles of Association provide that we may (but are not obligated to) in each year hold a general meeting as our annual general meeting. In addition, extraordinary general meetings of our shareholders may be convened only by a majority of our board of directors or the chairman of our board of directors.

*Cumulative Voting.* Under the Delaware General Corporation Law, cumulative voting for elections of directors is not permitted unless the corporation's certificate of incorporation specifically provides for it. Cumulative voting potentially facilitates the representation of minority shareholders on a board of directors since it permits the minority shareholder to cast all the votes to which the shareholder is entitled on a single director, which increases the shareholder's voting power with respect to electing such director. While there is nothing under the laws of the Cayman Islands which specifically prohibits or restricts the creation of cumulative voting rights for the election of directors of our company, it is not a concept that is accepted as a common practice in the Cayman Islands, and our company has made no provisions in our Memorandum and Articles of Association to allow cumulative voting for such elections. As a result, our shareholders are not afforded any less protections or rights on this issue than shareholders of a Delaware corporation.

*Removal of Directors.* Under the Delaware General Corporation Law, a director of a corporation with a classified board may be removed only for cause with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. Under our Memorandum and Articles of Association, a director may be removed by a special resolution of our shareholders.

*Transactions with Interested Shareholders.* The Delaware General Corporation Law contains a business combination statute applicable to Delaware corporations whereby, unless the corporation has specifically elected not to be governed by such statute by amendment to its certificate of incorporation, it is prohibited from engaging in certain business combinations with an "interested shareholder" for three years following the date that such person becomes an interested shareholder. An interested shareholder generally is a person or a group who or which owns or owned 15% or more of the target's outstanding voting share within the past three years. This has the effect of limiting the ability of a potential acquirer to make a two-tiered bid for the target in which all shareholders would not be treated equally. The statute does not apply if, among other things, prior to the date on which such shareholder becomes an interested shareholder, the board of directors approves either the business combination or the transaction which resulted in the person becoming an interested shareholder. This encourages any potential acquirer of a Delaware corporation to negotiate the terms of any acquisition transaction with the target's board of directors.

*Cayman Islands law has no comparable statute.* As a result, we cannot avail ourselves of the types of protections afforded by the Delaware business combination statute. However, although Cayman Islands law does not regulate transactions between a company and its significant

shareholders, it does provide that such transactions must be entered into bona fide in the best interests of the company and not with the effect of constituting a fraud on the minority shareholders.

*Restructuring.* A company may present a petition to the Grand Court of the Cayman Islands for the appointment of a restructuring officer on the grounds that the company: (a) is or is likely to become unable to pay its debts; and (b) intends to present a compromise or arrangement to its creditors (or classes thereof) either pursuant to the Companies Act, the law of a foreign country or by way of a consensual restructuring.

The Grand Court may, among other things, make an order appointing a restructuring officer upon hearing of such petition, with such powers and to carry out such functions as the court may order. At any time (i) after the presentation of a petition for the appointment of a restructuring officer but before an order for the appointment of a restructuring officer has been made, and (ii) when an order for the appointment of a restructuring officer is made, until such order has been discharged, no suit, action or other proceedings (other than criminal proceedings) shall be proceeded with or commenced against the company, no resolution to wind up the company shall be passed, and no winding up petition may be presented against the company, except with the leave of the court. However, notwithstanding the presentation of a petition for the appointment of a restructuring officer or the appointment of a restructuring officer, a creditor who has security over the whole or part of the assets of the company is entitled to enforce the security without the leave of the court and without reference to the restructuring officer appointed.

*Dissolution; Winding up.* Under the Delaware General Corporation Law, unless the board of directors approves the proposal to dissolve, dissolution must be approved by shareholders holding 100% of the total voting power of the corporation. Only if the dissolution is initiated by the board of directors may it be approved by a simple majority of the corporation's outstanding shares. Delaware law allows a Delaware corporation to include in its certificate of incorporation a supermajority voting requirement in connection with dissolutions initiated by the board.

Under Cayman Islands law, a company may be wound up by either an order of the courts of the Cayman Islands or by a special resolution of its members or, if the company is unable to pay its debts as they fall due, by an ordinary resolution of its members. The court has authority to order winding up in a number of specified circumstances including where it is, in the opinion of the court, just and equitable to do so.

*Variation of Rights of Shares.* Under the Delaware General Corporation Law, a corporation may vary the rights of a class of shares with the approval of a majority of the outstanding shares of such class, unless the certificate of incorporation provides otherwise. Under our Memorandum and Articles of Association, all or any of the special rights for the time being attached to the shares or any class of shares may, unless otherwise provided by the terms of issue of the shares of that class, from time to time be varied, modified or abrogated by a special resolution passed at a separate general meeting of the holders of the shares of that class. The special rights conferred upon the holders of any shares or class of shares shall not, unless otherwise expressly provided in the rights attaching to or the terms of issue of such shares, be deemed to be varied, modified or abrogated by the creation or issue of further shares ranking pari passu with such existing class of shares.

*Amendment of Governing Documents.* Under the Delaware General Corporation Law, a corporation's governing documents may be amended with the approval of a majority of the outstanding shares entitled to vote, unless the certificate of incorporation provides otherwise. As permitted by Cayman Islands law and our Memorandum and Articles of Association, our Memorandum and Articles of Association may only be amended with a special resolution of our shareholders.

*Rights of Non-resident or Foreign Shareholders.* There are no limitations imposed by our Memorandum and Articles of Association on the rights of non-resident or foreign shareholders to hold or exercise voting rights on our shares. In addition, there are no provisions in our Memorandum and Articles of Association which require our company to disclose shareholder ownership above any particular ownership threshold.

*Exempted Company.* The Companies Act in the Cayman Islands distinguishes between ordinary resident companies and exempted companies. Any company that is registered in the Cayman Islands but conducts business mainly outside of the Cayman Islands may apply to be registered as an exempted company. The requirements for an exempted company are essentially the same as for an ordinary company except for the exemptions and privileges listed below:

- an exempted company does not have to file an annual return of its shareholders with the Registrar of Companies;
- an exempted company's register of members is not required to be open to inspection;
- an exempted company does not have to hold an annual general meeting;
- an exempted company may issue no par value shares;
- an exempted company may obtain an undertaking against the imposition of taxation on profits, capital gains or inheritance (such undertakings are usually given for 20 years in the first instance);
- an exempted company may register by way of continuation in another jurisdiction and be deregistered in the Cayman Islands;
- an exempted company may register as a limited duration company; and
- an exempted company may register as a segregated portfolio company.

“Limited liability” means that the liability of each shareholder is limited to the amount unpaid by the shareholder on that shareholder's shares of the company (except in exceptional circumstances, such as involving fraud, the establishment of an agency relationship or an illegal or improper purpose or other circumstances in which a court may be prepared to pierce or lift the corporate veil).

***Changes in Capital (Item 10.B.10 of Form 20-F)***

We may from time to time by ordinary resolution in accordance with the Companies Act alter the conditions of our Memorandum and Articles of Association to:

- increase our capital by such sum, to be divided into shares of such amounts, as the resolution shall prescribe;
- consolidate and divide all or any of our share capital into shares of larger amounts than our existing shares;
- cancel any shares which at the date of the passing of the resolution have not been taken or agreed to be taken by any person, and diminish the amount of its share capital by the amount of the shares so cancelled subject to the provisions of the Companies Act;
- sub-divide our shares or any of them into shares of smaller amount than is fixed by our Memorandum and Articles of Association, subject nevertheless to the Companies Act, so that the resolution whereby any share is sub-divided may determine that, as between the holders of the shares resulting from such subdivision, one or more of the shares may have any such preferred or other special rights over, or may have such deferred rights or be subject to any such restrictions as compared with the others, as we have power to attach to unissued or new shares; and
- divide our shares into several classes and without prejudice to any special rights previously conferred on the holders of existing shares, attach to the shares

respectively any preferential, deferred, qualified or special rights, privileges, conditions or such restrictions that in the absence of any such determination in a general meeting may be determined by our directors.

We may, by special resolution, subject to any confirmation or consent required by the Companies Act, reduce our share capital or any capital redemption reserve in any manner authorized by law.

**Debt Securities (Item 12.A of Form 20-F)**

Not applicable.

**Warrants and Rights (Item 12.B of Form 20-F)**

Not applicable.

**Other Securities (Item 12.C of Form 20-F)**

Not applicable.

**Description of American Depositary Shares (Items 12.D.1 and 12.D.2 of Form 20-F)**

Citibank, N.A., as depositary, issues the ADSs. Each ADS represents ownership of twenty Class A common shares, deposited with Citibank, N.A. – Hong Kong Branch, as custodian for the depositary. Each ADS also represents ownership of any other securities, cash or other property which may be held by the depositary. The depositary's principal office is located at which the ADSs will be administered is located at 388 Greenwich Street, New York, New York 10013.

The Direct Registration System, or DRS, is a system administered by The Depository Trust Company, or DTC, pursuant to which the depositary may register the ownership of uncertificated ADSs, which ownership shall be evidenced by periodic statements issued by the depositary to the ADS holders entitled thereto.

The following is a summary of what we believe to be the material terms of the deposit agreement. Notwithstanding this, because it is a summary, it may not contain all the information that you may otherwise deem important. For more complete information, you should read the entire deposit agreement and the form of ADR which contains the terms of your ADSs. The deposit agreement has been filed with the SEC as an exhibit to a Registration Statement on Form F-6 (File No. 333-224550) for our company.

***Governing Law/Waiver of Jury Trial***

We do not treat ADS holders as our shareholders and accordingly, you, as an ADS holder, do not have shareholder rights. Cayman Islands law governs shareholder rights. The depositary will be the holder of the common shares underlying your ADSs. As a holder of ADSs, you will have ADS holder rights. A deposit agreement among us, the depositary and you, as an ADS holder, and the beneficial owners of ADSs sets out ADS holder rights as well as the rights and obligations of the depositary. The laws of the State of New York govern the deposit agreement and the ADSs and we have agreed with the depositary that the federal or state courts in the City

of New York shall have jurisdiction to hear and determine any suit, action or proceeding and to settle any dispute between them that may arise out of or in connection with the deposit agreement and, for such purposes, each irrevocably submits to the non-exclusive jurisdiction of such courts.

By holding an ADS or an interest therein, you irrevocably agree that any legal suit, action or proceeding against or involving us or the Depositary, arising out of or based upon the deposit agreement, ADSs or ADRs, may only be instituted in a state or federal court in the City of New York, and you irrevocably waive any objection to the laying of venue and irrevocably submit to the exclusive jurisdiction of such courts with respect to any such suit, action or proceeding.

### ***Holding the ADSs***

*How will you hold your ADSs?*

You may hold ADSs either (1) directly (a) by having an American Depositary Receipt, or ADR, which is a certificate evidencing a specific number of ADSs, registered in your name, or (b) by holding ADSs in DRS, or (2) indirectly through your broker or other financial institution. If you hold ADSs directly, you are an ADS holder. This description assumes you hold your ADSs directly. ADSs will be issued through DRS, unless you specifically request certificated ADRs. If you hold the ADSs indirectly, you must rely on the procedures of your broker or other financial institution to assert the rights of ADS holders described in this section. You should consult with your broker or financial institution to find out what those procedures are.

The registration of the Class A common shares in the name of the depositary bank or the custodian shall, to the maximum extent permitted by applicable law, vest in the depositary bank or the custodian the record ownership in the applicable Class A common shares with the beneficial ownership rights and interests in such Class A common shares being at all times vested with the beneficial owners of the ADSs representing the Class A common shares. The depositary bank or the custodian shall at all times be entitled to exercise the beneficial ownership rights in all deposited property, in each case only on behalf of the holders and beneficial owners of the ADSs representing the deposited property.

### ***Dividends and Other Distributions***

*How will you receive dividends and other distributions on the common shares underlying the ADSs?*

As a holder of ADSs, you generally have the right to receive the distributions we make on the securities deposited with the custodian. Your receipt of these distributions may be limited, however, by practical considerations and legal limitations. Holders of ADSs will receive such distributions under the terms of the deposit agreement in proportion to the number of ADSs held as of the specified record date, after deduction of the applicable fees, taxes and expenses.

### ***Distribution of Cash***

Whenever we make a cash distribution for the securities on deposit with the custodian, we will deposit the funds with the custodian. Upon receipt of confirmation of the deposit of the requisite

funds, the depositary bank will arrange for the funds received in a currency other than U.S. dollars to be converted into U.S. dollars and for the distribution of the U.S. dollars to the holders, subject to the laws and regulations of the Cayman Islands.

The conversion into U.S. dollars will take place only if practicable and if the U.S. dollars are transferable to the United States. The depositary bank will apply the same method for distributing the proceeds of the sale of any property (such as undistributed rights) held by the custodian in respect of securities on deposit.

The distribution of cash will be made net of the fees, expenses, taxes and governmental charges payable by holders under the terms of the deposit agreement. The depositary bank will hold any cash amounts it is unable to distribute in a non-interest bearing account for the benefit of the applicable holders and beneficial owners of ADSs until the distribution can be effected or the funds that the depositary bank holds must be escheated as unclaimed property in accordance with the laws of the relevant states of the United States.

#### *Distribution of Class A Common Shares*

Whenever we make a free distribution of Class A common shares for the securities on deposit with the custodian, we will deposit the applicable number of Class A common shares with the custodian. Upon receipt of confirmation of such deposit, the depositary bank will either distribute to holders new ADSs representing the Class A common shares deposited or modify the ADS-to-Class A common share ratio, in which case each ADS you hold will represent rights and interests in the additional Class A common shares so deposited. Only whole new ADSs will be distributed. Fractional entitlements will be sold and the proceeds of such sale will be distributed as in the case of a cash distribution.

The distribution of new ADSs or the modification of the ADS-to-Class A common share ratio upon a distribution of Class A common shares will be made net of the fees, expenses, taxes and governmental charges payable by holders under the terms of the deposit agreement. In order to pay such taxes or governmental charges, the depositary bank may sell all or a portion of the new Class A common shares so distributed.

No such distribution of new ADSs will be made if it would violate a law (e.g., the U.S. securities laws) or if it is not operationally practicable. If the depositary bank does not distribute new ADSs as described above, it may sell the Class A common shares received upon the terms described in the deposit agreement and will distribute the proceeds of the sale as in the case of a distribution of cash.

#### *Distribution of Rights.*

Whenever we intend to distribute rights to subscribe for additional Class A common shares, we will give prior notice to the depositary bank and we will assist the depositary bank in determining whether it is lawful and reasonably practicable to distribute rights to subscribe for additional ADSs to holders.

The depositary bank will establish procedures to distribute rights to subscribe for additional ADSs to holders and to enable such holders to exercise such rights if it is lawful and reasonably

practicable to make the rights available to holders of ADSs, and if we provide all of the documentation contemplated in the deposit agreement (such as opinions to address the lawfulness of the transaction). You may have to pay fees, expenses, taxes and other governmental charges to subscribe for the new ADSs upon the exercise of your rights. The depositary bank is not obligated to establish procedures to facilitate the distribution and exercise by holders of rights to subscribe for new Class A common shares other than in the form of ADSs.

The depositary bank will not distribute the rights to you if:

- We do not timely request that the rights be distributed to you or we request that the rights not be distributed to you; or
- We fail to deliver satisfactory documents to the depositary bank; or
- It is not reasonably practicable to distribute the rights.

The depositary bank will sell the rights that are not exercised or not distributed if such sale is lawful and reasonably practicable. The proceeds of such sale will be distributed to holders as in the case of a cash distribution. If the depositary bank is unable to sell the rights, it will allow the rights to lapse.

*Elective Distributions.*

Whenever we intend to distribute a dividend payable at the election of shareholders either in cash or in additional shares, we will give prior notice thereof to the depositary bank and will indicate whether we wish the elective distribution to be made available to you. In such case, we will assist the depositary bank in determining whether such distribution is lawful and reasonably practicable.

The depositary bank will make the election available to you only if it is reasonably practicable and if we have provided all of the documentation contemplated in the deposit agreement. In such case, the depositary bank will establish procedures to enable you to elect to receive either cash or additional ADSs, in each case as described in the deposit agreement.

If the election is not made available to you, you will receive either cash or additional ADSs, depending on what a shareholder in the Cayman Islands would receive upon failing to make an election, as more fully described in the deposit agreement.

*Other Distributions.*

Whenever we intend to distribute property other than cash, Class A common shares or rights to subscribe for additional Class A common shares we will notify the depositary bank in advance and will indicate whether we wish such distribution to be made to you. If so, we will assist the depositary bank in determining whether such distribution to holders is lawful and reasonably practicable.

If it is reasonably practicable to distribute such property to you and if we provide to the depositary bank all of the documentation contemplated in the deposit agreement, the depositary bank will distribute the property to the holders in a manner it deems practicable.

The distribution will be made net of fees, expenses, taxes and governmental charges payable by holders under the terms of the deposit agreement. In order to pay such taxes and governmental charges, the depositary bank may sell all or a portion of the property received.

The depositary bank will not distribute the property to you and will sell the property if:

- We do not request that the property be distributed to you or if we request that the property not be distributed to you; or
- We do not deliver satisfactory documents to the depositary bank; or
- The depositary bank determines that all or a portion of the distribution to you is not reasonably practicable.

The proceeds of such a sale will be distributed to holders as in the case of a cash distribution.

### ***Deposit, Withdrawal and Cancellation***

#### *How are ADSs issued?*

The depositary bank may create ADSs on your behalf if you or your broker deposit Class A common shares with the custodian. The depositary bank will deliver these ADSs to the person you indicate only after you pay any applicable issuance fees and any charges and taxes payable for the transfer of the Class A common shares to the custodian. Your ability to deposit Class A common shares and receive ADSs may be limited by U.S. and Cayman Islands legal considerations applicable at the time of deposit.

The issuance of ADSs may be delayed until the depositary bank or the custodian receives confirmation that all required approvals have been given and that the Class A common shares have been duly transferred to the custodian. The depositary bank will only issue ADSs in whole numbers.

When you make a deposit of Class A common shares, you will be responsible for transferring good and valid title to the depositary bank. As such, you will be deemed to represent and warrant that:

- The Class A common shares are duly authorized, validly issued, fully paid, non-assessable and legally obtained.
- All preemptive (and similar) rights, if any, with respect to such Class A common shares have been validly waived or exercised.
- You are duly authorized to deposit the Class A common shares.

- The Class A common shares presented for deposit are free and clear of any lien, encumbrance, security interest, charge, mortgage or adverse claim, and are not, and the ADSs issuable upon such deposit will not be, “restricted securities” (as defined in the deposit agreement).
- The Class A common shares presented for deposit have not been stripped of any rights or entitlements.

If any of the representations or warranties are incorrect in any way, we and the depositary bank may, at your cost and expense, take any and all actions necessary to correct the consequences of the misrepresentations.

#### *Transfer, Combination and Split Up of ADRs*

As an ADR holder, you will be entitled to transfer, combine or split up your ADRs and the ADSs evidenced thereby. For transfers of ADRs, you will have to surrender the ADRs to be transferred to the depositary bank and also must:

- ensure that the surrendered ADR is properly endorsed or otherwise in proper form for transfer;
- provide such proof of identity and genuineness of signatures as the depositary bank deems appropriate;
- provide any transfer stamps required by the State of New York or the United States; and
- pay all applicable fees, charges, expenses, taxes and other government charges payable by ADR holders pursuant to the terms of the deposit agreement, upon the transfer of ADRs.

To have your ADRs either combined or split up, you must surrender the ADRs in question to the depositary bank with your request to have them combined or split up, and you must pay all applicable fees, charges and expenses payable by ADR holders, pursuant to the terms of the deposit agreement, upon a combination or split up of ADRs.

#### *Withdrawal of Class A Common Shares Upon Cancellation of ADSs*

As a holder, you will be entitled to present your ADSs to the depositary bank for cancellation and then receive the corresponding number of underlying Class A common shares at the custodian’s offices. Your ability to withdraw the Class A common shares held in respect of the ADSs may be limited by U.S. and Cayman Islands considerations applicable at the time of withdrawal. In order to withdraw the Class A common shares represented by your ADSs, you will be required to pay to the depositary bank the fees for cancellation of ADSs and any charges and taxes payable upon the transfer of the Class A common shares. You assume the risk for delivery of all funds and securities upon withdrawal. Once canceled, the ADSs will not have any rights under the deposit agreement.

If you hold ADSs registered in your name, the depositary bank may ask you to provide proof of identity and genuineness of any signature and such other documents as the depositary bank may deem appropriate before it will cancel your ADSs. The withdrawal of the Class A common shares represented by your ADSs may be delayed until the depositary bank receives satisfactory evidence of compliance with all applicable laws and regulations. Please keep in mind that the depositary bank will only accept ADSs for cancellation that represent a whole number of securities on deposit.

You will have the right to withdraw the securities represented by your ADSs at any time except for:

- Temporary delays that may arise because (i) the transfer books for the Class A common shares or ADSs are closed, or (ii) Class A common shares are immobilized on account of a shareholders' meeting or a payment of dividends.
- Obligations to pay fees, taxes and similar charges.
- Restrictions imposed because of laws or regulations applicable to ADSs or the withdrawal of securities on deposit.

The deposit agreement may not be modified to impair your right to withdraw the securities represented by your ADSs except to comply with mandatory provisions of law.

### ***Voting Rights***

#### *How do you vote?*

As a holder, you generally have the right under the deposit agreement to instruct the depositary bank to exercise the voting rights for the Class A common shares represented by your ADSs.

At our request, the depositary bank will distribute to you any notice of shareholders' meeting received from us together with information explaining how to instruct the depositary bank to exercise the voting rights of the securities represented by ADSs.

If the depositary bank timely receives voting instructions from a holder of ADSs, it will endeavor to vote the securities (in person or by proxy) represented by the holder's ADSs in accordance with such voting instructions as follows:

- In the event of voting by show of hands, the depositary bank will vote (or cause the custodian to vote) all Class A common shares held on deposit at that time in accordance with the voting instructions received from a majority of holders of ADSs who provide timely voting instructions.
- In the event of voting by poll, the depositary bank will vote (or cause the Custodian to vote) the Class A common shares held on deposit in accordance with the voting instructions received from the holders of ADSs.

In the event of voting by poll, holders of ADSs in respect of which no timely voting instructions have been received shall be deemed to have instructed the depository bank to give a discretionary proxy to a person designated by us to vote the Class A common shares represented by such holders' ADSs; provided, that no such instructions shall be deemed given and no such discretionary proxy shall be given with respect to any matter as to which we inform the depository bank that we do not wish such proxy to be given; provided, further, that no such discretionary proxy shall be given (x) with respect to any matter as to which we inform the depository that (i) there exists substantial opposition, or (ii) the rights of holders of ADSs or the shareholders of our company will be materially adversely affected, and (y) in the event that the vote is on a show of hands.

Please note that the ability of the depository bank to carry out voting instructions may be limited by practical and legal limitations and the terms of the securities on deposit. We cannot assure you that you will receive voting materials in time to enable you to return voting instructions to the depository bank in a timely manner.

### ***Compliance with Regulations***

#### *Information Requests*

Each ADS holder and beneficial owner shall provide such information as we may request pursuant to applicable law, the rules and requirements of any stock exchange on which the shares or ADSs are or will be registered, traded or listed or the Memorandum and Articles of Association, regarding the capacity in which such holder or beneficial owner owns ADSs (and shares as the case may be) and capacity in which such Holder or Beneficial Owner owns ADSs (and Shares as the case may be) and regarding the identity of any other person interested in such ADSs and the nature of such interest and various other matters, whether or not they are holders and/or beneficial owners at the time of such request.

#### *Disclosure of Interests*

Each ADS holder and beneficial owner shall comply with our requests pursuant to Cayman Islands law, the rules and requirements of the Nasdaq Stock Market and any other stock exchange on which the common shares are, or will be, registered, traded or listed or our Memorandum and Articles of Association, which requests are made to provide information, inter alia, as to the capacity in which such ADS holder or beneficial owner owns ADS and regarding the identity of any other person interested in such ADS and the nature of such interest and various other matters, whether or not they are ADS holders or beneficial owners at the time of such requests.

### ***Amendment and Termination***

#### *How may the deposit agreement be amended?*

We may agree with the depository bank to modify the deposit agreement at any time without your consent. We undertake to give holders 30 days' prior notice of any modifications that would materially prejudice any of their substantial rights under the deposit agreement. We will not consider to be materially prejudicial to your substantial rights any modifications or supplements

that are reasonably necessary for the ADSs to be registered under the Securities Act or to be eligible for book-entry settlement, in each case without imposing or increasing the fees and charges you are required to pay. In addition, we may not be able to provide you with prior notice of any modifications or supplements that are required to accommodate compliance with applicable provisions of law.

You will be bound by the modifications to the deposit agreement if you continue to hold your ADSs after the modifications to the deposit agreement become effective. The deposit agreement cannot be amended to prevent you from withdrawing the Class A common shares represented by your ADSs (except as permitted by law).

*How may the deposit agreement be terminated?*

We have the right to direct the depositary bank to terminate the deposit agreement. Similarly, the depositary bank may in certain circumstances on its own initiative terminate the deposit agreement. In either case, the depositary bank must give notice to the holders at least 30 days before termination. Until termination, your rights under the deposit agreement will be unaffected.

After termination, the depositary bank will continue to collect distributions received (but will not distribute any such property until you request the cancellation of your ADSs) and may sell the securities held on deposit. After the sale, the depositary bank will hold the proceeds from such sale and any other funds then held for the holders of ADSs in a non-interest bearing account. At that point, the depositary bank will have no further obligations to holders other than to account for the funds then held for the holders of ADSs still outstanding (after deduction of applicable fees, taxes and expenses).

***Limitations on Obligations and Liability to ADR Holders***

*Limits on our Obligations and the Obligations of the Depositary and the Custodian; Limits on Liability to Holders of ADSs*

The deposit agreement limits our obligations and the depositary bank's obligations to you. Please note the following:

- We and the depositary bank are obligated only to take the actions specifically stated in the deposit agreement without negligence or bad faith.
- The depositary bank disclaims any liability for any failure to carry out voting instructions, for any manner in which a vote is cast or for the effect of any vote, provided it acts in good faith and in accordance with the terms of the deposit agreement.
- The depositary bank disclaims any liability for any failure to determine the lawfulness or practicality of any action, for the content of any document forwarded to you on our behalf or for the accuracy of any translation of such a document, for the investment risks associated with investing in Class A common shares, for the validity or worth of the Class A common shares, for any tax consequences that result from the ownership of ADSs, for the credit-worthiness of any third party, for allowing any rights to lapse

under the terms of the deposit agreement, for the timeliness of any of our notices or for our failure to give notice.

- We and the depositary bank will not be obligated to perform any act that is inconsistent with the terms of the deposit agreement.
- We and the depositary bank disclaim any liability if we or the depositary bank are prevented or forbidden from or subject to any civil or criminal penalty or restraint on account of, or delayed in, doing or performing any act or thing required by the terms of the deposit agreement, by reason of any provision, present or future of any law or regulation, or by reason of present or future provision of any provision of our Articles of Association, or any provision of or governing the securities on deposit, or by reason of any act of God or war or other circumstances beyond our control.
- We and the depositary bank disclaim any liability by reason of any exercise of, or failure to exercise, any discretion provided for in the deposit agreement or in our Articles of Association or in any provisions of or governing the securities on deposit.
- We and the depositary bank further disclaim any liability for any action or inaction in reliance on the advice or information received from legal counsel, accountants, any person presenting Class A common shares for deposit, any holder of ADSs or authorized representatives thereof, or any other person believed by either of us in good faith to be competent to give such advice or information.
- We and the depositary bank also disclaim liability for the inability by a holder to benefit from any distribution, offering, right or other benefit that is made available to holders of Class A common shares but is not, under the terms of the deposit agreement, made available to you.
- We and the depositary bank may rely without any liability upon any written notice, request or other document believed to be genuine and to have been signed or presented by the proper parties.
- We and the depositary bank also disclaim liability for any consequential or punitive damages for any breach of the terms of the deposit agreement.
- No disclaimer of any Securities Act liability is intended by any provision of the deposit agreement.
- Nothing in the deposit agreement gives rise to a partnership or joint venture, or establishes a fiduciary relationship, among us, the depositary bank and you as ADS holder.
- Nothing in the deposit agreement precludes the depositary bank (or its affiliates) from engaging in transactions in which parties adverse to us or the ADS owners have interests, and nothing in the deposit agreement obligates the depositary bank to disclose those transactions, or any information obtained in the course of those

transactions, to us or to the ADS owners, or to account for any payment received as part of those transactions.

### ***Requirements for Depositary Actions***

Before the execution and delivery, the registration of issuance, transfer, split-up, combination or surrender of any ADS, the delivery of any distribution thereon, or the withdrawal of any deposited property, the depositary may require:

- payment from the depositor of shares or presenter of ADSs or of this ADR of a sum sufficient to reimburse it for any tax or other governmental charge and any stock transfer or registration fee with respect thereto and payment of any applicable ADS fees and charges;
- satisfactory proof of the identity and genuineness of any signature or any other matters contemplated in the deposit agreement; and
- compliance with (A) any laws or governmental regulations relating to the execution and delivery of ADRs or ADSs or to the withdrawal or delivery of deposited securities and (B) such reasonable regulations and procedures as the depositary may establish, from time to time, consistent with the deposit agreement and applicable laws, including presentation of transfer documents.

The depositary may refuse to issue and deliver ADSs or register transfers of ADSs generally when the register of the depositary or our transfer books are closed or at any time if the depositary or we determine that it is necessary or advisable to do so.

### ***Your Right to Receive the Common Shares Underlying Your ADSs***

You have the right to cancel your ADSs and withdraw the underlying common shares at any time except for:

- Temporary delays that may arise because (i) the transfer books for the Class A common shares or ADSs are closed, or (ii) Class A common shares are immobilized on account of a shareholders' meeting or a payment of dividends.
- Obligations to pay fees, taxes and similar charges.
- Restrictions imposed because of laws or regulations applicable to ADSs or the withdrawal of securities on deposit.

The depositary shall not knowingly accept for deposit under the deposit agreement any common shares or other deposited securities required to be registered under the provisions of the Securities Act, unless a registration statement is in effect as to such common shares.

This right of withdrawal may not be limited by any other provision of the deposit agreement.

### ***Direct Registration System***

In the deposit agreement, all parties to the deposit agreement acknowledge that the DRS and Profile Modification System, or Profile, will apply to uncertificated ADSs upon acceptance thereof to DRS by DTC. DRS is the system administered by DTC pursuant to which the depositary may register the ownership of uncertificated ADSs, which ownership shall be evidenced by periodic statements issued by the depositary to the ADS holders entitled thereto. Profile is a required feature of DRS which allows a DTC participant, claiming to act on behalf of an ADS holder, to direct the depositary to register a transfer of those ADSs to DTC or its nominee and to deliver those ADSs to the DTC account of that DTC participant without receipt by the depositary of prior authorization from the ADS holder to register such transfer.

## List of Significant Subsidiaries and Consolidated Variable Interest Entities of JOYY Inc.

<b>Subsidiaries</b>	<b>Place of Incorporation</b>
Duowan Entertainment Corporation	British Virgin Islands
Funstage Technology Ltd	British Virgin Islands
Topstage Technology Ltd	British Virgin Islands
NeoTasks Inc.	Cayman Islands
Cloud Solution Inc	Cayman Islands
Bigo Inc	Cayman Islands
Shoptline Corporation Limited	Cayman Islands
Mangatoon Inc	Cayman Islands
Engage Capital Partners I. L.P.	Cayman Islands
Engage Capital Partners III. L.P.	Cayman Islands
Singularity IM, Inc.	Delaware
PageBites, Inc.	Delaware
Cube Technology Pte. Ltd.	Singapore
Bigo Technology Pte. Ltd.	Singapore
Likeme Pte. Ltd.	Singapore
Bigo Internet Information Pte. Ltd.	Singapore
Sandhill Solution Pte. Ltd.	Singapore
Indigo Technology Pte. Ltd.	Singapore
Hago Singapore Pte. Ltd.	Singapore
Gokoo Technology Pte. Ltd.	Singapore
NeoTasks Limited	Hong Kong
Bigo (Hong Kong) Limited	Hong Kong
Guangzhou Huanju Shidai Information Technology Co., Ltd.	Mainland China
Guangzhou BaiGuoYuan Information Technology Co., Ltd.	Mainland China
Guangzhou Wangxing Information Technology Co., Ltd.	Mainland China
Cloud Internet Service Limited	United Kingdom
Runderfo Inc.*	Cayman Islands
Goldenage Technology Investment Group Limited*	Hong Kong
Guangzhou Xiling Technology Co., Ltd.*	Mainland China
<b>Consolidated Variable Interest Entities and their Subsidiaries</b>	<b>Place of Incorporation</b>
Beijing Tuda Science and Technology Co., Ltd.	Mainland China
Guangzhou Huaduo Network Technology Co., Ltd.	Mainland China
Guangzhou Huanju Electronic Commerce Co., Ltd.	Mainland China
Foshan Tuyi Network Technology Co., Ltd.	Mainland China
Guangzhou Ruyi Information Technology Co., Ltd.	Mainland China
Hainan Lanlan Network Technology Co., Ltd.	Mainland China
Ningxia Julan Network Technology Co., Ltd.	Mainland China
Jiangxi Jieyu Network Technology Co., Ltd.	Mainland China
Guangzhou Jusheng Network Technology Co., Ltd.	Mainland China
Guangzhou BaiGuoYuan Network Technology Co., Ltd.	Mainland China
Chengdu Yunbu Network Technology Co., Ltd.	Mainland China
Chengdu Luota Network Technology Co., Ltd.	Mainland China
Chengdu Jiyue Network Technology Co., Ltd.	Mainland China
Guangzhou Ruicheng Network Technology Co., Ltd.	Mainland China
Guangzhou Huanju Microfinance Co., Ltd.	Mainland China
Guangzhou Ruiyun Network Technology Co., Ltd.	Mainland China
Guangzhou Yilian Yixing Equity Investment Partnership(LP)	Mainland China
Guangzhou Yiling Network Technology Co., Ltd.*	Mainland China

\*On November 16, 2020, we entered into definitive agreements with Baidu, Inc., or Baidu, and made certain amendments to the share purchase agreement on February 7, 2021, pursuant to which Baidu agreed to acquire our PRC video-based entertainment live streaming business, or YY Live, including the YY mobile app, YY.com website, and PC YY, among others, for an aggregate purchase price of approximately US\$3.6 billion in cash, subject to certain adjustments. The acquisition has been substantially completed, with certain matters remaining to be completed in the future.

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## JOYY INC.

AMENDED AND RESTATED CODE OF BUSINESS CONDUCT AND ETHICS

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**I. PURPOSE**

This Amended and Restated Code of Business Conduct and Ethics (the “**Code**”) contains general guidelines for conducting the business of JOYY Inc., a Cayman Islands company, and its subsidiaries and affiliates (collectively, the “**Company**”) consistent with the highest standards of business ethics, and is intended to qualify as a “code of ethics” within the meaning of Section 406 of the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder. To the extent this Code requires a higher standard than required by commercial practice or applicable laws, rules or regulations, the Company adheres to these higher standards.

This Code is designed to deter wrongdoing and to promote:

- honest and ethical conduct, including the ethical handling of actual or apparent conflicts of interest between personal and professional relationships;
- full, fair, accurate, timely, and understandable disclosure in reports and documents that the Company files with, or submits to, the U.S. Securities and Exchange Commission (the “**SEC**”) and in other public communications made by the Company;
- compliance with applicable laws, rules and regulations;
- strict prohibition of any bribes or kickbacks;
- prompt internal reporting of violations of the Code; and
- accountability for adherence to the Code.

**II. APPLICABILITY**

This Code applies to all directors, officers, employees and consultants of the Company, whether they work for the Company on a full-time, part-time, consultative or temporary basis (each, an “**employee**” and collectively, the “**employees**”). Certain provisions of the Code apply specifically to our chief executive officer, chief financial officer, principal accounting officer, other chief officers, controller, vice presidents and any other persons who perform similar functions that meet certain seniority levels of the Company (each, a “**senior officer**,” and collectively, the “**senior officers**”). Certain provisions of the Code apply to relevant third parties in assistance with the Company’s business.

If you have any questions regarding the Code or would like to report any violation of the Code, please send an email at [jubao@joyy.com](mailto:jubao@joyy.com) (the “**Compliance Administrator**”).

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This Code was adopted by the board of directors of the Company (the “**Board**”) on May 31, 2022.

### III. CONFLICTS OF INTEREST

#### *Identifying Conflicts of Interest*

A conflict of interest occurs when an employee’s private interest interferes, or appears to interfere, in any way with the interests of the Company as a whole. An employee should actively avoid any private interest that may impact such employee’s ability to act in the interests of the Company or that may make it difficult to perform the employee’s work objectively and effectively. In general, the following should be considered conflicts of interest:

- Competing Business. No employee may be employed by a business that competes with the Company or deprives it of any business.
  - Corporate Opportunity. No employee should use corporate property, information or his/her position with the Company to secure a business opportunity that would otherwise be available to the Company. If an employee discovers a business opportunity that is in the Company’s line of business through the use of the Company’s property, information or position, the employee must first present the business opportunity to the Company before pursuing the opportunity in his/her individual capacity.
  - Financial Interests.
    - (i) No employee may have any financial interest (ownership or otherwise), either directly or indirectly through a spouse or other family member, in any other business or entity if such interest adversely affects the employee’s performance of duties or responsibilities to the Company, or requires the employee to devote time to it during such employee’s working hours at the Company;
    - (ii) No employee may hold any ownership interest in a privately held company that is in competition with the Company;
    - (iii) An employee may hold up to 5% ownership interest in a publicly traded company that is in competition with the Company; provided that if the employee’s ownership interest in such publicly traded company increases to more than 5%, the employee must immediately report such ownership to the Compliance Administrator;
    - (iv) No employee may hold any ownership interest in a company that has a business relationship with the Company if such employee’s duties at the Company include managing or supervising the Company’s business relations with that company; and
    - (v) Notwithstanding the other provisions of this Code,
-

(a) a director or any immediate family member of such director (collectively, “**Director Affiliates**”) or a senior officer or any immediate family member of such senior officer (collectively, “**Officer Affiliates**”) may continue to hold his/her investment or other financial interest in a business or entity (an “**Interested Business**”) that:

(1) was made or obtained either (x) before the Company invested in or otherwise became interested in such business or entity; or (y) before the director or senior officer joined the Company (for the avoidance of doubt, regardless of whether the Company had or had not already invested in or otherwise become interested in such business or entity at the time the director or senior officer joined the Company); or

(2) may in the future be made or obtained by the director or senior officer, provided that at the time such investment or other financial interest is made or obtained, the Company has not yet invested in or otherwise become interested in such business or entity;

provided that such director or senior officer shall disclose such investment or other financial interest to the Board;

(b) an interested director or senior officer shall refrain from participating in any discussion among senior officers of the Company relating to an Interested Business and shall not be involved in any proposed transaction between the Company and an Interested Business; and

(c) before any Director Affiliate or Officer Affiliate (i) invests, or otherwise acquires any equity or other financial interest, in a business or entity that is in competition with the Company; or (ii) enters into any transaction with the Company, the related director or senior officer shall obtain prior approval from the Audit Committee of the Board.

For purposes of this Code, a company or entity is deemed to be “in competition with the Company” if it competes with the Company’s business of operating global online social entertainment platforms and/or any other business in which the Company is engaged.

- Loans or Other Financial Transactions. No employee may obtain loans or guarantees of personal obligations from, or enter into any other personal financial transaction with, any company that is a material customer, supplier or competitor of the Company. This guideline does not prohibit arms-length transactions with recognized banks or other financial institutions.
  - Service on Boards and Committees. No employee shall serve on a board of directors or trustees or on a committee of any entity (whether profit or not-for-profit) whose interests could reasonably be expected to conflict with those of the Company. Employees must obtain prior approval from the Board before accepting any such board or committee
-

position. The Company may revisit its approval of any such position at any time to determine whether an employee's service in such position is still appropriate.

The above is in no way a complete list of situations where conflicts of interest may arise. The following questions might serve as a useful guide in assessing a potential conflict of interest situation not specifically addressed above:

- Is the action to be taken legal?
- Is it honest and fair?
- Is it in the best interests of the Company?

### ***Disclosure of Conflicts of Interest***

The Company requires that employees fully disclose any situations that could reasonably be expected to give rise to a conflict of interest. If an employee suspects that he/she has a conflict of interest, or a situation that others could reasonably perceive as a conflict of interest, the employee must report it immediately to the Compliance Administrator. Conflicts of interest may only be waived by the Board, or the appropriate committee of the Board, and will be promptly disclosed to the public to the extent required by law and applicable rules of the stock exchange where the Company's securities, including, but not limited to, American depositary shares representing its common shares, are listed and traded (the "Stock Exchange").

### ***Family Members and Work***

The actions of family members outside the workplace may also give rise to conflicts of interest because they may influence an employee's objectivity in making decisions on behalf of the Company. If a member of an employee's family is interested in doing business with the Company, the criteria as to whether to enter into or continue the business relationship and the terms and conditions of the relationship must be no less favorable to the Company compared with those that would apply to an unrelated party seeking to do business with the Company under similar circumstances.

Employees should report any situation involving family members that could reasonably be expected to give rise to a conflict of interest to their supervisor. For purposes of this Code, "family members" or "members of employee's family" include an employee's spouse, parents, children, siblings, in-laws, whether by blood, marriage or adoption, or anyone residing in such employee's home.

## **IV. GIFTS AND ENTERTAINMENT**

The giving and receiving of appropriate gifts may be considered common business practice. Appropriate business gifts and entertainment are welcome courtesies designed to build relationships and understanding among business partners. However, gifts and entertainment should never compromise, or appear to compromise, an employee's ability to make objective and fair business decisions.

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It is the responsibility of employees to use good judgment in this area. As a general rule, employees may give or receive gifts or entertainment to or from customers or suppliers only if the gift or entertainment (i) could not be viewed as an inducement to any particular business decision, (ii) is in compliance with applicable laws, regulations and policies, (iii) is insignificant in amount, and (iv) is not given in consideration or expectation of any action by the recipient. All gifts and entertainment expenses made on behalf of the Company must be properly accounted for on expense reports.

The Company encourages employees to submit gifts received to the Company. While it is not mandatory to submit small gifts, gifts of over US\$25 must be submitted immediately to the legal or internal audit department of the Company.

An employee should contact the legal or internal audit department if he/she has any questions regarding any gifts or entertainment expenses. Bribes and kickbacks are criminal acts, strictly prohibited by law. An employee must not offer, give, solicit or receive any form of bribe or kickback anywhere in the world.

## **V. ANTI-BRIBERY AND FCPA COMPLIANCE**

The U.S. Foreign Corrupt Practices Act (“**FCPA**”) prohibits giving anything of value, directly or indirectly, to officials of foreign governments or foreign political candidates in order to obtain or retain business. A violation of FCPA does not only violate the Company’s policy but also constitute a civil or criminal offense under FCPA which the Company is subject to after the Effective Time. No employee shall give or authorize directly or indirectly any illegal payments to government officials of any country. While the FCPA does, in certain limited circumstances, allow nominal “facilitating payments” to be made, any such payment must be discussed with and approved by an employee’s supervisor in advance before it can be made.

No employee shall give or authorize directly or indirectly any improper payments to any other person or entity to secure any improper advantage for the Company, nor shall any employee solicit any improper payment from any other person or entity in exchange for any improper advantage.

## **VI. PROTECTION AND USE OF COMPANY ASSETS**

Employees should protect the Company’s assets and ensure their efficient use for legitimate business purposes only. Theft, carelessness and waste have a direct impact on the Company’s profitability and are strictly prohibited. Any use of the funds or assets of the Company, whether for personal gain or not, for any unlawful or improper purpose is strictly prohibited.

To ensure the protection and proper use of the Company’s assets, each employee should:

- exercise reasonable care to prevent theft, damage or misuse of Company property;
- promptly report any actual or suspected theft, damage or misuse of Company property;



- safeguard all electronic programs, data, communications and written materials from unauthorized access; and
- use Company property only for legitimate business purposes.

Except as approved in advance by the chief executive officer or chief financial officer/principal accounting officer of the Company, the Company prohibits political contributions (directly or through trade associations) by any employee on behalf of the Company. Prohibited political contributions include:

- any contributions of the Company's funds or other assets for political purposes;
- encouraging individual employees to make any such contribution; and
- reimbursing an employee for any political contribution.

## **VII. INTELLECTUAL PROPERTY AND CONFIDENTIALITY**

Employees should abide by the Company's rules and policies in protecting the intellectual property and confidential information, including the following:

- All inventions, creative works, computer software, and technical or trade secrets developed by an employee in the course of performing the employee's duties or primarily through the use of the Company's assets or resources while working at the Company shall be the property of the Company.
  - Employees should maintain the confidentiality of information entrusted to them by the Company or entities with which the Company has business relations, except when disclosure is authorized or legally mandated. Confidential information includes all non-public information that might be of use to competitors, or harmful to the company or its business associates, if disclosed.
  - The Company maintains a strict confidentiality policy. During an employee's term of employment with the Company, the employee shall comply with any and all written or unwritten rules and policies concerning confidentiality and shall fulfill the duties and responsibilities concerning confidentiality applicable to the employee.
  - In addition to fulfilling the responsibilities associated with his/her position in the Company, an employee shall not, without obtaining prior approval from the Company, disclose, announce or publish trade secrets or other confidential business information of the Company, nor shall an employee use such confidential information outside the course of his/her duties to the Company.
  - Even outside the work environment, an employee must maintain vigilance and refrain from disclosing important information regarding the Company or its business, business associates or employees.
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- An employee's duty of confidentiality with respect to the confidential information of the Company survives the termination of such employee's employment with the Company for any reason until such time as the Company discloses such information publicly or the information otherwise becomes available in the public sphere through no fault of the employee.
- Upon termination of employment, or at such time as the Company requests, an employee must return to the Company all of its property without exception, including all forms of medium containing confidential information, and may not retain duplicate materials.

## **VIII. ACCURACY OF FINANCIAL REPORTS AND OTHER PUBLIC COMMUNICATIONS**

JOYY Inc. is a public company and is required to report its financial results and other material information about its business to the public and the SEC. It is the Company's policy to promptly disclose accurate and complete information regarding its business, financial condition and results of operations. Employees must strictly comply with all applicable standards, laws, regulations and policies for accounting and financial reporting of transactions, estimates and forecasts. Inaccurate, incomplete or untimely reporting will not be tolerated and can severely damage the Company and result in legal liability.

Employees should be on guard for, and promptly report, any possibility of inaccurate or incomplete financial reporting. Particular attention should be paid to:

- financial results that seem inconsistent with the performance of the underlying business;
- transactions that do not seem to have an obvious business purpose; and
- requests to circumvent ordinary review and approval procedures.

The Company's senior financial officers and other employees working in the finance department have a special responsibility to ensure that all of the Company's financial disclosures are full, fair, accurate, timely and understandable. Any practice or situation that might undermine this objective should be reported to the Compliance Administrator.

Employees are prohibited from directly or indirectly taking any action to coerce, manipulate, mislead or fraudulently influence the Company's independent auditors for the purpose of rendering the financial statements of the Company materially misleading. Prohibited actions include but are not limited to:

- issuing or reissuing a report on the Company's financial statements that is not warranted in the circumstances (due to material violations of U.S. GAAP, generally accepted auditing standards or other professional or regulatory standards);
-

- not performing audit, review or other procedures required by generally accepted auditing standards or other professional standards;
- not withdrawing an issued report when withdrawal is warranted under the circumstances; or
- not communicating matters required to be communicated to the Company's Audit Committee.

## **IX. COMPANY RECORDS**

Accurate and reliable records are crucial to the Company's business and form the basis of its earnings statements, financial reports and other disclosures to the public. The Company's records are a source of essential data that guides business decision-making and strategic planning. Company records include, but are not limited to, booking information, payroll, timecards, travel and expense reports, e-mails, accounting and financial data, measurement and performance records, electronic data files and all other records maintained in the ordinary course of business.

All Company records must be complete, accurate and reliable in all material respects. There is never an acceptable reason to make false or misleading entries. Undisclosed or unrecorded funds, payments or receipts are strictly prohibited. An employee is responsible for understanding and complying with the Company's recordkeeping policy. An employee should contact the legal or internal audit department if he/she has any questions regarding the recordkeeping policy.

## **X. COMPLIANCE WITH LAWS AND REGULATIONS**

Each employee has an obligation to comply with the laws of the cities, provinces, regions and countries in which the Company operates. This includes, without limitation, laws covering commercial bribery and kickbacks, patents, copyrights, trademarks and trade secrets, information privacy, insider trading, offering or receiving gratuities, employment harassment, environmental protection, occupational health and safety, false or misleading financial information, misuse of corporate assets and foreign currency exchange activities. Employees are expected to understand and comply with all laws, rules and regulations that apply to their positions at the Company. If any doubt exists about whether a course of action is lawful, the employee should seek advice immediately from the legal or internal audit department.

## **XI. DISCRIMINATION AND HARASSMENT**

The Company is firmly committed to providing equal opportunity in all aspects of employment and will not tolerate any illegal discrimination or harassment based on race, ethnicity, religion, gender, age, national origin or any other protected class. Any comment or conduct related to sexual harassment is also strictly forbidden. For further information, employees should consult the legal or internal audit department.

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## **XII. FAIR DEALING**

Each employee should endeavor to deal fairly with the Company's customers, suppliers, competitors and employees. No employee should take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misrepresentation of material facts, or any other unfair-dealing practice.

## **XIII. HEALTH AND SAFETY**

The Company strives to provide employees with a safe and healthy work environment. Each employee has responsibility for maintaining a safe and healthy workplace for other employees by following environmental, safety and health rules and practices and reporting accidents, injuries and unsafe equipment, practices or conditions. Violence or threats of violence are not permitted.

Each employee is expected to perform his/her duty to the Company in a safe manner, not under the influence of alcohol, illegal drugs or other controlled substances. The use of illegal drugs or other controlled substances in the workplace is prohibited.

## **XIV. VIOLATIONS OF THE CODE**

All employees have a duty to report any known or suspected violation of this Code, including any violation of laws, rules, regulations or policies that apply to the Company. Reporting a known or suspected violation of this Code by others will not be considered an act of disloyalty, but an action to safeguard the reputation and integrity of the Company and its employees.

If an employee knows of or suspects a violation of this Code, it is such employee's responsibility to immediately report the violation to the Compliance Administrator, who will work with the employee to investigate his/her concern. All questions and reports of known or suspected violations of this Code will be treated with sensitivity and discretion. The Company will protect the employee's confidentiality to the extent possible, consistent with the law and the Company's need to investigate the employee's concern.

It is the Company's policy that any employee who violates this Code will be subject to appropriate discipline, including termination of employment, based upon the facts and circumstances of each particular situation. An employee's conduct, if it does not comply with the law or with this Code, can result in serious consequences for both the employee and the Company.

The Company strictly prohibits retaliation against an employee who, in good faith, seeks help or reports known or suspected violations. An employee inflicting reprisal or retaliation against another employee for reporting a known or suspected violation will be subject to disciplinary action, including termination of employment.

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**XV. WAIVERS OF THE CODE**

Waivers of this Code will be granted on a case-by-case basis and only in extraordinary circumstances. Waivers of this Code may be made only by the Board, or the appropriate committee of the Board, and may be promptly disclosed to the public if so required by applicable laws and regulations and rules of the Stock Exchange.

**XVI. CONCLUSION**

This Code contains general guidelines for conducting the business of the Company consistent with the highest standards of business ethics. If employees have any questions about these guidelines, they should contact the legal or internal audit department. The Company expects all employees to adhere to these standards. Each employee is separately responsible for his/her actions. Conduct that violates the law or this Code cannot be justified by claiming that it was ordered by a supervisor or someone in higher management positions. If an employee engages in conduct prohibited by the law or this Code, such employee will be deemed to have acted outside the scope of his/her employment. Such conduct will subject the employee to disciplinary action, including termination of employment.

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**Certification by the Principal Executive Officer  
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, David Xueling Li, certify that:

1. I have reviewed this annual report on Form 20-F of JOYY Inc. (the "Company");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) disclosed in this report any change in the Company's internal control over financial reporting that occurred during the period covered by this annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
5. The Company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: April 27, 2023

By: /s/ David Xueling Li  
Name: David Xueling Li  
Title: Chief Executive Officer

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**Certification by the Principal Financial Officer  
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002**

I, Fuyong Liu, certify that:

1. I have reviewed this annual report on Form 20-F of JOYY Inc. (the "Company");
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the Company's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) disclosed in this report any change in the Company's internal control over financial reporting that occurred during the period covered by this annual report that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting; and
5. The Company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company's auditors and the audit committee of the Company's board of directors (or persons performing the equivalent functions):
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the Company's internal control over financial reporting.

Date: April 27, 2023

By: /s/ Fuyong Liu

Name: Fuyong Liu

Title: General Manager of Finance

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**Certification by the Principal Executive Officer  
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Annual Report of JOYY Inc. (the "Company") on Form 20-F for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, David Xueling Li, Chief Executive Officer of the Company, hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 27, 2023

By: /s/ David Xueling Li  
Name: David Xueling Li  
Title: Chief Executive Officer

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**Certification by the Principal Financial Officer  
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

In connection with the Annual Report of JOYY Inc. (the "Company") on Form 20-F for the year ended December 31, 2022 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Fuyong Liu, General Manager of Finance of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to my knowledge:

The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: April 27, 2023

By: /s/ Fuyong Liu

Name: Fuyong Liu

Title: General Manager of Finance

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Our ref VSL/741072-000001/26119438v1  
Direct tel +852 2971 3046  
E-mail richard.spooner@maples.com

JOYY Inc.  
30 Pasir Panjang Road  
#15-31A Mapletree Business City,  
Singapore 117440

27 April 2023

Dear Sir

**JOYY Inc.**

We have acted as legal advisors as to the laws of the Cayman Islands to JOYY Inc., an exempted company incorporated with limited liability under the laws of the Cayman Islands (the “**Company**”), in connection with the filing by the Company with the United States Securities and Exchange Commission (the “**SEC**”) of an annual report on Form 20-F for the year ended 31 December 2022 (the “**Annual Report**”), which will be filed with the Securities and Exchange Commission in the month of April 2023.

We hereby consent to the reference of our name under the heading “Item 5. Operating and Financial Review and Prospects—A. Operating Results—Discussion of Selected Statements of Operations Items—Taxation” in the Annual Report, and further consent to the incorporation by reference into the Registration Statements on Form S-8 (File No. 333-187074, File No. 333-215742, File No. 333-229099 and File No. 333-234003) of the summary of our opinion under the headings “Item 5. Operating and Financial Review and Prospects—A. Operating Results—Discussion of Selected Statements of Operations Items—Taxation—Cayman Islands” and Item 10. Additional Information—E. Taxation—Cayman Islands Taxation”. We also consent to the filing with the SEC of this consent letter as an exhibit to the Annual Report.

Yours faithfully

/s/ Maples and Calder (Hong Kong) LLP  
Maples and Calder (Hong Kong) LLP

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方達律師事務所

FANGDA PARTNERS

Shanghai·Beijing·Shenzhen·Hong Kong·Guangzhou

<http://www.fangdalaw.com>

E-mail: email@fangdalaw.com  
Tel.: 86-21-2208-1166  
Fax: 86-21-5298-5599  
Ref.: 23GC0084

24/F, HKRI Center Two, HKRI Taikoo Hui  
288 Shi Men Yi Road  
Shanghai 200041, PRC

To:

JOYY Inc.  
30 Pasir Panjang Road #15-31A Mapletree Business City  
Singapore 117440

April 27, 2023

Re: 2022 Annual Report on Form 20-F of JOYY Inc.

Dear Sirs,

We consent to the reference to our firm under the headings “Item 3. Key Information—D. Risk Factors” and “Item 4. Information on the Company—B. Business Overview—Regulations in Multiple Jurisdictions Where We Operate—Mainland China Regulation” in JOYY Inc.’s Annual Report on Form 20-F for the year ended December 31, 2022 (the “**Annual Report**”), which will be filed with the Securities and Exchange Commission (the “SEC”) in the month of April 2023, and further consent to the incorporation by reference of the summaries of our opinions under these captions into the Company’s registration statements on Form S-8 (No. 333-187074, No. 333-215742, No. 333-229099 and No. 333-234003). We also consent to the filing with the SEC of this consent letter as an exhibit to the Annual Report on Form 20-F for the year ended December 31, 2022.

Yours sincerely,

/s/ Fangda Partners  
\_\_\_\_\_  
Fangda Partners

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CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-187074, No. 333-215742, No. 333-229099 and No. 333-234003) of JOYY Inc. of our report dated April 27, 2023 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 20-F.

/s/ PricewaterhouseCoopers LLP  
Singapore  
April 27, 2023

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**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (No. 333-187074, No. 333-215742, No. 333-229099 and No. 333-234003) of JOYY Inc. of our report dated April 29, 2022 relating to the financial statements, which appears in this Form 20-F.

/s/ PricewaterhouseCoopers Zhong Tian LLP  
Guangzhou, the People's Republic of China

April 27, 2023

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April 27, 2023

Securities and Exchange Commission  
100 F Street, N.E.  
Washington, DC 20549

Commissioners:

We have read the statements made by JOYY Inc. pursuant to Item 304(a)(1) of Regulation S-K (copy attached) which we understand will be filed with the Securities and Exchange Commission as part of the Form 20-F of JOYY Inc. dated April 27, 2023. We agree with the statements concerning our Firm in such contained therein.

Very truly yours,

/s/PricewaterhouseCoopers Zhong Tian LLP

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ITEM 16F. CHANGES IN REGISTRANT’S CERTIFYING ACCOUNTANT

To conform to our globalized business operations, the audit committee of our board of directors and the board of directors of our company approved the engagement of PricewaterhouseCoopers LLP, or PwC Singapore, on September 2, 2022, replacing our former auditor, PricewaterhouseCoopers Zhong Tian LLP, or PwC China, as our independent registered public accounting firm to audit our annual consolidated financial statements and our internal control over financial reporting for the fiscal year ended December 31, 2022. The change of our independent registered public accounting firm had been approved by the audit committee of our board, and the decision was not made due to any disagreements between us and PwC China.

The reports of PwC China on our consolidated financial statements for the fiscal years ended December 31, 2020 and 2021 did not contain an adverse opinion or a disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope or accounting principle.

During the fiscal years ended December 31, 2020 and 2021 and the subsequent interim period through September 2, 2022, there have been no (i) disagreements between us and PwC China on any matter of accounting principles or practices, financial statement disclosure, or audit scope or procedure, which disagreements if not resolved to the satisfaction of PwC China would have caused them to make reference thereto in their reports on the consolidated financial statements for such years, or (ii) reportable events as defined in Item 16F(a)(1)(v) of the instructions to Form 20-F.

We have provided PwC China with a copy of the disclosures hereunder and required under Item 16F of Form 20-F and requested from PwC China a letter addressed to the SEC indicating whether it agrees with such disclosures. A copy of PwC China’s letter dated April 27, 2023 is filed hereto as Exhibit 16.1.

During each of the fiscal years ended December 31, 2020 and 2021 and the subsequent interim period through September 2, 2022, neither we nor anyone on behalf of us has consulted with PwC Singapore regarding (i) the application of accounting principles to a specific transaction, either completed or proposed, or the type of audit opinion that might be rendered on our consolidated financial statements, and neither a written report nor oral advice was provided to us that PwC Singapore concluded was an important factor considered by us in reaching a decision as to any accounting, audit, or financial reporting issue, (ii) any matter that was the subject of a disagreement pursuant to Item 16F(a)(1)(iv) of the instructions to Form 20-F, or (iii) any reportable event pursuant to Item 16F(a)(1)(v) of the instructions to Form 20-F.

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