

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 20-F

(Mark One)

☐ REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (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
For the transition period from _____ to _____.

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

Commission file number: 001-35224

Xunlei Limited

(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)

3709 Baishi Road, Nanshan District, Shenzhen, 518000

The People's Republic of China

(Address of principal executive offices)

Naijiang (Eric) Zhou, Chief Financial Officer

Telephone: +86-0755 61111571

Email: zhounaijiang@xunlei.com

3709 Baishi Road, Nanshan District, Shenzhen, 518000

The People's Republic of China

(Name, Telephone, Email and/or Facsimile number and Address of Company Contact Person)

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

Title of each class	Name of each exchange on which registered	Ticker symbol
American depositary shares, each representing five common shares Common shares, par value US\$0.00025 per share *	The NASDAQ Stock Market LLC (The NASDAQ Global Select Market) The NASDAQ Stock Market LLC (The NASDAQ Global Select Market)	XNET

* Not for trading, but only in connection with the listing on The NASDAQ Global Select Market of American depositary shares.

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)

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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: 325,047,736 common shares (excluding (i) 39,064,775 common shares that are (a) issued to our depositary bank for the purpose of bulk issuance, or (b) repurchased by the company, and (ii) 1,370,285 common shares representing 274,057 ADSs and 9,519,144 common shares held by Leading Advice Holdings Limited, a share incentive awards holding platform) 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.

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 ☒

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 "accelerated filer," "large 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 Securities Act.

Yes ☐ No ☐

[†] 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-Oxley 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:

US 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

In this annual report, except where the context otherwise requires and for purposes of this annual report only:

- “we,” “us,” “our company,” “our” or “Xunlei” refers to Xunlei Limited, a Cayman Islands company, its subsidiaries, the variable interest entity, or the VIE, and the VIE’s subsidiaries;
- “China” or “PRC” refers to the People’s Republic of China, excluding, for the purpose of this annual report only, Hong Kong, Macau and Taiwan;
- “daily active user” refers to a user who accessed to Mobile Xunlei through a mobile device, on a given day;
- “digital media content” refers to videos, music, games, software and documents transmitted in digital form;
- “monthly unique visitors” in relation to our platform, refers to the number of different individual visitors who accessed Xunlei products (including websites and software) on our platform from the same computer at least once within a month; under this method, a user who accessed Xunlei products from two different computers would count as two unique visitors;
- “shares” or “common shares” refers to our common shares, par value US\$0.00025 per share;
- “subscriber” refers to users who can access our premium acceleration services, including accounts temporarily suspended, but excluding sub-accounts and accounts on a trial basis.
- “ADSs” refers to our American depositary shares, each representing five common shares, and “ADRs” refers to any American depositary receipts that evidence our ADSs;
- “RMB” or “Renminbi” refers to the legal currency of China; and
- “US\$,” “dollars” or “U.S. dollars” refers to the legal currency of the United States.

We use U.S. dollar as reporting currency in our financial statements and in this annual report. Transactions in Renminbi are recorded at the rates of exchange prevailing when the transactions occur. Solely for the convenience of the reader, the translations of Renminbi amounts into U.S. dollars contained in this annual report were made at RMB6.9646 to US\$1.00, the rate released by the State Administration of Foreign Exchange of the People’s Republic of China on December 31, 2022. We make no representation that any Renminbi or U.S. dollar amounts could have been, or could be, converted into U.S. dollars or Renminbi, as the case may be, at any particular rate, the rates stated below, or at all. The PRC government imposes control over its foreign currency reserves in part through direct regulation of the conversion of Renminbi into foreign exchange and through restrictions on foreign trade.

FORWARD-LOOKING INFORMATION

This annual report on Form 20-F contains forward-looking statements that reflect our current expectations and views of future events. These statements are made under the “safe harbor” provisions of the U.S. Private Securities Litigation Reform Act of 1995. You can identify these forward-looking statements by words or phrases such as “may,” “could,” “should,” “would,” “will,” “expect,” “anticipate,” “aim,” “estimate,” “intend,” “plan,” “believe,” “likely to,” “project,” “continue,” “potential,” 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 business strategies, including the strategies to streamline our business and continue moving toward mobile internet;
- our future business development, results of operations and financial condition;
- our ability to maintain and strengthen our market position in China;
- our ability to retain subscribers for our premium acceleration and other services;
- our ability to develop new products and services and attract, maintain and monetize user traffic;
- trends and competition in the internet industry in China;
- rules and regulations governing the internet industry in China;
- our ability to handle intellectual property rights-related matters; and
- general economic and business conditions in China.

You should not place undue reliance on these forward-looking statements and you should read these statements in conjunction with other sections of this annual report, in particular the risk factors disclosed in “Item 3. Key Information—D. Risk Factors.” 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. Moreover, we operate in a rapidly evolving environment. New risks emerge from time to time and it is impossible 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 from those contained in any forward-looking statement. 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 do not undertake any obligation to update or revise the forward-looking statements except as required under applicable law.

PART I

Item 1. Identity of Directors, Senior Management and Advisers

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 Entity

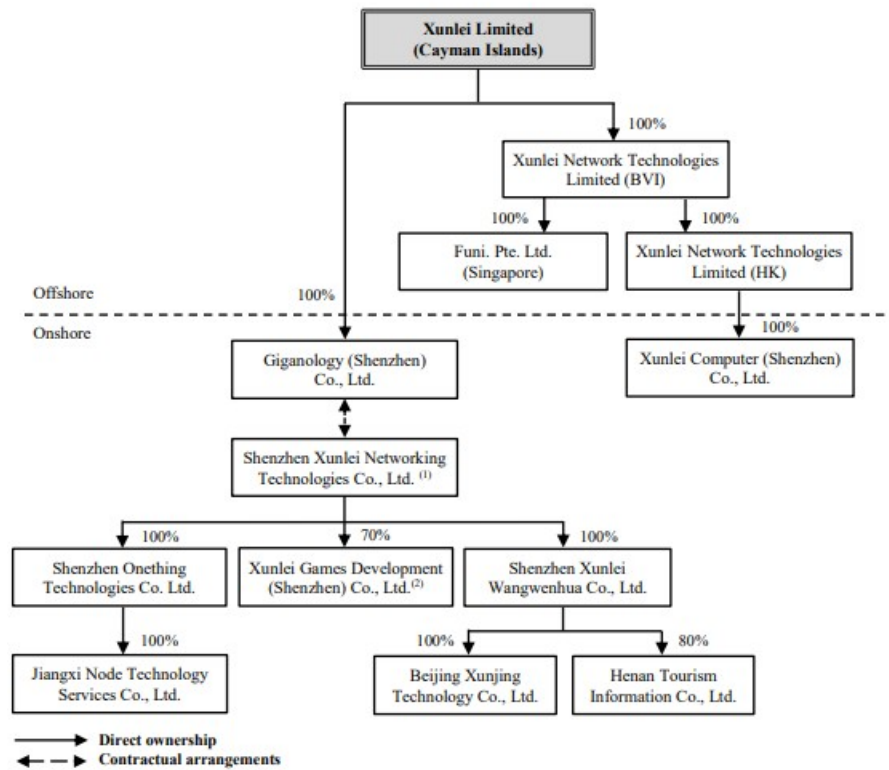
Xunlei Limited is not a Chinese operating company but a Cayman Islands holding company with no equity ownership in its variable interest entity. We conduct our operations in China through (i) our PRC subsidiaries, and (ii) the variable interest entity, with which we have maintained contractual arrangements and its subsidiaries in China. PRC laws and regulations place certain restrictions on foreign ownership of companies that engage in value-added telecommunication service, and prohibit foreign investment in internet cultural operating service and online transmission of audio-visual programs service. Accordingly, we operate these businesses in China through the variable interest entity, and rely on contractual arrangements among our PRC subsidiaries, the variable interest entity and its shareholders to control the business operations of the variable interest entity. Revenues contributed by the variable interest entity accounted for 99.99%, 95.47% and 88.12% of our total revenues in 2020, 2021 and 2022, respectively. As used in this annual report, “we,” “us,” “our company” and “our” refer to Xunlei Limited, its subsidiaries, and, in the context of describing our operations and consolidated financial information, the variable interest entity in China, Shenzhen Xunlei Networking Technologies Co., Ltd., or Shenzhen Xunlei, which was established in January 2003 to operate our Xunlei internet platform together with its various subsidiaries in the PRC. Investors in our ADSs are not purchasing equity interest in the variable interest entity in China but instead are purchasing equity interest in a holding company incorporated in the Cayman Islands.

A series of contractual agreements, including business operation agreement, equity pledge agreement, powers of attorney, exclusive technology support and services agreement, exclusive technology consulting and training agreement, proprietary technology license contract, intellectual properties purchase option agreement, equity interests disposal agreement, and loan agreements, have been entered into by and among our subsidiary, the variable interest entity and its shareholders. Terms contained in each set of contractual arrangements with the variable interest entity and its shareholders are substantially similar. As a result of the contractual arrangements, we have effective control over and are considered the primary beneficiary of the variable interest entity, and we have consolidated the financial results of the variable interest entity and its subsidiaries in our consolidated financial statements. For more details of these contractual arrangements, see “Item 4. Information on the Company—C. Organizational Structure—Agreements that provide us effective control over Shenzhen Xunlei.”

However, the contractual arrangements may not be as effective as ownership in providing us with control over the variable interest entity and we may incur substantial costs to enforce the terms of the arrangements. In addition, these agreements have not been tested in PRC courts. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—We rely on contractual arrangements with the variable interest entity in China and its shareholders for our operations, which may not be as effective as ownership in providing operational control the variable interest entity and its subsidiaries” and “—The shareholders of Shenzhen Xunlei may have potential conflicts of interest with us, which may materially and adversely affect our business.”

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The following diagram illustrates our corporate structure, including the variable interest entity and our principal subsidiaries and principal subsidiaries of the variable interest entity, as of the date of this annual report on Form 20-F:



Notes:

(1) Shenzhen Xunlei is the variable interest entity. Mr. Sean Shenglong Zou, our co-founder and director, Mr. Hao Cheng, our co-founder, Mr. Jianming Shi, Guangzhou Shulian Information Investment Co., Ltd. and Ms. Fang Wang own 76.0%, 8.3%, 8.3%, 6.7% and 0.7% of Shenzhen Xunlei's equity interests, respectively.

(2) The remaining 30% of the equity interest is owned by Mr. Hao Cheng.

There are also substantial uncertainties regarding the interpretation and application of current and future PRC laws, regulations and rules regarding the status of the rights of our PRC subsidiaries with respect to its contractual arrangements with the variable interest entity and its shareholders. It is uncertain whether any new PRC laws or regulations relating to variable interest entity structures will be adopted or if adopted, what they would provide. If our PRC subsidiaries or any of the variable interest entity is found to be in violation of any existing or future PRC laws or regulations, or fail to obtain or maintain any of the required permits or approvals, the relevant PRC regulatory authorities 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 PRC government finds that the agreements that establish the structure for operating our businesses in China do not comply with PRC governmental restrictions on foreign investment in internet-related business and foreign investors’ mergers and acquisition activities in China, or if these regulations or the interpretation of existing regulations change in the future, we could be subject to severe penalties or be forced to relinquish our interests in those operations” and “—Uncertainties exist with respect to the interpretation and implementation of the enacted PRC Foreign Investment Law and how it may impact the viability of our current corporate structure, corporate governance and business operations.”

Our corporate structure is subject to risks associated with our contractual arrangements with the variable interest entity. If the PRC government deems that our contractual arrangements with the variable interest entity do not comply with PRC 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. Our holding company, our PRC subsidiaries and variable interest entity, and investors of our company face uncertainty about potential future actions by the PRC government that could affect the enforceability of the contractual arrangements with the variable interest entity and, consequently, significantly affect the financial performance of the variable interest entity 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.”

We face various risks and uncertainties related to doing business in China. Our business operations are primarily conducted in China, and we are subject to complex and evolving PRC laws and regulations. For example, we face risks associated with regulatory approvals on our future offshore offerings (if any), anti-monopoly regulatory actions, and oversight on cybersecurity and data privacy, which may impact our ability to conduct certain businesses, accept foreign investments, or list on a United States or other foreign exchange. 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 be of little or no value. For a detailed description of risks related to doing business in China, please refer to risks disclosed under “Item 3.D. Key Information—Risk Factors—Risks Related to Doing Business in China.”

PRC government’s significant authority in regulating our operations and its oversight and control over offerings conducted overseas by, and foreign investment in, China-based issuers could significantly limit or completely hinder our ability to offer or continue to offer securities to investors. 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 be of little or no value. For more details, see “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—The PRC government’s significant oversight and discretion over our business operation could result in a material adverse change in our operations and the value of our ADSs.”

Risks and uncertainties arising from the legal system in China, including risks and uncertainties regarding the enforcement of laws and quickly evolving rules and regulations in China, could result in a material adverse change in our operations and the value of our ADSs. For more details, see “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—Uncertainties with respect to the PRC legal system could adversely affect us.”

The Holding Foreign Companies Accountable Act

Pursuant to the Holding Foreign Companies Accountable Act, or the HFCAA, if the SEC determines that we have filed audit reports issued by a registered public accounting firm that has not been subject to inspections by the PCAOB for two consecutive years, the SEC will prohibit our shares or the ADSs from being traded on a national securities exchange or in the over-the-counter trading market in the United States. 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, including our auditor. In May 2022, the SEC conclusively listed us as a Commission-Identified Issuer under the HFCAA following the filing of this annual report on Form 20-F for the fiscal year ended December 31, 2021. 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. For this reason, 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. Each year, the PCAOB will determine whether it can inspect and investigate completely audit firms in mainland China and Hong Kong, among other jurisdictions. If PCAOB determines in the future that it no longer has full access to inspect and investigate completely accounting firms in mainland China and Hong Kong and we continue to use an accounting firm headquartered in one of these jurisdictions to issue an audit report on our financial statements filed with the Securities and Exchange Commission, we would be identified as a Commission-Identified Issuer following the filing of the annual report on Form 20-F for the relevant fiscal year. There can be no assurance that we would not be identified as a Commission-Identified Issuer for any future fiscal year, and if we were so identified for two consecutive years, we would become subject to the prohibition on trading under the HFCAA. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—The PCAOB had historically been unable to inspect our auditor in relation to their audit work performed for our financial statements and the inability of the PCAOB to conduct inspections of our auditor in the past has deprived our investors with the benefits of such inspections” and “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—Our ADSs may be prohibited from trading in the United States under the HFCAA in the future if the PCAOB is unable to inspect or investigate completely auditors located in China. The delisting of the ADSs, or the threat of their being delisted, may materially and adversely affect the value of your investment.”

Permissions Required from the PRC Authorities for Our Operations

We conduct our business primarily through our subsidiaries, variable interest entity and its subsidiaries in China. Our operations in China are governed by PRC laws and regulations. As of the date of this annual report, our PRC subsidiaries, variable interest entity and its subsidiaries have obtained the requisite licenses and permits from the PRC government authorities that are material for the business operations of our holding company, our PRC subsidiaries, the variable interest entity and its subsidiaries in China, including, among others, the value-added telecommunication services license, or VATS License and Online Culture Operation Permit. However, given the uncertainties of interpretation and implementation of relevant laws and regulations and the enforcement practices of relevant government authorities, we cannot assure you that we have obtained or will obtain all permits or licenses required for conducting our business in China. For example, neither Shenzhen Wangwenhua, an entity that operates a live streaming business, nor Shenzhen Xunlei, an entity that provides video content display services, is a registered owner of the license for online transmission of audio-visual programs. As a result, it is possible that relevant PRC government authorities could determine that these businesses are operating without sufficient licenses. In addition, we are in the process of application for the registration in the National Internet Audio-Visual Platforms Information Management System under the requirement of Notice 78 (defined below) for operating a live streaming business and providing video content display services. 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 Business—We are strictly regulated in China. Any lack of requisite licenses or permits applicable to our businesses or to our third-party services providers and any changes in government policies or regulations may have a material and adverse impact on our businesses, financial condition and results of operations.”

In addition, our online game operating subsidiaries, Shenzhen Wangwenhua, Shenzhen Xunlei and Xunlei Games, have obtained a VATS License for operating our online games; and Shenzhen Xunlei, holding 100% of the equity interest in Shenzhen Wangwenhua and 70% of the equity interest in Xunlei Games, has obtained an Internet Publishing Services License for the publication of internet games, which expired on September 17, 2022 and is in the process of renewal. However, neither Shenzhen Wangwenhua nor Xunlei Games has obtained an Internet Publishing Services License. Given the uncertainties of interpretation and implementation of relevant laws and regulations and the enforcement practices of relevant government authorities, we cannot assure you that Shenzhen Wangwenhua and Xunlei Games are not required to obtain Internet Publishing Services Licenses as well. In addition, we cannot assure you that Shenzhen Xunlei will successfully renew its Internet Publishing Services License. As a result, relevant PRC government authorities may find that certain of our online game operating subsidiaries are engaged in internet publishing services without having the proper license and may penalize us accordingly. In such event, Shenzhen Xunlei, Shenzhen Wangwenhua and Xunlei Games could be ordered to cease the operations of such game publishing services, including to the extent of discontinuing our online games business operated by them, and could be subject to confiscation of illegal income and major equipment, or to fines. For more detailed information, see “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—We may not be able to successfully address the challenges and risks we face in the online games market, such as a failure to operate popular, high-quality games or to obtain all the licenses required to operate online games, which may subject us to penalties from the relevant authorities, including the discontinuance of our online game business.”

Furthermore, in connection with our previous issuance of securities to foreign investors, under current PRC laws, regulations and regulatory rules, as of the date of this annual report, we, our PRC subsidiaries and the variable interest entity, (i) are not required to obtain permissions from the China Securities Regulatory Commission, or the CSRC, (ii) are not required to go through cybersecurity review by the Cyberspace Administration of China, or the CAC, and (iii) have not received or were denied such requisite permissions by any PRC authority.

However, the PRC government has recently indicated an intent to exert more oversight and control over offerings that are conducted overseas and/or foreign investment in China-based issuers. For more detailed information, see “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—The approval of and the filing with the CSRC or other PRC government authorities may be required in connection with our future offshore offerings (if any) under PRC law, and, if required, we cannot predict whether or for how long we will be able to obtain such approval.”

Cash and Asset Flows through Our Organization

Under PRC laws, Xunlei Limited may provide funding to our PRC subsidiaries only through capital contributions or loans, and to our PRC consolidated variable interest entity only through loans, subject to satisfaction of applicable registration and approval requirements from the PRC government. For the year ended December 31, 2022, Xunlei Limited extended a loan of RMB245.0 million to its subsidiaries in China and a loan of US\$70.0 million directly to its consolidated variable interest entity in China. For the year ended December 31, 2020, 2021 and 2022, our consolidated variable interest entity received debt financing of US\$2.5 million, US\$23.5 million and US\$25.5 million from our WFOE, respectively.

Xunlei Limited is a holding company with no material operations of its own. We conduct our operations primarily through our PRC subsidiaries, the variable interest entity and its subsidiaries in China. As a result, Xunlei Limited’s ability to pay dividends depends upon dividends paid by our PRC subsidiaries. If our existing PRC 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 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 PRC law, each of our subsidiaries and the variable interest entity in 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” and “Item 3. Key Information—Risk Factors—Risks Related to Our Corporate Structure—We may rely principally on dividends and other distributions on equity paid by our PRC subsidiaries to fund any cash and financing requirements we may have. Any limitation on the ability of Giganology Shenzhen and Xunlei Computer to pay dividends to us could have a material adverse effect on our ability to conduct our business.”

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Under PRC laws and regulations, our PRC subsidiaries and consolidated variable interest entity 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 China is also subject to examination by the banks designated by SAFE. The restricted amounts include the paid-up capital and the statutory reserve funds of our PRC subsidiaries and the net assets of our consolidated variable interest entity in which we have no legal ownership, totaling US\$168.5 million, US\$169.2 million and US\$172.1 million as of December 31, 2020, 2021 and 2022, respectively. For details, see “Item 3. Key Information—Risk Factors—Risks Related to Our Corporate Structure—PRC regulation of loans to, and direct investment in, PRC entities by offshore holding companies and governmental control of currency conversion may restrict or prevent us from making loans to our PRC subsidiaries and variable interest entity and its subsidiaries or making additional capital contributions to our PRC subsidiaries, which may materially and adversely affect our liquidity and our ability to fund and expand our business.”

In the year ended December 31, 2020, 2021 and 2022, no assets other than cash were transferred through our organization.

Xunlei Limited has not declared or paid any cash dividends, nor does it have any present plan to pay any cash dividends on its common shares in the foreseeable future. We currently intend to retain most, if not all, of our available funds and any future earnings to fund the development and growth of our business. See “Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Dividend Policy.” For the material Cayman Islands, PRC and U.S. federal income tax consequences of an investment in our ADSs or common shares, see “Item 10. Additional Information—E. Taxation.”

The following discussion reflects the hypothetical taxes that might be required to be paid within mainland China, assuming that:

(i) we have taxable earnings, and (ii) we determine to pay a dividend in the future:

	Tax calculation⁽¹⁾
Hypothetical pre-tax earnings ⁽²⁾	100%
Tax on earnings at statutory rate of 25% ⁽³⁾	(25)%
Net earnings available for distribution	75%
Withholding tax at standard rate of 10% ⁽⁴⁾	(7.5)%
Net distribution to Parent/Shareholders	67.5%

Notes:

- (1) For purposes of this example, the tax calculation has been simplified. The hypothetical book pre-tax earnings amount, not considering timing differences, is assumed to equal taxable income in China.
- (2) Under the terms of VIE agreements, our PRC subsidiaries may charge the VIE for services provided to VIE. These service fees shall be recognized as expenses of the VIE, with a corresponding amount as service income by our PRC subsidiaries and eliminate in consolidation. For income tax purposes, our PRC subsidiaries and VIE file income tax returns on a separate company basis. The service fees paid are recognized as a tax deduction by the VIE and as income by our PRC subsidiaries and are tax neutral.
- (3) Certain of our subsidiaries and VIE qualifies for a 15% preferential income tax rate in China. However, such rate is subject to qualification, is temporary in nature, and may not be available in a future period when distributions are paid. For purposes of this hypothetical example, the table above reflects a maximum tax scenario under which the full statutory rate would be effective.
- (4) The PRC Enterprise Income Tax Law imposes a withholding income tax of 10% on dividends distributed by a foreign invested enterprise, or FIE, to its immediate holding company outside of China. A lower withholding income tax rate of 5% is applied if the VIE’s immediate holding company is registered in Hong Kong or other jurisdictions that have a tax treaty arrangement with China, subject to a qualification review at the time of the distribution. For purposes of this hypothetical example, the table above assumes a maximum tax scenario under which the full withholding tax would be applied.

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The table above is based on the assumption that all profits of the VIE will be distributed as fees to our PRC subsidiaries under tax neutral contractual arrangements. If, in the future, the accumulated earnings of the VIE exceed the service fees paid to our PRC subsidiaries (or if the current and contemplated fee structure between the intercompany entities is determined to be non-substantive and disallowed by Chinese tax authorities), the VIE could make a non-deductible transfer to our PRC subsidiaries for the amounts of the stranded cash in the VIE. This would result in the double taxation of earnings: once at the VIE level (non-deductible expense) and again at the WFOE level (for presumptive earnings on the transfer). This has the impact of reducing the amount available above from 67.5% to approximately 50.6% of pre-tax income, respectively. We believe that there is only a remote possibility that this scenario would happen.

Financial Information Related to Our Consolidated Variable Interest Entity

The following table presents the condensed consolidating schedule of financial information of Xunlei Limited (or the Parent), the WFOE (which is the primary beneficiary of the VIE), our other subsidiaries (excluding the WFOE), and the VIE and VIE's subsidiaries, for the years ended December 31, 2020, 2021 and 2022 and as of the dates presented.

Selected Condensed Consolidated Statements of Operations Data

	Year ended December 31, 2022					Consolidated Group
	Xunlei Limited	Other subsidiaries	WFOE	VIE and VIE's subsidiaries	Elimination	
Inter-company total revenues ⁽¹⁾⁽⁵⁾	—	—	4,863	—	(4,863)	—
Third-party total revenues	—	40,711	—	301,853	—	342,564
Third-party costs of revenues	—	(28,938)	—	(171,116)	—	(200,054)
Inter-company operating expenses ⁽¹⁾⁽⁵⁾	—	—	—	(4,863)	4,863	—
Third-party operating expenses	(6,436)	(4,784)	(4,580)	(115,578)	—	(131,378)
Profit from subsidiaries and consolidated VIE ⁽²⁾	27,300	—	11,136	—	(38,436)	—
Net income attributable to Xunlei Limited	21,463	16,488	16,719	11,136	(44,343)	21,463

	Year ended December 31, 2021					Consolidated Group
	Xunlei Limited	Other subsidiaries	WFOE	VIE and VIE's subsidiaries	Elimination	
Inter-company total revenues ⁽¹⁾⁽⁵⁾	—	7,153	879	—	(8,032)	—
Third-party total revenues	—	10,865	—	228,736	—	239,601
Third-party costs of revenues	—	(8,881)	—	(109,722)	—	(118,603)
Inter-company operating expenses ⁽¹⁾⁽⁵⁾	—	—	—	(8,032)	8,032	—
Third-party operating expenses	(3,302)	(10,281)	(552)	(110,367)	—	(124,502)
Profit from subsidiaries and consolidated VIE ⁽²⁾	3,935	—	2,913	—	(6,848)	—
Net income attributable to Xunlei Limited	1,191	876	3,059	2,913	(6,848)	1,191

	Year ended December 31, 2020					Consolidated Group
	Xunlei Limited	Other subsidiaries	WFOE	VIE and VIE's subsidiaries	Elimination	
Inter-company total revenues ⁽¹⁾⁽⁵⁾	—	6,355	822	—	(7,177)	—
Third-party total revenues	—	4	—	186,679	—	186,683
Third-party costs of revenues	—	(244)	(5)	(92,388)	—	(92,637)
Inter-company operating expenses ⁽¹⁾⁽⁵⁾	—	—	—	(7,177)	7,177	—
Third-party operating expenses	(1,438)	(9,235)	(433)	(101,421)	—	(112,527)
Loss from subsidiaries and consolidated VIE ⁽²⁾	(14,361)	—	(10,673)	—	25,034	—
Net loss attributable to Xunlei Limited	(13,840)	(3,757)	(10,604)	(10,673)	25,034	(13,840)

	Year ended December 31, 2022					
	Xunlei Limited	Other subsidiaries	WFOE	VIE and VIE's subsidiaries	Elimination	Consolidated Group
Cash and cash equivalents	32,004	13,526	79,482	52,142	—	177,154
Short-term investments	29,342	—	54,284	—	—	83,626
Accounts receivable, net	—	601	—	29,162	—	29,763
Inventories	—	—	—	457	—	457
Amount due from group companies ⁽³⁾⁽⁵⁾	5,808	199	66,531	5,326	(77,864)	—
Due from related parties	—	19,782	14	13,121	—	32,917
Prepayments and other current assets	927	722	4,044	2,574	—	8,267
Restricted cash	—	—	—	7,654	—	7,654
Investments in subsidiaries and consolidated VIE ⁽²⁾	49,888	159,146	—	—	(209,034)	—
Long-term investments	—	25,466	—	5,345	—	30,811
Deferred tax assets	—	213	—	—	—	213
Property and equipment, net	—	164	25	61,545	—	61,734
Right-of-use assets	—	—	—	865	—	865
Intangible assets, net	—	—	—	6,546	—	6,546
Goodwill	—	—	—	21,179	—	21,179
Amount due from group companies, non-current portion ⁽³⁾	200,471	—	28,716	—	(229,187)	—
Other long-term prepayments and non-current assets	—	—	43	2,094	—	2,137
Total assets	318,440	219,819	233,139	208,010	(516,085)	463,323
Accounts payable	55	1,977	2	23,398	—	25,432
Amount due to group companies ⁽³⁾⁽⁵⁾	5,028	899	12	71,925	(77,864)	—
Due to related parties	1,560	—	—	—	—	1,560
Contract liabilities and deferred income, current portion	—	1,186	—	37,781	—	38,967
Income tax payable	10	1,223	1,011	3,342	—	5,586
Accrued liabilities and other payables	1,894	2,018	2,080	43,446	—	49,438
Lease liabilities, current portion	—	—	—	283	—	283
Bank borrowings, current portion	—	—	—	7,024	—	7,024
Contract liabilities and deferred income, non-current portion	—	—	—	876	—	876
Deferred tax liabilities	—	—	—	687	—	687
Bank borrowings, non-current portion	—	—	—	24,750	—	24,750
Lease liabilities, non-current portion	—	—	—	299	—	299
Deficits in subsidiaries and consolidated VIE ⁽²⁾	—	—	101,946	—	(101,946)	—
Amount due to group companies, non-current portion ⁽³⁾	—	91,381	40,189	97,617	(229,187)	—
Total liabilities	8,547	98,684	145,240	311,428	(408,997)	154,902
Total shareholders' equity/(deficits)	309,893	121,135	87,899	(101,946)	(107,088)	309,893
Non-controlling interests	—	—	—	(1,472)	—	(1,472)
Total liabilities, non-controlling interests and shareholders' equity	318,440	219,819	233,139	208,010	(516,085)	463,323

	Year ended December 31, 2021					
	Xunlei Limited	Other subsidiaries	WFOE	VIE and VIE's subsidiaries	Elimination	Consolidated Group
Cash and cash equivalents	32,015	54,802	19,896	16,645	—	123,358
Short-term investments	40,972	68,307	—	6,373	—	115,652
Accounts receivable, net	—	132	—	26,003	—	26,135
Inventories	—	—	—	1,363	—	1,363
Amount due from group companies ⁽³⁾⁽⁵⁾	107,484	17,969	59,961	3,102	(188,516)	—
Due from related parties	—	175	16	15,387	—	15,578
Prepayments and other current assets	183	267	4,250	7,142	—	11,842
Restricted cash	—	—	—	4,078	—	4,078
Investments in subsidiaries and consolidated VIE ⁽²⁾	36,324	—	—	—	(36,324)	—
Long-term investments	—	25,028	—	6,467	—	31,495
Due from related parties, non-current portion	—	19,311	—	—	—	19,311
Property and equipment, net	—	240	—	57,417	—	57,657
Right-of-use assets	—	—	—	27	—	27
Intangible assets, net	—	—	—	8,299	—	8,299
Goodwill	—	—	—	23,136	—	23,136
Amount due from group companies, non-current portion ⁽³⁾	92,917	31,369	—	—	(124,286)	—
Other long-term prepayments and non-current assets	—	103	—	2,684	—	2,787
Total assets	309,895	217,703	84,123	178,123	(349,126)	440,718
Accounts payable	55	2,563	—	23,789	—	26,407
Amount due to group companies ⁽³⁾⁽⁵⁾	2,546	800	38,438	146,732	(188,516)	—
Due to related parties	1,506	—	—	91	—	1,597
Contract liabilities and deferred income, current portion	—	152	—	36,740	—	36,892
Income tax payable	—	31	49	2,451	—	2,531
Accrued liabilities and other payables	2,141	4,967	—	42,449	—	49,557
Lease liabilities, current portion	—	—	—	18	—	18
Bank borrowings, current portion	—	—	—	2,876	—	2,876
Contract liabilities and deferred income, non-current portion	—	—	—	845	—	845
Deferred tax liabilities	—	—	—	930	—	930
Bank borrowings, non-current portion	—	—	—	17,291	—	17,291
Lease liabilities, non-current portion	—	—	—	7	—	7
Deficits in subsidiaries and consolidated VIE ⁽²⁾	—	—	125,916	—	(125,916)	—
Amount due to group companies, non-current portion ⁽³⁾	—	87,917	5,000	31,369	(124,286)	—
Total liabilities	6,248	96,430	169,403	305,588	438,718	138,951
Total shareholders' equity/(deficits)	303,647	121,604	(85,280)	(125,916)	89,592	303,647
Non-controlling interests	—	(331)	—	(1,549)	—	(1,880)
Total liabilities, non-controlling interests and shareholders' equity	309,895	217,703	84,123	178,123	(349,126)	440,718

	Year ended December 31, 2020					
	Xunlei Limited	Other subsidiaries	WFOE	VIE and VIE's subsidiaries	Elimination	Consolidated Group
Cash and cash equivalents	57,585	42,520	22,859	14,284	—	137,248
Short-term investments	47,525	70,296	—	—	—	117,821
Accounts receivable, net	—	—	—	22,983	—	22,983
Inventories	—	—	—	1,726	—	1,726
Amount due from group companies ^{(3) (5)}	3,323	43,932	54,925	15,168	(117,348)	—
Due from related parties	—	—	15	10,955	—	10,970
Prepayments and other current assets	860	—	628	10,046	—	11,534
Restricted cash	—	—	—	1,541	—	1,541
Investments in subsidiaries and consolidated VIE ⁽²⁾	20,064	—	—	—	(20,064)	—
Long-term investments	—	21,028	—	5,706	—	26,734
Property and equipment, net	—	192	1	50,532	—	50,725
Right-of-use assets	—	39	—	1,915	—	1,954
Intangible assets, net	—	—	—	8,857	—	8,857
Goodwill	—	—	—	22,607	—	22,607
Amount due from group companies, non-current portion ⁽³⁾	175,720	7,663	—	—	(183,383)	—
Other long-term prepayments and non-current assets	—	—	—	905	—	905
Total assets	305,077	185,670	78,428	167,225	(320,795)	415,605
Accounts payable	55	1	—	20,588	—	20,644
Amount due to group companies ⁽³⁾⁽⁵⁾	10,750	358	—	106,240	(117,348)	—
Due to related parties	—	5,334	—	55	—	5,389
Contract liabilities and deferred income, current portion	1	—	—	34,040	—	34,041
Income tax payable	—	53	—	2,500	—	2,553
Accrued liabilities and other payables	2,118	3,069	141	33,361	—	38,689
Lease liabilities, current portion	—	49	—	1,912	—	1,961
Contract liabilities and deferred income, non-current portion	—	—	—	920	—	920
Deferred tax liabilities	—	—	—	1,085	—	1,085
Bank borrowings, non-current portion	—	—	—	19,924	—	19,924
Lease liabilities, non-current portion	—	—	—	27	—	27
Deficits in subsidiaries and consolidated VIE ⁽²⁾	—	—	128,816	—	(128,816)	—
Amount due to group companies, non-current portion ⁽³⁾	—	64,129	42,444	76,810	(183,383)	—
Total liabilities	12,924	72,993	171,401	297,462	(429,547)	125,233
Total shareholders' equity/(deficits)	292,153	113,037	(92,973)	(128,816)	108,752	292,153
Non-controlling interests	—	(360)	—	(1,421)	—	(1,781)
Total liabilities, non-controlling interests and shareholders' equity	305,077	185,670	78,428	167,225	(320,795)	415,605

Selected Condensed Consolidated Statements of Cash Flows Data

	Year ended December 31, 2022					Consolidated Group
	Xunlei Limited	Other subsidiaries	WFOE	VIE and VIE's subsidiaries	Elimination	
Purchases of goods and services from group companies ⁽⁴⁾	—	—	—	(29,738)	29,738	—
Sales of goods and services to group companies ⁽⁴⁾	—	—	29,738	—	(29,738)	—
Other operating activities with external parties	(948)	6,519	(9,146)	54,684	—	51,109
Net cash (used in)/generated from operating activities	(948)	6,519	20,592	24,946	—	51,109
Loans to group companies ⁽⁴⁾	(3,450)	—	(25,580)	—	29,030	—
Repayment of loans from group companies ⁽⁴⁾	—	—	10,830	—	(10,830)	—
Other investing activities with external parties	11,134	(1,000)	10,425	(8,801)	—	11,758
Net cash generated from/(used in) investing activities	7,684	(1,000)	(4,325)	(8,801)	18,200	11,758
Loans from group companies ⁽⁴⁾	—	3,450	—	25,580	(29,030)	—
Repayment of loans to group companies ⁽⁴⁾	—	—	—	(10,830)	10,830	—
Other financing activities with external parties	(6,747)	—	—	13,388	—	6,641
Net cash (used in)/generated from financing activities	(6,747)	3,450	—	28,138	(18,200)	6,641
Net (decrease)/increase in cash and cash equivalents	(11)	8,969	16,267	44,283	—	69,508
Cash, cash equivalents and restricted cash at beginning of year	32,015	4,557	70,141	20,723	—	127,436
Effect of exchange rates on cash, cash equivalents and restricted cash	—	—	(6,926)	(5,210)	—	(12,136)
Cash, cash equivalents and restricted cash at end of year	32,004	13,526	79,482	59,796	—	184,808

	Year ended December 31, 2021					Consolidated Group
	Xunlei Limited	Other subsidiaries	WFOE	VIE and VIE's subsidiaries	Elimination	
Operating activities with external parties	(5,732)	8,654	(8,387)	24,945	—	19,480
Net cash (used in)/generated from operating activities	(5,732)	8,654	(8,387)	24,945	—	19,480
Loans to group companies ⁽⁴⁾	(26,391)	(23,527)	—	—	49,918	—
Repayment of loans from group companies ⁽⁴⁾	—	19,123	5,302	—	(24,425)	—
Other investing activities with external parties	6,553	(19,755)	—	(19,417)	—	(32,619)
Net cash (used in)/generated from investing activities	(19,838)	(24,159)	5,302	(19,417)	25,493	(32,619)
Loans from group companies ⁽⁴⁾	—	26,391	—	23,527	(49,918)	—
Repayment of loans to group companies ⁽⁴⁾	—	—	—	(24,425)	24,425	—
Other financing activities with external parties	—	—	—	(223)	—	(223)
Net cash generated from/(used in) financing activities	—	26,391	—	(1,121)	(25,493)	(223)
Net (decrease)/increase in cash and cash equivalents	(25,570)	10,886	(3,085)	4,407	—	(13,362)
Cash, cash equivalents and restricted cash at beginning of year	57,585	42,520	22,859	15,825	—	138,789
Effect of exchange rates on cash, cash equivalents and restricted cash	—	1,396	122	491	—	2,009
Cash, cash equivalents and restricted cash at end of year	32,015	54,802	19,896	20,723	—	127,436

	Year ended December 31, 2020					
	Xunlei Limited	Other subsidiaries	WFOE	VIE and VIE's subsidiaries	Elimination	Consolidated Group
Operating activities with external parties	649	(8,112)	6,975	(13,423)	—	(13,911)
Net cash generated from/(used in) operating activities	649	(8,112)	6,975	(13,423)	—	(13,911)
Loans to group companies ⁽⁴⁾	(1,802)	(2,463)	—	(6,329)	10,594	—
Repayment of loans from group companies ⁽⁴⁾	500	—	4,300	502	(5,302)	—
Other investing activities with external parties	55,030	(66,616)	(10)	(9,160)	—	(20,756)
Net cash generated from/(used in) investing activities	53,728	(69,079)	4,290	(14,987)	5,292	(20,756)
Loans from group companies ⁽⁴⁾	—	1,723	6,329	2,542	(10,594)	—
Repayment of loans to group companies ⁽⁴⁾	—	(500)	(502)	(4,300)	5,302	—
Other financing activities with external parties	(4,475)	—	—	7,154	—	2,679
Net cash (used in)/generated from financing activities	(4,475)	1,223	5,827	5,396	(5,292)	2,679
Net increase/(decrease) in cash and cash equivalents	49,902	(75,968)	17,092	(23,014)	—	(31,988)
Cash, cash equivalents and restricted cash at beginning of year	7,683	114,168	5,767	37,830	—	165,448
Effect of exchange rates on cash, cash equivalents and restricted cash	—	4,320	—	1,009	—	5,329
Cash, cash equivalents and restricted cash at end of year	57,585	42,520	22,859	15,825	—	138,789

Notes:

- (1) Intercompany sales of goods and services were eliminated at the consolidation level.
- (2) It represents the elimination of the investments in subsidiaries and the VIE and the VIE's subsidiaries by group companies.
- (3) It represents the elimination of intercompany balances among Xunlei Limited, other subsidiaries, the WFOE, the VIE and the VIE's subsidiaries.
- (4) It represents the elimination of intercompany operating, investing and financing activities among Xunlei Limited, other subsidiaries, the WFOE, the VIE and the VIE's subsidiaries.
- (5) For the years ended December 31, 2020, 2021 and 2022, the VIE has incurred US\$0.8 million, US\$0.9 million and US\$4.9 million in fees related to technical services provided by the WFOE and the WFOE concurrently recognized the same amounts as revenues. Unsettled balance of such transactions was US\$12.8 million and US\$4.0 million as of December 31, 2021 and 2022, 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 involves significant risks. You should carefully consider all of the information in this annual report, including the risks and uncertainties described below, before making an investment in our ADSs. Any of the following risks could have a material adverse effect on our business, financial condition and results of operations. In any such case, the market price of our ADSs could decline, and you may lose all or part of your investment.

Risks Related to Our Business

Risks and uncertainties relating to our business include, but are not limited to, the following:

- Our business model is currently undergoing significant innovation and transition, and our historical growth rate may not be indicative of our future performance and our new business may not be successful;
- The blockchain industry in China is an emerging industry. The laws and regulations governing the operation of blockchain products and services in China are developing and evolving and subject to changes. If we fail to comply with existing and future applicable laws, regulations or requirements of local regulatory authorities, our business, financial condition and results of operations may be materially and adversely affected;
- Regulatory uncertainties exist with respect to our historical LinkToken operations, which may have a material adverse effect on our business and results of operations;
- We may not be able to retain our large user base, convert our users into subscribers of our premium services or maintain our existing subscribers;
- The intellectual property protection mechanism we have implemented may not always be effective or sufficient. The premium acceleration services, Xunlei Cloud Drive and other value-added services we provide to our users have exposed us to and may continue to expose us to copyright infringement claims and other related claims, which could be time-consuming and costly. Any damage awards, injunctive relief and/or court orders could materially and adversely affect our existing business model, divert our management's attention and adversely impact our business and reputation;
- If we are unable to successfully capture and retain the growing number of mobile internet users or if we are unable to successfully monetize our mobile products, our business, financial condition and results of operations may be materially and adversely affected;
- We are subject to various risks in connection with our international operations;
- If we fail to keep up with the technological development in the internet industry and users' changing demand, our business, financial condition and results of operations may be materially and adversely affected;
- Our technologies, business methods and services, including those relating to our resource discovery network, may be subject to third-party patent claims or rights, such as issued patents or pending patent applications, that limit or prevent their use;
- We may be subject to claims or lawsuits outside of China, which could increase our risk of direct or indirect liabilities for our existing or future service offerings;
- We may not be able to prevent unauthorized use of our intellectual property or disclosure of our trade secrets and other proprietary information, which could reduce demand for our services and have material and adverse impacts on our business, financial condition and results of operations;
- The revenue model for our live streaming may not remain effective and we cannot guarantee that our future monetization strategies will be successfully implemented or generate sustainable revenues and profit;
- We may fail to offer attractive content for our live streaming services, or attract and retain talented and popular broadcasters, which may materially adversely affect the operation of our live streaming services and its results of operations;

- We may be held liable for information or content displayed on, retrieved from or linked to our platforms, or distributed to our users, if such content is deemed to violate laws or regulations in China and other jurisdictions, or for improper or fraudulent activities conducted on our platform, and authorities in China and other jurisdictions may impose legal sanctions on us and our reputation may be damaged; and
- System failure, interruptions and downtime, including those caused by cyber-attacks or security breaches, can result in user dissatisfaction, adverse publicity or leakage of confidential information of our users and customers, and our business, financial condition, results of operations may be materially and adversely affected.

Risks Related to Our Corporate Structure

Risks and uncertainties relating to our corporate structure include, without limitation, the following:

- If the PRC government finds that the agreements that establish the structure for operating our businesses in China do not comply with PRC governmental restrictions on foreign investment in internet-related business and foreign investors' mergers and acquisition activities in China, or if these regulations or the interpretation of existing regulations change in the future, we could be subject to severe penalties or be forced to relinquish our interests in those operations;
- We rely on contractual arrangements with the variable interest entity in China and its shareholders for our operations, which may not be as effective as ownership in providing operational control the variable interest entity and its subsidiaries; and
- Any failure by Shenzhen Xunlei or its shareholders to perform their obligations under our contractual arrangements with them may have a material adverse effect on our business.

Risks Related to Doing Business in China

We are also subject to risks and uncertainties relating to doing business in China in general, including, but are not limited to, the following:

- Changes in China's economic, political or social conditions or government policies could have a material adverse effect on our business and operations;
- Regulation and censorship of information disseminated over the internet in China have adversely affected our business and may continue to adversely affect our business, and we may be liable for the digital media content on our platform;
- The PRC government's significant oversight and discretion over our business operation could result in a material adverse change in our operations and the value of our ADSs;
- Uncertainties with respect to the PRC legal system could adversely affect us; and
- The PCAOB had historically been unable to inspect our auditor in relation to their audit work performed for our financial statements and the inability of the PCAOB to conduct inspections of our auditor in the past has deprived our investors with the benefits of such inspections.; and
- Our ADSs may be prohibited from trading in the United States under the HFCAA in the future if the PCAOB is unable to inspect or investigate completely auditors located in China. The delisting of the ADSs, or the threat of their being delisted, may materially and adversely affect the value of your investment.

General Risks Related to The ADSs

In addition to the risks described above, we are subject to general risks related to the ADSs, including, without limitation, the following:

- The market price of our ADSs may be volatile;
- You may be subject to limitations on transfer of your ADSs;
- 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 common shares which are represented by your ADSs are voted; and
- You may face difficulties in protecting your interests, and your ability to protect your rights through the U.S. federal courts may be limited because we are incorporated under Cayman Islands law, we conduct almost all of our operations in China and substantially all of our directors and officers reside outside the United States.

Risks Related to Our Business

Our business model is currently undergoing significant innovation and transition, and our historical growth rate may not be indicative of our future performance and our new business may not be successful.

We launched our core product, Xunlei Accelerator, in 2004 and subscription services in 2009 to enable users to quickly access and consume digital media content. Coupled with our core product and services, we also provide a range of internet value-added services. Our cloud acceleration product offered by our subscription services have maintained nationwide popularity in the past few years. Our business model currently is undergoing significant innovation and continued transition. We have launched several new services and products in recent years, such as cloud computing products and products based on blockchain technology. The evolving business model and expansion into the new services involve new risks and challenges. For example, we have been investing in our blockchain business in the past few years but the profitability of our new initiatives in this area has yet to be proven. A major product we have developed in blockchain area is ThunderChain, a blockchain infrastructure product. However, we have not been able to generate meaningful revenue from such product so far and may continue to be unable to generate meaningful revenue in the future. There are also substantial uncertainties with respect to our cloud computing business. The technologies supporting our cloud computing business and blockchain business are new and rapidly evolving. If we fail to explore these new technologies and apply them innovatively to keep our products and services competitive, we may experience immediate decline in the growth of our businesses. In addition, the regulatory environment surrounding these businesses may also be evolving and any unfavorable developments may adversely affect our businesses.

In addition to uncertainties of our new initiatives, our traditional PC-based download acceleration subscriptions also experienced declines in recent years, partly due to the change of our users' online behaviors and the ongoing and intensified government scrutiny of internet content in China. Although we are continuously improving our existing products and services and rolling out new products and services to attract our subscribers, our efforts may not be successful. Our subscriber base declined from 4.4 million as of December 31, 2014 to 3.8 million as of December 31, 2020, and increased back to 5.0 million as of December 31, 2022. See “—We may not be able to retain our large user base, convert our users into subscribers of our premium services or maintain our existing subscribers” and “—Risks Related to Doing Business in China—Regulation and censorship of information disseminated over the internet in China have adversely affected our business and may continue to adversely affect our business, and we may be liable for the digital media content on our platform.”

Due to the abovementioned factors, our historical growth rate may not be indicative of our future performance and our new business initiatives may not be successful, and we cannot assure you that we will grow at the same rate as we did in the past, if at all.

The blockchain industry in China is an emerging industry. The laws and regulations governing the operation of blockchain products and services in China are developing and evolving and subject to changes. If we fail to comply with existing and future applicable laws, regulations or requirements of local regulatory authorities, our business, financial condition and results of operations may be materially and adversely affected.

We launched ThunderChain, a blockchain infrastructure platform, in 2018. Currently, our strategic focus in the blockchain sector is on the development of blockchain applications. In 2022, we launched a blockchain-based enterprise digital collection service platform to utilize ThunderChain to provide a number of services, including digital collection minting, showcasing and management, among others. The digital collections minted via blockchain technology are permanently preserved in the ThunderChain with unique serial numbers through the deployment of smart contract technology.

The blockchain industry in China is an emerging industry. The PRC government has yet to establish a comprehensive regulatory framework. The laws and regulations governing the operation of blockchain products and services in China are also rapidly developing and evolving. On January 10, 2019, the Cyberspace Administration of China, or CAC, issued the *Provisions on the Administration of Blockchain Information Services*, or the Blockchain Provisions, which came into effect on February 15, 2019. Pursuant to the Blockchain Provisions, a blockchain information service provider is required to file particulars of such service provider, including its name, service category, service form, application field and server address with the blockchain information service filing management system managed by the CAC and go through filing procedures within ten business days after it starts to provide services. After completing the filing procedure, the blockchain information service provider should display the filing number in a conspicuous position on the service provider's websites and applications through which it provides services. Our subsidiaries providing blockchain information services have completed these filing procedures with relevant regulatory authorities and obtained the filing numbers. In addition, the operations of our blockchain services are still at an early stage. We may be required to make additional filings if we make further adjustments to our business operations. We cannot assure you that we will always be able to timely obtain or renew relevant permits, approvals or licenses that may be viewed necessary for our blockchain operations. If we fail to maintain any of these required permits, approvals or licenses in a timely manner, or at all, we may be subject to various penalties, including fines and discontinuation of or restriction on our operations. Any such disruptions in our business operations may have a material and adverse effect on our business, results of operations and financial condition.

Laws and regulations in China regulating digital assets, such as *Circular on Further Preventing and Disposing of Risks in Virtual Currency Trading and Speculation*, prohibit all fungible tokens trading activities, including but not limited to, initial coin offerings, information intermediary and pricing services, and derivative transactions. Additionally, *the Proposals on Preventing NFT-related Financial Risks*, which was jointly issued by the National Internet Finance Association of China, China Banking Association and the Securities Association of China in April 2022, contains an undertaking of these three associations not to financialize or securitize non-fungible tokens, or NFTs, and not to provide trading services or related financial services for NFTs in any form. As of the date of this annual report, there is no clear definition and scope of NFTs under these laws and regulations, which results in uncertainties on whether the digital collections provided on our platform will be recognized as NFTs, whether the services we provide will be subject to laws and regulations relating to fungible token trading activities and, if so, how our services will be regulated. As such, we do not allow users to trade any digital collectibles on our platform to minimize the risks associated with trading digital collectibles on our platform. However, our users are able to re-gift their digital collectibles 180 days after obtaining the ownership. New laws or regulations or the interpretation and application of existing laws or regulations concerning token-related services, may be inconsistent with our practices and thus we may need to adjust our business to comply with new laws, regulations and orders from competent governmental authorities, if any, from time to time, which could cause us to incur substantial costs or require us to change our business practices in a manner materially adverse to our business. We cannot assure you that we would be able to satisfy the governmental authorities' orders or requirements and fully comply with any new token-related rules or interpretations on a timely basis. We might be subject to additional regulatory risks, including adjustment or even termination of our current business practices, and our business and results of operations may be adversely affected.

In addition to filing requirements, the Blockchain Provisions also imposed an array of other requirements on the providers of blockchain information services. See "Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on blockchain information services" for more details. Failure to comply with relevant requirements in the Blockchain Provisions may subject us to administrative penalties such as warning, being ordered to temporarily suspend relevant business operations to rectify within prescribed time period, or fines, or criminal liabilities, depending on which provisions are violated.

Since the blockchain technology and other related technologies are evolving rapidly, new laws, regulations and governmental policies are expected to be adopted from time to time by relevant PRC authorities to impose additional restrictions or require licenses or permits for operating blockchain related business. We are unable to predict with certainty the impact, if any, that future legislation, judicial interpretations or regulations relating to the blockchain industry will have on our business, financial condition and results of operations. To the extent that we are not able to fully comply with any new laws or regulations when they are promulgated, our business, financial condition and results of operations as well as the price of our ADSs may be materially and adversely affected.

Regulatory uncertainties exist with respect to our historical LinkToken operations, which may have a material adverse effect on our business and results of operations.

LinkToken was developed in 2017. It was essentially a type of digital ticket. The underlying technology of LinkToken was blockchain technology. Users of OneThing Cloud could be rewarded with LinkTokens by voluntarily participating in OneThing Cloud reward program to share idle uplink bandwidth capacities and external storage to us. The amount of LinkTokens awarded depended on a number of factors, including, but not limited to, the size of bandwidth and external storage users contribute, the length of time online and the usage of computing resources. Rewarded LinkTokens could be used to redeem for a variety of products and services offered in the LinkToken Mall. In 2018, we disposed of the LinkToken operations and the related assets and liabilities to an independent third party. Upon the completion of the disposal in April 2019, the independent third party obtained the exclusive right to carry out LinkToken operations inside and outside mainland China, including without limitation, the formulation, amendment and execution of the rules governing the rewarding of LinkToken to users, operations of LinkToken Pocket and the LinkToken Mall. After the disposal, subject to rewarding rules determined by the independent third party, users of OneThing Cloud could still voluntarily participate in OneThing Cloud reward program to share idle uplink bandwidth capacities and external storage and be rewarded with LinkToken. In May 2019, we terminated our technical support to the independent third party with respect to its LinkToken operations. In April 2020, the independent third party terminated OneThing Cloud reward program, as a result of which users can no longer be rewarded with LinkTokens. Meanwhile, we launched our own reward program, which allows users to share idle uplink bandwidth capacities and external storage with us in exchange for a small amount of cash rewards. Although we have no longer been operating OneThing Cloud reward program since our disposal of LinkToken, we periodically receive user complaints regarding LinkToken, including the termination of OneThing Cloud reward program, which could cause reputational harm to our business operations and might also have a negative impact on our business and results of operations.

Although we have no longer been operating LinkTokens after our disposal of such business to the independent third party, new laws, regulations and governmental policies regarding virtual currencies may still be interpreted or even retroactively enforced against us regarding our previous dealings with LinkToken. On September 4, 2017, People's Bank of China, the Office of the Central Leading Group for Cyberspace Affairs, the Ministry of Industry and Information Technology, or the MIIT, the State Administration for Industry and Commerce, the China Banking Regulatory Commission, the China Securities Regulatory Commission, and the China Insurance Regulatory Commission jointly promulgated *the Announcement on Prevention of Token Fundraising Risks* to strengthen the administration of the initial coin offerings activities. Pursuant to the announcement, "fundraising through token offerings" is referred to as a type of fundraising activities where an issuer raises "virtual currencies" such as Bitcoin or Ether from investors through the illegal issuance and subsequent circulation of tokens. Pursuant to the announcement, token fundraising activity is essentially an illegal public fundraising activity without obtaining government's approval. It is a suspected illegal offering of tokens, illegal offering of securities, illegal fundraising, financial fraud, pyramid scheme, which are criminal offenses under the PRC law. The announcement prohibits fundraising activities through token issuance. In addition, the announcement also provides that token trading platform should not be engaged in (i) the exchange between any statutory currency with tokens and "virtual currencies," (ii) the trading, either as a central counterparty or not, of the tokens or "virtual currencies," and (iii) token or "virtual currency" pricing, information intermediary services or other services for tokens or "virtual currencies."

In response to complaints from users on, among others, alleged involvement of our company in token fundraising activities, Shenzhen Financial Office conducted an onsite inspection in July 2022 in relation to our previous LinkToken operations. In response, we promptly submitted all relevant materials as requested by Shenzhen Financial Office. As of the date of this annual report, we have not received any further feedback from Shenzhen Financial Office. To date, no governmental financial regulators have imposed any administrative penalties against us relating to LinkTokens on the basis that we engaged in token fundraising activities. However, we cannot assure you that going forward, relevant PRC authorities would have the same view with us and would not impose retroactive regulatory restrictions or penalties on us for our prior dealings with LinkToken. Were that to happen, we might be subject to additional regulatory risks, and our business and results of operations may be adversely affected.

We may not be able to retain our large user base, convert our users into subscribers of our premium services or maintain our existing subscribers.

Our Xunlei Accelerator had approximately 51.1 million monthly unique visitors in December 2022 according to our internal record. If we are unable to consistently provide our users with quality services and experience, if users do not perceive our service offerings to be of value, or if we introduce new or adjust existing features or change the mix of digital media content in a manner that is not favorably received by our users, we may not be able to retain our existing user base.

We experienced fluctuations in the number of subscribers partly due to the intensified scrutiny over internet content from the Chinese government, and may continue to experience fluctuations in the future. With a government campaign against inappropriate internet content launched in April 2014, we have put in more efforts to monitor the content on our platform. As a result, we experienced a decline in the number of subscribers from 2014 to 2020. Despite the increasing regulatory scrutiny, we still managed to realize a growth in the number of subscribers since 2020 primarily as a result of our continuous product optimization and development. However, such favorable trends may not sustain, and any increase in the number of subscribers may not necessarily lead to a corresponding increase in revenue. Similar government action or other forces may make it challenging for us to retain our user base, or may contribute to a decline in our user base, in the future. See “—Risks Related to Doing Business in China—Regulation and censorship of information disseminated over the internet in China have adversely affected our business and may continue to adversely affect our business, and we may be liable for the digital media content on our platform.”

In the long term, even without taking into account the abovementioned government restrictions, we cannot assure you that we would be able to retain our large user or subscriber base. For example, our efforts to provide greater incentives for our users to subscribe, including marketing activities to highlight the value of differentiated subscriber-only services, such as Green Channel, may not continue to succeed. Our subscribers may stop their subscriptions or other spending on our products or services because we no longer serve their needs or if we are unable to offer a satisfying user experience or successfully compete with current and new competitors in both retaining our existing subscribers and attracting new subscribers, which would adversely impact our business, results of operations and prospects. In addition, the development of technologies may also render our acceleration technology obsolete. For example, the development of 5G technology significantly increased the speed of wireless mobile communications. Although people generally expect that 5G technology would significantly change people’s life, when and how it will happen are yet to be fully demonstrated. The new technology will create new business opportunities, but it may also alter people’s online habits, which in turn may have a negative impact on our businesses such as our subscription and cloud computing business.

The intellectual property protection mechanism we have implemented may not always be effective or sufficient. The premium acceleration services, Xunlei Cloud Drive and other value-added services we provide to our users have exposed us to and may continue to expose us to copyright infringement claims and other related claims, which could be time-consuming and costly. Any damage awards, injunctive relief and/or court orders could materially and adversely affect our existing business model, divert our management’s attention and adversely impact our business and reputation.

Our success depends, in large part, on our ability to operate our business without infringing, misappropriating or otherwise violating third-party rights, including third-party intellectual property rights. Internet, technology and media companies are frequently involved in litigations based on allegations of infringement of intellectual property rights, unfair competition, invasion of privacy, defamation and other violations of third-party rights. In the ordinary course of our business, we receive, from time to time, written notices from third parties claiming that certain contents and games on our network, websites, products or services infringe their copyrights or the copyrights of third parties. These notices may contain threats to take legal actions against us or requests for cessation of distribution, marketing or displaying such contents or games on our network, websites, products or services. As of the date of this annual report, we are involved in two pending copyright lawsuits in China. Almost all of these claims alleged that contents on our network, products or services constitute infringements of the plaintiffs’ copyrights. The total amount of damages claimed in these pending copyright lawsuits is approximately RMB1.3 million (US\$0.2 million). See also “Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal Proceedings.” While we believe that none of these pending lawsuits are likely to have a material adverse effect on our business, claims alleging copyright infringement or other claims arising from the content accessible through our distributed computing network, or on our websites or through our other services, with or without merit, may lead to damage awards and/or court orders, diversion of our management’s attention and financial resources and negative publicity affecting our brand and reputation, and therefore may adversely affect our results of operations and business prospects.

We provide subscribers with limited space to temporarily stored content downloaded on our servers for optimal acceleration performance. Subscribers may also request our cloud servers to transmit a file on their behalf and download it to their local storage. We also provide users with cloud storage services through Xunlei Cloud Drive, which allows users to download and upload documents, images, audios, videos and other files to cloud servers at an accelerated speed. See “Item 4. Information on the Company—B. Business Overview—Our Platform.” In addition, certain of our services allow users to upload files and various media contents after they create accounts with us, converting the files into links and sharing such links with designated persons. We do not provide users with any links to third parties, nor do we download or save any contents from third parties for our users on our own initiative. Although we have made commercially reasonable efforts to request users to comply with applicable intellectual property laws, we cannot ensure that all of our users have the rights to use, transmit or share these contents if such content infringes third-party intellectual property rights. We have implemented internal procedures to meet the requirements under relevant PRC laws and regulations to monitor and review contents available on our platform, and remove contents promptly once we receive notice of infringement from the legitimate right holder. See also “Item 4. Information on the Company—B. Business Overview— Intellectual Property—Digital media data monitoring and copyright protection” for more details. However, due to the significant amount of digital media content accessible through our acceleration services and other value-added services, we cannot guarantee the effectiveness of our current implementation of intellectual property protection mechanisms and measures. We may be liable for temporarily storing or transmitting content or creating links representing content on behalf of our subscribers if such content infringes third-party intellectual property rights, and any such potential legal liabilities could materially and adversely affect our business.

The validity, enforceability and scope of protection of intellectual property in internet-related industries in different jurisdictions are uncertain and still evolving. As we face increasing competition and as litigation becomes more common in resolving commercial disputes in our business expansion in overseas countries, we face a higher risk of intellectual property infringement claims. The Supreme People’s Court of China promulgated a judicial interpretation on infringement of the right of internet dissemination in December 2012 which was revised in December 2020 and became effective on January 1, 2021. This judicial interpretation provides that the courts will require service providers to remove not only links or content that have been specifically mentioned in the notices of infringement from rights holders, but also links or content they “should have known” to contain infringing content. The interpretation further provides that where an internet service provider has directly obtained economic benefits from any content made available by an internet user, it has a higher duty of care with respect to internet users’ infringement of third-party copyrights. This interpretation may subject us and other internet service providers to significant administrative burdens and litigation risks. See “Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on intellectual property rights.” Interested parties may lobby for more robust intellectual property protection in jurisdictions in which we conduct business or may conduct business, and intellectual property laws in China and other such jurisdictions where we have business operations such as the Middle East and Southeast Asia may become less favorable to our business. Intellectual property litigation may be expensive and time-consuming and could divert management’s attention and resources. If there is a successful claim of infringement, we may be required to discontinue the infringing activities, pay substantial fines and damages and/or seek royalty or license agreements that may not be available on commercially acceptable terms, if at all. Our failure to obtain the required licenses on a timely basis could harm our business. Any intellectual property litigation and/or any negative publicity by third parties alleging our intellectual property infringement could have a material adverse effect on our business, reputation, financial condition or results of operations. To address the risks relating to intellectual property infringement, we may have to substantially modify, limit or, in extreme cases, terminate some of our services. Any of such changes could materially affect our users’ experience and in turn have a material adverse impact on our business.

In addition, as our business expands overseas, we may be subject to intellectual property infringement claims and lawsuits in jurisdictions other than China, such as the Middle East and Southeast Asia. The costs of performing these procedures and obtaining authorization and licensing for the growing content on our platform and use of such content in the various jurisdictions into which we may expand our business may increase, which could materially and adversely affect our business, financial condition and results of operations.

If we are unable to successfully retain and grow the number of paying users or if we are unable to successfully monetize our mobile products, our business, financial condition and results of operations may be materially and adversely affected.

An increasing number of users have been accessing our products and services through mobile devices, and we have realized our transition to mobile internet as evidenced by our mobile users outnumbering our PC users. Products such as Xunlei Accelerator are now available to users from PCs as well as mobile devices, and we intend to continue expanding the number of mobile products we offer. To capture more monetization opportunities, we plan to further expand the number of our paying users, increase our user retention and user subscription, and stimulate more VIP membership subscription through marketing and optimizing the products and services we offered. However, if we are unable to continuously attract and retain the increasing number of users who access our products through mobile devices, or if we are slower than our competitors in developing attractive services adaptable for mobile devices, we may fail to capture a significant share of an increasingly important portion of the market or may lose existing users. Even if we are able to retain the increasing number of users who access our services through mobile devices, we may not be able to successfully monetize them in the future. For example, because of the inherent limitations of mobile devices, we may not be able to provide as many kinds of products on mobile devices as we do on PCs, which may limit the monetization potential of our mobile products and services.

We are subject to various risks in connection with our international operations.

We have been exploring opportunities in overseas markets. In 2021, we launched Hiya, an audio live streaming platform targeting overseas markets. In 2022, Hiya realized a rapid growth and generated a revenue of US\$38.5 million, accounting for 11.2% of our total revenues in 2022 as compared to 3.6% of our total revenues in 2021. Currently, users of this product are mainly from several countries in the Middle East, Southeast Asia, South Asia and North Africa. Operating business internationally may expose us to additional risks and uncertainties. As we have very limited experience in operating our business in overseas markets, we may be unable to attract a sufficient number of users, fail to anticipate competitive conditions or face difficulties in operating effectively in overseas markets. We may also fail to adapt our business models to the local market due to various legal requirements and market conditions. Our international operations and expansion efforts have resulted and may continue to result in increased costs and are subject to a variety of risks, including difficulties in obtaining licenses, approvals or other applicable government authorizations, content controls imposed by local authorities, uncertain enforcement of our intellectual property rights, potential claims for intellectual property infringements and the complexity of compliance with foreign laws and regulations. Compliance with applicable laws, regulations and rules related to our business, including those related to live streaming services, content restrictions, data privacy, virtual items, anticorruption laws, anti-money laundering and protection of minors, results in costs and potential risks in doing business in multiple jurisdictions including the Middle East, Southeast Asia, South Asia and North Africa. In some cases, compliance with the laws and regulations in one jurisdiction may result in a violation of the laws and regulations of another jurisdiction. As we expand our business overseas, we cannot assure you that we will be able to fully comply with the legal requirements of each jurisdiction and successfully adapt our business model to local market conditions. Due to the complexities involved in the expansion of our business globally, we cannot assure you that we will be able to comply with all local laws or regulations, including licensing requirements, in a timely or complete manner.

Our overseas operations could also be materially and adversely affected by heightened tensions in international relations. Recently there have been changes in international trade policies and rising political tensions, particularly between the U.S. and China. The U.S. government has made statements and taken certain actions that may lead to potential changes to U.S. and international trade policies towards China. Rising trade and political tensions could reduce levels of trades, investments, technological exchanges and other economic activities between China and other countries, which would have an adverse effect on global economic conditions, the stability of global financial markets, and international trade policies. Rising trade and political tensions could materially adversely affect Chinese companies' overseas operations and our ability to provide services to users in those countries. Unfavorable government policies on international trade, such as capital controls or tariffs, could also adversely affect consumer demands, financial and economic conditions in the jurisdictions in which we operate. In particular, if any new tariffs, legislation and/or regulations are implemented, or if existing trade agreements are renegotiated or, especially, if the U.S. government takes retaliatory trade actions due to the recent U.S.-China trade and political tension, such changes could have an adverse effect on our business, financial condition and results of operations. In addition, our results of operations could be adversely affected if any such tensions or unfavorable government trade policies harm the Chinese economy or the global economy in general. Margins on sales of our products in foreign countries, and on sales of products that include components obtained from foreign suppliers, could be materially and adversely affected by international trade regulations, including duties, tariffs and antidumping penalties. We are also exposed to credit and collectability risk on our trade receivables in certain international markets. There can be no assurance that we can effectively limit our credit risk and avoid losses. In addition, political instability may also expose us to additional risks and uncertainties. If any of these economic or political risks materializes and we fail to anticipate and effectively manage them, we may suffer a material adverse effect on our business and results of operations.

If we fail to keep up with the technological development in the internet industry and users' changing demand, our business, financial condition and results of operations may be materially and adversely affected.

The internet industry is rapidly evolving and subject to continual technological changes. As the internet infrastructure continues to develop, the internet may become more easily accessible through alternative technological innovations in the future, which may make our existing products and services less attractive to our users, and we may lose our existing users and fail to attract new users, which may further adversely impact our business, financial condition and results of operations.

In addition, user demand for internet content may also shift over time. Currently, internet users appear to have significant demand for multimedia acceleration, online games and online streaming services, and we expect such demand to continue. However, we cannot assure you that the behavior of internet users will not change in the future. For example, it is expected that the development of 5G technology may have certain impacts on mobile internet user's behavior. If 5G technology reduces our users' demand for internet acceleration, our membership subscription and cloud computing services will be negatively affected unless we are able to successfully develop alternative products or services to take advantage of new opportunities created by this new technology. If we fail to upgrade our services in response to changes in user demand in an effective and timely manner, the number of our users and advertisers may decrease. Furthermore, changes in technologies and user demand may require substantial capital expenditures in product development and infrastructure. To further expand our user base and offer our users a wider range of access points, we are expanding our business to mobile devices in part through potentially pre-installed acceleration products in mobile phones. In addition, we are continually developing and upgrading products and services, including our cloud computing services, which is expected to utilize the idle capacity of our users, and seeking strategic cooperation with hardware manufacturers such as smartphone makers, which may require significant resources from us. However, if we are not able to perfect our new technologies or to achieve the intended results or if our innovations cannot respond to the needs of our users or if our users are not attracted to our upgraded or new products and services, we may not be able to maintain or expand our user base, and our business, results of operations and prospects may be materially and adversely affected.

Our technologies, business methods and services, including those relating to our resource discovery network, may be subject to third-party patent claims or rights, such as issued patents or pending patent applications, that limit or prevent their use.

We cannot assure you that our technologies, business methods and services, including those relating to our resource discovery network, will be free from claims of patent infringements, and that holders of patents would not seek to enforce such patents against us in China, the United States or any other jurisdictions. For example, we were involved in a patent infringement case in China. The plaintiff alleged that our acceleration service infringed the plaintiff's patent rights. In November 2018, the court dismissed the plaintiff's all claims. The plaintiff subsequently appealed but its claims were dismissed by the appellate court as well. In March 2020, the plaintiff filed a petition to retrial case. In April 2020, the court has declined to retry the case. We are currently not involved in any patent infringement case in China. We believe that our products do not infringe any third-party patents of which we are aware. However, our analysis may have failed to identify all relevant patents and patent applications. For example, there may be currently pending applications, unknown to us, that may later result in issued patents that are infringed by our products, services or other aspects of our business. There could also be existing patents of which we are not aware that our products may inadvertently infringe. Third parties may attempt to enforce such patents against us. Further, the application and interpretation of China's patent laws and the procedures and standards for granting patents in China are uncertain and still evolving, and we cannot assure you that PRC courts or regulatory authorities would agree with our analysis. Any patent infringement claims, regardless of their merits, could be time-consuming and costly to us. If we were found to infringe third-party patents and were not able to adopt non-infringing technologies, our ability to operate our business may be severely limited, and our results of operations could be materially and adversely affected.

We may be subject to claims or lawsuits outside of China, which could increase our risk of direct or indirect liabilities for our existing or future service offerings.

We may be subject to claims or lawsuits outside of China, such as the United States, the Middle East and Southeast Asia, by virtue of our listing in the United States, the ownership of our ADSs by investors, doing business in overseas markets, the extraterritorial application of foreign law by foreign courts or for other reasons. We have attracted, and expect to continue to attract, attention from intellectual property owners outside of China. With the expansion of our overseas business, users in different jurisdictions such as the Middle East and Southeast Asia are able to access our products and services. If we are determined to be bound by the copyright laws and regulations in jurisdictions outside of China by virtue of allowing users in those jurisdictions to access our products and services, we would be subject to heightened risks of intellectual property infringement liabilities. If a claim of infringement brought against us in the United States or other jurisdictions is successful, we may be required to (i) pay substantial statutory or other damages and fines, (ii) remove relevant content from our website, (iii) discontinue products or services, (iv) disable access through our service to certain sites or content; (v) terminate users, and/or (vi) seek royalty or license agreements that may not be available on commercially reasonable terms, or at all.

In addition, as a publicly listed company, we may be exposed to increased risk of litigation. For example, we were involved in shareholder class action lawsuits in the United States. See “Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal Proceedings.” We may be involved in more class action lawsuits in the future. While we believe the claims are without merit, such kinds of lawsuits could divert a significant amount of our management’s attention and other resources from our business and operations, which could harm our results of operations and require us to incur significant expenses to defend the lawsuits. Any such class action suit, whether or not successful, could harm our reputation and restrict our ability to raise capital in the future. In addition, if a claim is successfully made against us, we may be required to pay significant damages, which could have a material adverse effect on our financial condition and results of operations.

We may not be able to prevent unauthorized use of our intellectual property or disclosure of our trade secrets and other proprietary information, which could reduce demand for our services and have material and adverse impacts on our business, financial condition and results of operations.

Our patents, trademarks, trade secrets, copyrights and other intellectual property rights are important assets for us. Events that are outside of our control may pose a threat to our intellectual property rights. For example, effective intellectual property protection may not be available in China and some other jurisdictions in which our services are distributed or made available through the internet. Also, the efforts we have made to protect our proprietary rights may not be sufficient or effective. For example, the legal regimes relating to the recognition and enforcement of intellectual property rights in China and South America are particularly limited. Therefore, legal proceedings to enforce our intellectual property in these jurisdictions may progress slowly, during which time infringement may continue largely unimpeded. Countries that have relatively inefficient intellectual property protection and enforcement regimes represent a significant portion of the demand for our products. These factors may make it more challenging for us to enforce our intellectual property rights against infringement. The infringement of our intellectual property rights, particularly in these jurisdictions, may materially harm our business and competitiveness in these markets and elsewhere by reducing our sales, adversely affecting our results of operations, and diluting our brand or reputation. Any significant impairment of our intellectual property rights could harm our business or our competitiveness. Also, protecting our intellectual property rights is costly and time-consuming. Any increase in the unauthorized use of our intellectual property could make it more expensive to conduct our business and harm our results of operations.

We seek to obtain patent protection for our innovations. However, it is possible that patent protection may not be available for some of these innovations. In addition, given the costs of obtaining patent protection, we may choose not to protect certain innovations that later turn out to be important. Furthermore, there is always the possibility that, despite our efforts, the scope of the protection gained will be insufficient or that an issued patent may be deemed invalid or unenforceable.

We also seek to maintain certain intellectual property as trade secrets. We require our employees, consultants, advisors and collaborators to enter into confidentiality agreements in order to protect our trade secrets and other proprietary information. These agreements might not effectively prevent disclosure of our trade secrets, know-how or other proprietary information and might not provide an adequate remedy in the event of unauthorized disclosure of such confidential information. In addition, others may independently discover our trade secrets and proprietary information, in which case we cannot assert such trade secret rights against such parties. Any unauthorized disclosure or independent discovery of our trade secrets would deprive us of the associated competitive advantages. Costly and time-consuming litigations could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive position.

The revenue model for our live streaming may not remain effective and we cannot guarantee that our future monetization strategies will be successfully implemented or generate sustainable revenues and profit.

We provide live streaming services to users in China and overseas mainly through Xunlei Live, Xunlei mobile app, Hiya Voice mobile app and Hiya mobile app. Live streaming services, in particular, audio live streaming services, have been contributing an increasing portion of our total revenues recently. In 2022, revenue from live streaming services contributed approximately 30.8% of our total revenues. The live streaming industry is highly competitive and there are several well-established and successful players in this market. We may not be able to compete effectively with our competitors and realize intended growth of our live streaming business. We are not sure whether our products will be accepted by the market and generate projected revenues. The user demand may also change, decrease substantially or dissipate, and we may fail to anticipate and serve user demands effectively and timely. Although we factor in industry standards and expected user demand in determining how to optimize virtual item merchandizing effectively, if we fail to properly manage the supply and timing of our virtual items and their appropriate prices, our users may be less likely to purchase these virtual items from us. In addition, if users' spending habits change and they choose to only access our content for free without additional purchases, we may not be able to continue to successfully implement the virtual items-based revenue model for live streaming, in which case we may have to provide other value-added services or products to monetize our user base. We cannot guarantee that our attempts to monetize our user base and products and services will continue to be successful, profitable or widely accepted, and therefore the future revenue and income potential of our business may be difficult to evaluate.

Hiya is available in overseas markets. Each different country or region has different regulations and judicial systems. We cannot assure you that we will be able to carry out business operations in different jurisdictions in a fully compliant manner. Once the relevant regulatory authorities in these countries or regions believe that our products or services violate the relevant laws and regulations of the country or region, they have the right to take legal measures such as ordering us to cease business operations and imposing administrative penalties, which could materially and adversely affect our live streaming business in overseas markets. In addition, the legal systems of different countries and regions such as the Middle East and Southeast Asia may not be as developed as in certain other jurisdictions, such as the United States. Once disputes or lawsuits arise in connection with our business in these countries and regions, it may be difficult for us to obtain effective remedies, which may adversely affect our business operations, results of operations and financial condition.

We may fail to offer attractive content for our live streaming services, or attract and retain talented and popular broadcasters, which may materially adversely affect the operation of our live streaming services and its results of operations.

We offer live streaming content. Our content library is constantly evolving and growing to meet users' evolving interests. We actively track viewership growth and community feedback to identify trending content and encourage our broadcasters to create content that caters to users' constantly changing taste. However, if we fail to continue to expand and diversify our content offerings, identify trending and popular genres, or maintain the quality of our content, we may experience decreased viewership and user engagement, which may materially and adversely affect our results of operations and financial condition.

In addition, we largely rely on our broadcasters to create high-quality and fun live streaming content. Popular broadcasters are key to the success of our live streaming services. We have in place a comprehensive and effective incentive mechanism to encourage broadcasters to supply content that are attractive to our users. We have also entered into cooperation agreements that contain exclusivity clauses with popular broadcasters. However, if any of those broadcasters and/or the talent agencies decides to breach the agreement or chooses not to continue the cooperation with us once the term of the agreement expires, or if we fail to attract new talented and productive broadcasters, the popularity of our platform may decline and the number of our users may decrease, which could materially and adversely affect our results of operations and financial condition.

We may be held liable for information or content displayed on, retrieved from or linked to our platforms, or distributed to our users, if such content is deemed to violate laws or regulations in China and other jurisdictions, or for improper or fraudulent activities conducted on our platform, and authorities in China and other jurisdictions may impose legal sanctions on us and our reputation may be damaged.

Our live streaming services enable users to interact and chat with broadcasters and other users and engage in various other online activities. Although we require our broadcasters to register their real name, we are unable to independently verify the accuracy and authenticity of the identity information provided by them. For the registration of users before they become broadcasters, we rely on third-party organizations to verify their identities through mobile phone numbers or ID card number, which may not always be reliable. In addition, we have put in place measures to monitor content on our platform generated by our users, but it is impossible for us to detect every piece of inappropriate or illegal content on our platform due to the immense quantity of user-generated content on our platform. Therefore, there is a risk that broadcasters and/or users may engage in illegal, obscene or incendiary conversations or activities, including the publishing of inappropriate or illegal content that may be deemed unlawful under PRC laws and regulations on our platforms or in the chatrooms created through our apps. For example, we received a notice from CAC in 2020, pointing out that there was certain inappropriate information discovered on our platform. Furthermore, we received two other notices from the CAC in 2022, stating that certain sensitive information had been found on our platform. In response, we promptly intercepted the users who attempted to download such information, fixed the issue and managed to avoid the risk of being removed from app stores by regulatory authorities. If any content on our platforms is deemed illegal, obscene or incendiary, or if appropriate licenses and third-party consents have not been obtained, claims may also be brought against us for defamation, libel, negligence, copyright, patent or trademark infringement, other unlawful activities or other theories and claims based on the nature and content of the materials that are provided, uploaded, shared, published or otherwise accessed by users or us through our platforms. Defending any such actions could be costly and involve significant amounts of time and attention of our management and other resources. In addition, PRC authorities may impose legal sanctions on us, including, in serious cases, suspending or revoking the licenses necessary to operate our platforms if they find that we have not adequately managed the content on our platforms. Any such claims or sanctions against us could materially and adversely affect our business and our brand.

We believe that maintaining and enhancing our Xunlei brand is of significant importance to the success of our business. A well-recognized brand is critical to increasing our user base and, in turn, enhancing our attractiveness to advertisers, subscribers and paying users. If we fail to sustain or improve the strength of our brand, we may subsequently experience difficulty in maintaining market share. We have developed our reputation and established a leading position by providing our users with superior acceleration services and cloud computing services. We will continue to conduct various marketing and brand promotion activities. We cannot assure you, however, that these activities will be successful and achieve the brand promotion effects we expect. In addition, any negative publicity in relation to our services or our marketing or promotion practices, regardless of its veracity, could harm our brand image and, in turn, result in a reduced number of users and advertisers. Historically, there has been negative publicity about our company, our products and services and certain key members of our management team, which have adversely affected our brand, public image and reputation. If we fail to maintain and enhance our brand, or if we incur excessive expenses in this effort, our business, financial condition and results of operations may be materially and adversely affected.

System failure, interruptions and downtime, including those caused by cyber-attacks or security breaches, can result in user dissatisfaction, adverse publicity or leakage of confidential information of our users and customers, and our business, financial condition, results of operations may be materially and adversely affected.

Our operations rely on our networks and servers, which can suffer system failures, interruptions and downtime. Our network systems are vulnerable to damage from computer viruses, fires, floods, earthquakes, power losses, telecommunication failures, computer hacking, security breach, and similar events despite our implementation of security measures, which may cause interruptions to the services we provide, degrade the user experience, disclosure of our data or user data, such as personal information, names, accounts, user IDs and passwords, and payment or transaction related information, or cause users to lose confidence in our products. Our efforts to protect our company data and user data may also be unsuccessful due to software bugs or other technical malfunctions, employee error or malfeasance, government surveillance, or other factors.

The satisfactory performance, stability, security and availability of our websites and our network infrastructure are critical to our reputation and our ability to attract and retain users and advertisers. Our network and servers contain information regarding file index, advertising records, premium licensed digital media content and various other facets of the business to assist management and help ensure effective communication among various departments and offices of our company. Any failure to maintain the satisfactory performance, stability, security and availability of our network, website, servers or technology platform, whether such failure results from intentional cyber-attacks by hackers, from issues with our own technology and team or from other factors beyond our control, may cause significant harm to our reputation and impact our ability to attract and maintain users and business partners. We have put in place various measures to prevent such incidents from happening and internal reporting procedures with respect to such incidents. However, such prevention measures may not function in a way as we expect due to the evolution of the sophistication of cyber-attacks, advances in technology, an increased level of sophistication and diversity of our products and services, an increased level of expertise of hackers, new discoveries in the field of cryptography or others, software bugs or other technical malfunctions, or other evolving threats.

From time to time, our users in certain locations may not be able to gain access to our network or our websites for a period of time lasting from several minutes to several hours, due to server interruptions, power shutdowns, internet connection problems or other reasons. For example, in 2020, one of our products experienced a system failure due to an extremely high usage rate, which lasted for around three hours and affected a large portion of our users. Although we have fixed the server promptly, we cannot assure you that such instances will not occur in the future. Any server interruptions, break-downs or system failures, including failures which may be attributable to events within or outside our control that could result in a sustained shutdown of all or a material portion of our network or website, could reduce the attractiveness of our service offerings. In addition, any substantial increase in the volume of traffic on our network or website will require us to increase our investment in bandwidth, expand and further upgrade our technology platform. We do not maintain insurance policies covering losses relating to our network systems due to very limited available insurance products in the insurance market in China. As a result, any system failure, interruptions or network downtime for an extended period may have a material adverse impact on our revenues and results of operations.

We rely on information technology systems to process, transmit and cache or store electronic information in our day-to-day operations, including customer, employee and company data. The secure processing, maintenance and transmission of this information are critical to our operations and the legal environment surrounding information security, storage, use, processing, disclosure and privacy is demanding with the frequent imposition of new and changing requirements. We also store certain information with third parties. Our information systems and those of our third-party vendors are subjected to computer viruses or other malicious codes, unauthorized access attempts, and cyber- or phishing-attacks and also are vulnerable to an increasing threat of continually evolving cybersecurity risks and external hazards, as well as improper or inadvertent staff behavior, all of which could expose confidential company and personal data systems and information to security breaches. Any such breach could compromise our networks, and the information stored therein could be accessed, publicly disclosed, lost or stolen. Such attacks could result in our intellectual property and other confidential information being lost or stolen, disruption of our operations, and other negative consequences, such as increased costs for security measures or remediation costs, and diversion of management attention. Any actual or perceived access, disclosure or other loss of information or any significant breakdown, intrusion, interruption, cyber-attack or corruption of customer, employee or company data or our failure to comply with federal, state, local and foreign privacy laws or contractual obligations with customers, vendors, payment processors and other third parties, could result in legal claims or proceedings, liability under laws or contracts that protect the privacy of personal information, regulatory penalties, disruption of our operations, and damage to our reputation, all of which could materially adversely affect our business, revenue and competitive position. For example, in 2020, a few individual users had taken advantage of a technical flaw of certain of our products to make fraudulent purchases and managed to cash out. We have promptly identified and patched the technical flaw. While we will continue to implement additional protective measures to reduce the risk of and detect cyber-incidents, cyber-attacks are becoming more sophisticated and frequent, and the techniques used in such attacks change rapidly. Our protective measures may not protect us against attacks and such attacks could have a significant impact on our business and reputation.

In addition, there has been a trend tightening the regulation of privacy and user data protection globally. We may become subject to new laws and regulations applying to the solicitation, collection, processing or use of personal or consumer information that could affect how we store, process and share data with our customers, suppliers and third-party sellers. *The Civil Code, the Cyber Security Law, the Data Security Law and the Personal Information Protection Law* protect individual privacy and personal data security by requiring internet service providers to collect data in compliance with the laws and regulations and obtain the prior consents from internet users prior to the collection, use or disclosure of internet users' personal data. In particular, *the Cyber Security Law*, which took effect on June 1, 2017, requires network operators to strictly treat users' personal information confidential and to establish and improve user information protection mechanism. In addition, *the Data Security Law*, which took effect on September 1, 2021, establishes a classified and tiered system for data protection based on the level of importance of the data in terms of economic and social development, as well as the level of danger of the data for national security, public interests, or the legal interests of individuals and organizations in the event of data manipulation, destruction, leakage, illegal acquisition or illegal usage. *The Personal Information Protection Law*, which took effect on November 1, 2021, requires, among others, that collection of personal information shall be limited to the minimum scope necessary for the processing purpose in order to avoid the excessive collection of personal information. See "Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on internet privacy" and "Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on information security and censorship." Moreover, numerous regulations, guidelines and measures have been or are expected to be adopted under the umbrella of, or in addition to, these laws. For example, the National Information Security Standardization Technical Committee issued the latest *Standard of Information Security Technology—Personal Information Security Specification*, which came into effect in October 2020. Under such standard, the personal data controller refers to entities or persons who are authorized to determine the purposes and methods for using and processing personal information. The personal information controller should follow the principles of legality, justification and necessity in handling personal information. The personal information controller should obtain a consent from a personal information provider and provide such personal information provider an independent choice when the product or service offered by the personal information controller has multiple functions. In addition, the CAC, the MIIT, the Ministry of Public Security and the State Administration for Market Regulation jointly promulgated *the Administrative Provisions on Algorithm Recommendations of Internet Information Services* on December 31, 2021, with effect from March 1, 2022, which requires algorithm recommendation service providers to establish and improve their management systems and technical measures for, among others, data security and personal information protection. In addition, the algorithm recommendation service provider capable of social mobilization or influencing public opinion shall complete the filing with the internet information service algorithm filing system.

These laws and regulations are relatively new and substantial uncertainties exist with respect to the interpretation and implementation of these laws and regulations. Any change in laws and regulations relating to privacy, data protection and information security and any implementation of such laws and regulations could significantly increase our costs in providing our products and services, limit their use or adoption or require certain changes to our operations. We may need to adjust our business practice to comply with these cyber security and data security requirements from time to time. We have taken measures to comply with existing laws and regulations, such as submitting the filing application pursuant to *the Administrative Provisions on Algorithm Recommendations of Internet Information Services*, which is in the process of review by the competent authority. However, we cannot assure you that we will be compliant with these new laws and regulations in all respects in a timely manner and may be ordered to rectify and terminate any actions that are deemed to be illegal by the regulatory authorities and become subject to fines and other regulatory sanctions, which may materially and adversely affect our business, financial condition, and results of operations. For example, in July 2021, the MIIT issued a list of the applications that infringe users' interests and rights. Shenzhen Xunlei was identified as having misled users to click to enter other information pages or third-party application download pages without clear notification on the homepage. We promptly took actions in response to the identified issue and completed the required rectification. In October 2021, we received two notices from the Guangdong Communication Administration, which found that our system had sensitive information leakage risk. We promptly fixed the vulnerabilities as required. In December 2021, the Guangdong Communication Administration conducted an onsite inspection of Shenzhen Xunlei. Shenzhen Xunlei took actions in response to the issues identified by the authority during the inspection and completed the rectification as required.

As we expand our business overseas, we are subject to laws and regulations and other policies in different jurisdictions related to the collection, use, retention, security, transfer or other processing of identifiable personal information. We may need to comply with increasingly complex and stringent regulations protecting business and personal data in the United States, Europe and other jurisdictions. These legal requirements are constantly evolving and impose different obligations in different jurisdictions. For example, the European Union adopted the General Data Protection Regulation, or the GDPR, which became effective on May 25, 2018. The GDPR imposes additional obligations on companies regarding the handling of personal data and provides certain individual privacy rights to persons whose data is stored. New privacy laws continued to come into effect around the world in 2020, with one of the most significant being the California Consumer Privacy Act, or the CCPA, which became effective on January 1, 2020. Compliance with existing, proposed and recently enacted laws, including implementation of the privacy and process enhancements called for under GDPR, CCPA and regulations from other legislations, can be costly as these laws may be interpreted and applied in ways that are inconsistent with our business practices. Compliance with emerging and evolving requirements in multiple jurisdictions may result in us changing our business practices, which could adversely affect our business and results of operations. We cannot assure you that we will be able to comply with the requirements of laws and regulations in different jurisdictions and other laws and regulations in a timely manner or in full. Any inability, or perceived inability, to adequately address privacy laws and regulations laws, regulations, policies, industry standards, contractual obligations, or other legal obligations could result in various administrative penalties, including fines, suspension of business operations in local jurisdictions and reputational damage.

Our results of operations could be materially and adversely affected if our cooperation with Itui regarding online advertising is unsuccessful. We may also be subject to penalties from relevant authorities due to certain actions or inactions of Itui in connection with online advertising, which is beyond our control.

In May 2020, we entered into an advertising revenue sharing agreement with a subsidiary of Itui International Inc., our largest shareholder, and we renewed such agreement with the subsidiary of Itui International Inc. on a yearly basis. Under such agreement, Itui provides us with online traffic monetization services, including the operation and placement of advertisements, research and technology support with respect to advertising systems, business algorithm platform as well as content recommendation and other optimization services. By outsourcing our advertising business to Itui, we hope to take advantage of Itui's advanced precision targeting algorithm to achieve better placement of advertisement. However, we cannot assure you that we can further improve the results of operations of online advertising through such cooperation in the future. In our cooperation with Itui, we require Itui to comply with all relevant laws and regulations regarding advertising business. However, we have no control over Itui and we cannot assure you that Itui will be able to operate the advertising business and its advertising platform legally and successfully. We may still be liable for certain circumstances in connection with Itui that are beyond our control, and our business may also be negatively affected. In addition, if we are unable to maintain our cooperation with Itui for whatever reasons and we are unable to find a suitable replacement in a timely manner, or at all, our advertising revenue may experience significant decline. As a result, our business and financial condition may be negatively affected.

We rely on third-party platforms to distribute our mobile applications. If we are unable to maintain a good relationship with such platform providers, if their terms and conditions or pricing were changed to our detriment, if we violate, or if a platform provider believes that we have violated, the terms and conditions of its platform, or if any of these platforms loses market share or falls out of favor or is unavailable for a prolonged period of time, our mobile strategy may suffer.

We are subject to the standard policies and terms of service of third-party platforms, which govern the distribution of our mobile application on the platform. Each platform provider has broad discretion to change and interpret its terms of service and other policies with respect to us and other users, and those changes and interpretation may be unfavorable to us. A platform provider may also change its fee structure, add fees associated with access to and use of its platform, alter how we are able to advertise or distribute on the platform, or change how the personal information of its users is made available to application developers on the platform. Such changes may decrease the visibility or availability of our applications, limit our distribution capabilities, prevent access to our applications, reduce the amount of downloads and revenue we may recognize from the applications, increase our costs to operate on these platforms or result in the exclusion or limitation of our application on such platforms. Any such changes could adversely affect our business, financial condition or results of operations.

If we violate, or a platform provider believes we have violated its terms of service (or if there is any change or deterioration in our relationship with these platform providers), that platform provider could limit or discontinue our access to the platform. A platform provider could also limit or discontinue our access to the platform if it establishes more favorable relationships with one or more of our competitors or it determines that we are a competitor. Any limit of, or discontinuation to, our access to any platform could adversely affect our business, financial condition or results of operations. In September 2016, all of our mobile applications, including Mobile Xunlei, were removed from Apple's iOS App Store as a result of alleged possible violations of the developer license agreement between Apple and us. After a prolonged negotiation, Apple agreed that we could re-launch our mobile applications, including Mobile Xunlei, on Apple's iOS App Store as long as our mobile applications comply with Apple's policies for launching mobile applications on App Store and pass Apple's scrutiny. In July 2020, we successfully re-launched our mobile applications on Apple's iOS App Store, which means new users can download our mobile applications again. Although we have re-launched our mobile applications on App Store, we cannot assure you the removal of our mobile applications from App Store will not happen again in the future. Furthermore, other app stores also have the right to update their store policies. If we are deemed to violate their policies, our mobile applications are removed from App Store again or other app stores at the same time, which may significantly harm our mobile strategy, materially and adversely affect our business operations, results of operations and financial condition.

We are strictly regulated in China. Any lack of requisite licenses or permits applicable to our businesses or to our third-party services providers and any changes in government policies or regulations may have a material and adverse impact on our businesses, financial condition and results of operations.

Our business is subject to governmental supervision and regulations by the relevant PRC governmental authorities including the State Council, the MIIT, the National Radio and Television Administration, or NPTA, the National Press and Publication Administration, or the NPPA, the Ministry of Culture and Tourism (established in March 2018 as a result of institutional reform integrating the Ministry of Culture, and the Ministry of Tourism), or MOCT, and other relevant government authorities. Together these government authorities promulgate and enforce regulations that cover many aspects of operation of telecommunications and internet information services, including entry into the telecommunications industry, the scope of permissible business activities, licenses and permits for various business activities and foreign investment.

We are advised by our PRC legal counsel that a license for online transmission of audio-visual programs is required for the display of video content, including live streaming content, on our platform. See "Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on online transmission of audio-visual programs." We used to be a registered owner of such license when we were operating Xunlei Kankan business. However, when we disposed of Xunlei Kankan business to a purchaser in July 2015, the registered owner of such license was also changed to the purchaser. After the disposal, Shenzhen Wangwenhua started to operate a live streaming business through Xunlei Live website and mobile app. As advised by our PRC legal counsel, a license for online transmission of audio-visual programs is required for providing video content display services and operating a live streaming business. In June 2018, Shenzhen Wangwenhua acquired 80% of the equity interest of Henan Tourism Information Co., Ltd., or Henan Tourism, from an independent third party. Henan Tourism is a registered owner of the license for online transmission of audio-visual programs. However, neither Shenzhen Wangwenhua nor Shenzhen Xunlei, the entity that operates both license-required businesses, is a registered owner of the license for online transmission of audio-visual programs. As a result, relevant PRC government authorities may find that we are operating license-required business without obtaining a proper license, and thus may issue warnings, order us to rectify our violating operations and impose fines on us. In the case of serious violations as determined by relevant authorities at its discretion, they may ban the violative operations, seize our equipment in connection with such operations and impose a penalty of one to two times of the amount of the total investment in such operations.

The cloud computing services we provide to the internet users may be deemed to have included the content distribution network (CDN) services. Pursuant to the *Notice of Ministry of Industry and Information Technology on Cleaning up and Standardizing the Internet Network Access Service Market*, we have to update our existing VATS License to specifically cover the CDN services. Shenzhen Onething Technologies Co., Ltd., or Shenzhen Onething, a subsidiary of Shenzhen Xunlei, and a subsidiary of Shenzhen Onething have obtained the VATS Licenses that cover the CDN services.

Our business model for CDN services, namely, a shared computing model and network, is relatively new and there are no laws or regulations on this specific model so far. It is possible that the relevant PRC authority may in the future decide that we are operating certain businesses without the proper licenses or approvals. Were that to happen, we would be warned, fined, ordered to rectify our violations or be imposed restrictions or even suspension on our relevant business. In addition to the above, if the PRC government promulgates new laws and regulations that require additional licenses or imposes additional restrictions on the operation of any part of our business, it has the power to, among other things, levy fines, confiscate our income, revoke our business licenses, and require us to discontinue our business or impose restrictions on the affected portion of our business. Any of these actions by the PRC government may have a material and adverse effect on our results of operations.

Furthermore, we operate our cloud computing business that integrates the idea of shared economy model and are subject to risks related to this business model. We cannot assure you that our cooperation with all third parties for our cloud computing business complies with all laws and regulations. For example, we cannot assure you that our third-party service providers have obtained or applied for all permits and licenses required for providing relevant services to us. We cooperate with various third-party service providers to provide Internet Data Center (IDC) and Internet Service Provider (ISP) services for our CDN services. As PRC laws and regulations require IDC and ISP service providers to obtain the corresponding IDC licenses and ISP licenses, we require our third-party service providers to obtain such licenses. However, we cannot assure you that these third-party service providers maintain or are able to obtain in a timely manner or at all the required licenses. If our third-party service providers fail to obtain or maintain relevant approvals, licenses or permits required for operating such businesses, our third-party service providers could be subject to liabilities, penalties and operational disruptions. Even if these service providers are able to maintain proper licenses, it is possible that the services and bandwidth resources they provide may not meet our requirements.

Violation of existing or future laws, regulations or regulations on collection and use of personal data could damage our reputation, deter current and potential users from using our services and substantially harm our business and results of operations.

Pursuant to the applicable PRC laws and regulations concerning the collection, use and sharing of personal data, our PRC subsidiaries, variable interest entity and its subsidiaries are required to keep our users' personal information confidential and are prohibited from disclosing such information to any third parties without such users' consent. Relevant laws and regulations also require internet operators to take measures to ensure confidentiality of users' information. See "Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on internet privacy." In November 2019, the MIIT issued *the Notice on Carrying Out the Special Rectification of App Infringement on Users' Rights and Interests*. Based on such notice, the MIIT required a number of mobile apps to be removed from application stores as these apps infringed users' rights and interests and rectifications cannot be completed within a specified period of time.

To comply with relevant laws and regulations, we have established information security systems to protect user's privacy, we also have adopted a risk detection mechanism for data security defects and vulnerabilities, and set up an emergency response mechanism for data security incidents. We also periodically review our privacy policies and amend as needed based on the development and changes of the personal information we collect and process to ensure that we comply with relevant requirements such as obtaining users' prior consent before the collection and processing of their personal information. 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 with relevant laws and regulations may result in proceedings or actions against us by government entities or others, and could damage our reputation. For example, in September 2021, one of our mobile applications received a notice from a regulatory authority for failing to explicitly inform users in our privacy policy that their device information would be provided to third parties' SDKs. In response, we have modified the privacy policies of the product to the regulator's satisfaction. However, we cannot guarantee you that regulatory authorities will not find our privacy policies insufficient again in the future, and we may be ordered to modify our privacy policies and make rectifications to meet the requirements of relevant laws or regulations. If we fail to make modifications or rectifications to the satisfaction of relevant regulatory authorities, we may subject to administrative penalties or even removals of our mobile applications.

In addition, user and regulatory attitudes towards privacy are evolving and concerns about the security of personal data could also lead to a decline in general usage of our products and services, which could lead to lower the number of users. For example, if the PRC government authorities require real-name registration by our users, the number of our users may decrease and our business, financial condition and results of operations may be adversely affected. See “—Risks Related to Doing Business in China—We may be adversely affected by the complexity, uncertainties and changes in PRC regulations of internet-related business and companies.” In addition, we may become subject to the data protection or personal privacy laws of jurisdictions outside of China, where more stringent requirements may be imposed on us and we may have to allocate more resources to comply with the legal requirements, and the number of our users may further decrease. A significant reduction in the number of users could have a material adverse effect on our business, financial condition and results of operations.

We may not be able to generate sufficient cash from operations or to obtain sufficient capital to meet the additional capital requirements of our changing business.

In order to implement our development strategies, including our strategies to transition to mobile internet and continuing efforts on our cloud computing business, we will make continual capital investments in terms of devoting more research and development efforts into investigating user needs and develop new mobile products and update existing ones, continue enhancing the technologies involved in our cloud computing business and provide more frequent updates to our existing products. Thus, we will continue to incur substantial capital expenditures on an ongoing basis, and it may become difficult for us to meet such capital requirements.

To date, we have financed our operations and the building of Xunlei Tower, our new headquarters, primarily by using our existing internal cash reserves and borrowing bank loans. If we fail to retain a sufficient number of users and continue to convert such users into paying users or subscribers, we may not be able to generate sufficient revenues to cover our business development strategies, including our continued transition to mobile internet and the continued expansion of our cloud computing business and live streaming business, and our business may be materially and adversely affected. Further, since the construction of Xunlei Tower has been completed, we currently operate the building ourselves, which may subject us to additional real estate related financial and operating risks.

We may obtain additional financing, including from equity offerings and debt financings in capital markets, to fund the operation and planned expansion of our business. Our ability to obtain additional financing in the future, however, is subject to a number of uncertainties, including:

- our future business development, financial condition and results of operations;
- general market conditions for financing activities by companies in our industry; and
- macroeconomic, political, regulatory and other conditions in China and elsewhere.

If we cannot obtain sufficient capital to meet our capital expenditure needs, we may not be able to execute our growth strategies, and our business, results of operations and prospects may be materially and adversely affected.

Our costs and expenses, such as research and development expenses, may increase and our results of operations may be adversely affected.

The operation of our extensive resource delivery network and cloud computing business as well as our exploration and implementation of our new business strategies require significant upfront capital expenditures as well as continual, substantial investment in content, technology and infrastructure. Since inception, we have invested substantially in research and development to maintain our technology leadership, and in equipment to increase our network capacity. We expect our research and development expenses to increase in the near term as we continue to expand our research and development team to develop new products and update existing products, particularly as we continue devoting resources in the development of our cloud computing business and the development and updating of our mobile products. Most of our capital expenditures, such as expenditures on servers and other equipment, are based upon our estimation of potential future demand and we are generally required to pay the entire purchase price and license fees upfront. As a result, our cash flow may be negatively affected in the periods in which such payments are made. We may not be able to quickly generate sufficient revenue from such expenditures, which may negatively affect our results of operations within certain periods thereafter; and if we overestimate future demand for our services, we may not be able to achieve expected rates of return on our capital expenditures, or at all.

In addition, bandwidth and other costs are subject to change and are determined by market supply and demand. For example, the market prices for professionally produced digital media content have increased significantly in China during the past few years, and there have been increases in the relevant license fees. In addition, if bandwidth and other providers cease their business with us or raise the prices of their products and services, we will incur additional costs to find alternative service providers or to accept the increased costs in order to provide our services. If we cannot maintain a cost-effective operation, or if our costs to deliver our services do not decline commensurate with any future declines in the prices we charge our users, our results of operations may be adversely affected and we may fail to achieve profitability.

If we are unable to collect accounts receivable in a timely manner or at all, our financial condition, results of operations and prospects may be materially and adversely affected.

We generated a large portion of our revenue from the sales of CDN in 2021. As of December 31, 2022, we have a considerable portion of accounts receivable arising from the sales of CDN. In addition, we have outsourced our advertising operations to Itui in 2020. As a result, we generated a considerable portion of revenues from the advertising revenue sharing agreement we entered into with Itui, which resulted in a large account receivable as well. Thus, the financial soundness of our customers purchasing CDN from us, Itui, advertising agencies, or advertisers may affect our collection of accounts receivable. In general, a credit assessment of our CDN purchasers will be made to evaluate the collectability of the service fees before entering into any business contracts, and we require Itui to do the same with advertising agencies or advertisers. However, we cannot assure you that we or Itui will always be able to accurately assess the creditworthiness of each CDN purchaser, advertising agency, or advertiser, as applicable. Any inability of Itui, advertisers, advertising agencies or CDN purchasers, especially those that accounted for a significant percentage of our accounts receivables in the past, to pay us in a timely manner may adversely affect our liquidity and cash flows. For example, we made a provision for our accounts receivable of US\$7.6 million in 2018 due to a CDN purchaser's prolonged overdue payment and its shutdown of operations. In addition, the online advertising market in China is dominated by a small number of large advertising agencies. If the large advertising agencies that Itui has business relationships with demand higher rebates for their agency services, or if we are unable to collect account receivable from Itui pursuant to our revenue sharing agreement in a timely manner, our results of operations will be materially and adversely affected.

We had net operating cash outflows in the past and may be subject to liquidity pressure in the future if we cannot generate sufficient cash from our operating activities in the future.

We had a net operating cash outflow of US\$13.9 million in 2020. In 2021 and 2022, we had net cash generated from operating activities of US\$19.5 million and US\$51.1 million, respectively. See "Item 5. Operating and Financial Review and Prospects—B. Liquidity and Capital Resources—Cash Flows—Operating activities" for reasons of such net operating cash outflow. We cannot guarantee we will be able to generate positive and sufficient cash flows from operating activities in the future. If we have negative cash flows from operating activities in the future, our business, results of operations and liquidity may be adversely affected.

In addition, in connection with the construction of the headquarters building, we entered into a loan facility agreement with a commercial bank in 2019 to finance the construction project. The land use right and the building under construction were mortgaged to the bank. The maximum amount of loans we are able to take out is RMB400.0 million (US\$57.4 million), of which we took out RMB244.6 million (US\$35.1 million) as of December 31, 2022 for the construction project. As of December 31, 2022, the outstanding balance of the loan we took out was RMB221.3 million (US\$31.8 million). The construction of the headquarters building was completed in 2022 within our budget and we relocated to the new headquarters building in December 2022. We engaged a reputable national construction company to construct the building and a professional real estate consulting firm to manage the process. There has been a dispute between us and a constructing company of our headquarters construction project and such dispute is currently under an arbitration procedure. Disputes between construction company/real estate consulting firm/other construction service providers and us may continue to arise in the future. There remain uncertainties to the outcome of the arbitration and any unfavorable outcome may adversely affect our financial condition. The arbitration process may also divert our management's attention and subject us to additional costs.

We may not be able to successfully address the challenges and risks we face in the online games market, such as a failure to operate popular, high-quality games or to obtain all the licenses required to operate online games, which may subject us to penalties from relevant authorities, including the discontinuance of our online game business.

We have cooperated with third parties to operate certain web games since 2019. See “Item 4. Information on the Company—B. Business Overview—Our Platform—Online game services.” Operating online games in China requires several permits and approvals. For example, as advised by our PRC legal counsel, a VATS License is required for operating online games and an Internet Publishing Services License is required for operating internet publishing services, which is defined as offering internet publications to the public through the internet. Our online game operating subsidiaries, Shenzhen Xunlei, Shenzhen Wangwenhua and Xunlei Games, have obtained the VATS License for operating our online games. Shenzhen Xunlei, which holds 100% of the equity interest in Shenzhen Wangwenhua and 70% of the equity interest in Xunlei Games, has obtained an Internet Publishing Services License for the publication of internet games, which expired on September 17, 2022 and is in the process of renewal. However, neither Shenzhen Wangwenhua nor Xunlei Games has obtained the Internet Publishing Services License. Given the uncertainties of interpretation and implementation of relevant laws and regulations and the enforcement practices of relevant government authorities, we cannot assure you that relevant government authorities would not require Shenzhen Wangwenhua and Xunlei Games to obtain the Internet Publishing Services Licenses as well. In addition, we cannot assure you that Shenzhen Xunlei's Internet Publishing Services License will be renewed successfully. As a result, relevant PRC government authorities may find that certain of our online game operating subsidiaries are operating internet publishing services without proper license and thus may penalize us accordingly. If that were to happen, we would be subject to orders to shut down the website or delete all relevant online publications, confiscation of illegal income and major equipment or fines. In addition, according to relevant regulations, an online game has to be scrutinized by and obtain an approval number (ISBN number) from the NPPA before it is allowed to be launched online. In our cooperation with online game providers, we require that ISBN numbers have to be obtained for the online games within the scope of our cooperation. However, as we are not the developers or publishers of those online games, we cannot assure you that the ISBN numbers of those online games are obtained strictly in compliance with relevant legal requirements and procedures without any defects or relevant amendment filings are made in compliance with relevant legal requirements. If the ISBN numbers are obtained not in compliance with relevant laws and regulations or amendment filings are not made timely, relevant government authorities may impose fines on us, confiscate our income generated from operating such online games and require us to delete all relevant online publications or discontinue our online game business.

In addition, relevant PRC laws and regulations require that contents of online games are prohibited to advocate cult, superstition, obscenity, pornography, gambling or violence, or abet commission of crime. As we are not the developers of the online games we operate, we cannot assure you that the contents of the online games we operate are fully in compliance with such requirement. Failure to comply with relevant PRC laws and regulations may subject us to liability, administrative actions or penalties imposed by relevant PRC authorities. The imposition of any of these penalties may result in a material and adverse effect on our ability to operate our online game business and our results of operations. As we do not have control over the contents of the online games we operate, we cannot assure you that we will not be subject to any intellectual property infringement claims or misappropriation claims. As of the date of this annual report, we were not involved in any lawsuits relating to the online games we operate. Defending those claims, with or without merits, could be costly and time-consuming, and diverge our management's attention. If we or our third-party online game providers lose the cases, we may be required to compensate a large amount of damages or immediately discontinue the operation of relevant online games. If we are unable to find alternative solutions on commercially reasonable terms on a timely basis, our online game business, reputation and results of operations may be materially and adversely affected.

In October 2019, General Administration of Press and Publication issued *the Notice by the General Administration of Press and Publication of Preventing Minors from Indulging in Online Games*, or Anti-indulgence Notice, which imposed an array of restrictive measures to prevent underage users to indulge in online games. For example, the Anti-indulgence Notice requires game operators to implement the real-name registration system for players of online games and take effective measures to restrict underage players from using paid services that are inconsistent with their capacity for civil conduct. Furthermore, on August 30, 2021, the NPPA issued *the Notice on Further Strict Management to Prevent Minors from Indulging in Online Games*, which requires all online game operators to provide services to minors only on any Friday, Saturday, Sunday and statutory holidays from 8:00 p.m. to 9:00 p.m., i.e., for one hour, and not to provide online games in any form to users who have not registered or logged in with their real names. We have implemented a real-name registration system for our online games. Game operators or developers of the online games on our platform are able to access our real-name registration system and implement their anti-indulgence measures based on the identity information in our system. In addition to the real-name registration system already in place, we have adjusted the systems in the games we operate to comply with the requirements under this notice. In February 2021, Shenzhen Press and Publication Bureau issued *the Notice on Interface Docking of Anti-indulgence and Real Name Registration System to Prevent Minors from Indulging in Online Games*, which requires all the online game enterprises in Guangdong Province to file the application before April 30, 2021, and all such games to connect with the National Anti-Indulgence and Real-Name Registration System established by Publication Bureau of the Publicity Department of the CPC Central Committee before June 1, 2021. We completed the requisite filing and connected our online games to the National Anti-Indulgence and Real Name Registration System in June 2021. However, if any third-party online game operators, developers or we fail to comply with the above requirements, we may have joint or several liabilities and thus be subject to administrative penalties. Penalties under the Anti-indulgence Notice include fines and other penalties such as taking corrective actions during specified periods, shutting down of our online games operations and license revocation due to the fact that we did not implement those restrictions pursuant to the Anti-indulgence Notice. If any of the above were to happen, our online game business and results of operations would be negatively affected.

We operate in a competitive market and may not be able to compete effectively.

We face significant competition in different areas of our business. Some of our existing or potential competitors have a longer operating history and significantly greater financial resources than we do, and in turn may be able to attract and retain more users and advertisers. Our competitors may compete with us in a variety of ways, including by conducting brand promotions and other marketing activities and making acquisitions. For example, in the cloud computing sector, we face existing intensive competition from leading Chinese internet companies such as Alibaba and Tencent. They generally have a stronger competitive position and have more resources and technological capability to compete in this sector. We cannot guarantee you that we will certainly be able to compete effectively with them and continuously increase our market share or maintain our existing market share. In the cloud acceleration sector, although we currently have a niche market in China for cloud acceleration products and services, we cannot guarantee that we will be able to maintain our established position in the future. We may face competition from leading Chinese internet companies if they start to allocate resources and focus on the development in this business sector or from startups who may develop similar or alternative products. With more entrants into the cloud acceleration business, aggressive price cutting by competitors may result in the loss of our existing subscribers. We may have to take actions to retain our user base and attract more subscribers at significant cost, including upgrading and developing existing and new products and services in order to meet users' changing demand, but we cannot assure you that such efforts will succeed, especially given the tightening control over internet content by the Chinese government. See “—If we fail to keep up with the technological development in the internet industry and users' changing demand, our business, financial condition and results of operations may be materially and adversely affected” and “—Regulation and censorship of information disseminated over the internet in China have adversely affected our business and may continue to adversely affect our business, and we may be liable for the digital media content on our platform.” If we are unable to effectively compete in any aspect of our business, our business, financial condition and results of operations may be materially and adversely effected.

Undetected programming errors or flaws or failure to maintain effective customer service could harm our reputation or decrease market acceptance of our services, particularly our resource discovery network, which would materially and adversely affect our results of operations.

Our programs may contain programming errors that may only become apparent after their release, especially in terms of upgrades to, for example, Xunlei Accelerator or subscription services. We receive user feedbacks in connection with programming errors affecting their user experience from time to time, and such errors may also come to our attention during our monitoring process. However, we cannot assure you that we will be able to detect and resolve all these programming errors effectively or in a timely manner. Undetected programming errors or defects may adversely affect user experience and cause our users to stop using our services and our advertisers to reduce their use of our services, any of which could materially and adversely affect our business and results of operations.

Advertisements displayed on our platform may subject us to penalties and other administrative actions.

Under PRC advertising laws and regulations, advertisement channels such as us are obligated to monitor the advertising content they display to ensure that such content is true, accurate and in full compliance with applicable laws and regulations. PRC advertising laws and regulations set forth certain content requirements for advertisements in the PRC including, among other things, prohibitions on false or misleading content, superlative wording, socially destabilizing content or content involving obscenities, superstition, violence, discrimination or infringement of the public interest. In April 2015, the SCNPC enacted *the PRC Advertisement Law*, which took effect on September 1, 2015 and was last amended on April 29, 2021, to further strengthen the supervision and management of advertisement services. Pursuant to *the PRC Advertisement Law*, any advertisement that contains false or misleading information to deceive or mislead consumers shall be deemed false advertising. Furthermore, *the PRC Advertisement Law* explicitly stipulates detailed requirements for the content of several different kinds of advertisement, including advertisements for medical treatment, pharmaceuticals, medical instruments, health food, alcoholic drinks, education or training, products or services having an expected return on investment, real estate, pesticides, feed and feed additives, and some other agriculture-related advertisement. On July 4, 2016, the State Administration for Industry and Commerce, or the SAIC, issued *the Interim Measures for the Administration of Internet Advertising* to specifically regulate internet advertising activities. On February 25, 2023, the State Administration for Market Regulation, or the SAMR, issued *the Measures for the Administration of Internet Advertising*, which will come into effect on May 1, 2023, and replace the Interim Measures. See “Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on advertising business” for details. In providing advertising services, we are required to review the supporting documents provided to us by advertising agencies or advertisers for the relevant 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, we 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 eliminate the effect of illegal advertisement and cessation of publishing the advertisement. In circumstances involving serious violations, the State Administration for Market Regulation, or the SAMR, or its local branches may revoke violators’ licenses or permits for their advertising business operations.

To fulfill these monitoring functions specified by the PRC laws and regulations set forth above, we have taken several measures. Before we outsourced our advertising business to Itui in 2020, in almost all of our advertising agreements, we required the advertising agencies or advertisers that entered into agreements with us to: (i) ensure the advertising content provided to us is true, accurate and in full compliance with PRC laws and regulations; (ii) ensure such content does not infringe any third-party’s rights and interests; and (iii) indemnify us for any liabilities arising from such advertising content. We have outsourced our advertising business to Itui since 2020 and required Itui to set up an effective review mechanism for each advertisement it placed on our websites and platform so as to ensure the contents are in full compliance with relevant legal requirements. However, we cannot assure you that all the contents contained in such advertisements are true and accurate as required by the advertising laws and regulations, especially given the uncertainty in the application of these laws and regulations. If we are found to be in violation of applicable PRC advertising laws and regulations in the future, we may be subject to penalties and our reputation may be harmed, which may have a material and adverse effect on our business, financial condition and results of operations.

We face risks relating to third parties’ billing and payment systems.

The billing and payment systems of third parties such as online third-party payment processors help us maintain accurate records of payments of sales proceeds by certain subscribers and other paying users and collect such payments. Our business and results of operations could be adversely affected if these third parties fail to accurately account for or calculate the revenues generated from the sales of our products and services. Moreover, if there are security breaches or failure or errors in the payment process of these third parties, user experience may be affected and our business results may be negatively impacted.

The channels for the payment of our services and products typically comprise third-party online system, fixed phone line and mobile phone payment. A significant portion of the payments have been made through our online payment system since 2014. Although we have been able to control our payment handling charges by encouraging our subscribers to use the third-party online payment system which charges relatively lower levels of handling fees compared with other payment channels, we cannot assure you that these third-party payment service providers will not increase fee levels charged to us or we are able to continuously maintain our cooperative relationship with them in commercially acceptable terms. Also, the subscribers may change their habits to make payments through mobile phones or other third-party online payment channels with higher costs. If that were to happen in the future, or if we fail to minimize the associated payment handling charges, our results of operations may be adversely affected due to any suspension of these payment channels and we may not be able to find any suitable alternatives in a timely manner, or at all.

We also do not have control over the security measures of our third-party payment service providers, 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 we use. In addition, there may be billing software errors that would damage customer confidence in these payment systems. If any of the above were to occur, we may lose paying users and users may be discouraged from purchasing our products, which may have an adverse effect on our business and results of operations.

We have granted, and may continue to grant, share awards under our share incentive plans, which may result in increased share-based compensation expenses.

We have granted share-based compensation awards, including share options and restricted shares, to various employees, key personnel and other non-employees to incentivize performance and align their interests with ours. In June 2020, we terminated our 2010 share incentive plan, 2013 share incentive plan and 2014 share incentive plan and adopted a 2020 share incentive plan, or the 2020 Plan. Upon the termination of our then-existing share incentive plans, the awards that are granted and outstanding under those share incentive plans and the evidencing original award agreements shall remain effective and binding under the 2020 Plan, subject to any amendment and modification to the original award agreements that we shall determine. Under the 2020 Plan, we were authorized to issue a maximum number of 31,000,000 common shares of our company upon exercise of the options or other types of awards. On March 13, 2023, our board of directors amended and restated the 2020 Plan, or the Amended and Restated 2020 Plan, to expand the original award pool of 31,000,000 shares by authorizing the issuance of additional 15,561,200 shares. After the award pool expansion, the maximum aggregate number of shares available for grant of awards was increased from 31,000,000 under the original 2020 Plan to 46,561,200 under the Amended and Restated 2020 Plan. As of March 31, 2023, 25,092,130 restricted share units had been granted and outstanding under the Amended and Restated 2020 Plan. There were also 160,000 unvested restricted shares that survived the termination of our previous share incentive plans and remained outstanding under the Amended and Restated 2020 Plan as of March 31, 2023. As of March 31, 2023, our unrecognized share-based compensation expenses relating to the awards outstanding under the Amended and Restated 2020 Plan amounted to US\$9.8 million. See “Item 6. Directors, Senior Management and Employees—B. Compensation—Share Incentive Plan” for details.

We will issue the equivalent number of common shares upon the vesting and exercise of these options, restricted shares and restricted share units. The amount of these expenses is based on the fair value of the share-based compensation award we granted. The expenses associated with share-based compensation have affected our net income and may reduce our net income in the future, and any additional securities issued under share-based compensation schemes will dilute the ownership interests of our shareholders, including holders of our ADSs. We believe the granting of incentive awards is of significant importance to our ability to attract and retain key personnel and employees, and we will continue to grant stock options, restricted shares and other share awards to employees in the future. As a result, our expenses associated with share-based compensation may increase, which may have an adverse effect on our results of operations.

The continuing and collaborative efforts of our senior management and key employees are crucial to our success, and our business may be harmed if we were to lose their services.

Our success depends on the continual efforts and services of our senior management team. If one or more of our executives or other key personnel are unable or unwilling to continue to provide services to us for whatever reasons, we may not be able to find suitable replacements easily or at all. Competition for management and key personnel in our industry is intense and the pool of qualified candidates is limited. We may not be able to retain the services of our executives or key personnel or attract and retain experienced executives or key personnel in the future. If any of our executive officers or key employees joins a competitor or forms a competing company, we may lose advertisers, know-how and key professionals and staff members. Each of our executive officers has entered into an employment agreement (including a non-compete provision) with us. However, if any dispute arises between us and our executives or key employees, these agreements may not be enforceable in China, where these executives and key employees reside, in light of uncertainties with China’s legal system.

In addition, while we often grant additional incentive shares to management personnel and other key employees after their hire dates, the initial grants are usually much larger than subsequent grants. Employees may be more likely to leave us after their initial incentive share grant fully vests, especially if the value of the incentive shares has significantly appreciated in value relative to the exercise price. If any member of our senior management team or other key personnel leaves our company, our ability to successfully operate our business and execute our business strategy could be impaired.

Any misconduct of our employees may negatively affect our reputation and corporate image, which in turn may adversely affect our business and prospects.

We believe that maintaining and enhancing our reputation and corporate image is of significant importance to the success of our business. If any of our employees engages in any misconduct, whether or not related to the employee's work at our company, it may negatively affect our reputation and corporate image. Historically, there has been negative publicity about our company and our management, which adversely affected our brand, public image and reputation. A member of our senior management team who is also our director was subject to certain legal sanctions in China in the past due to copyright infringement activities when working at another company unrelated to us. Even though the infringement activities took place a number of years before the executive joined our company and had nothing to do with us, the past misconduct of the executive and the sanctions he was subject to may negatively affect our reputation and corporate image, which in turn may adversely affect our business and prospects. As part of our internal compliance procedures, we routinely conduct internal audits and inspections, including exit interviews and audits, on current and former employees. Any misconduct by our current or former employees uncovered from such compliance procedures, whether the misconduct relates to the employees' work with us, would potentially have material adverse impacts on our reputation, results of operations, financial performance or future prospects. For example, in October 2020, we received a notification from Shenzhen Municipal Public Security Bureau that the bureau has filed a case for investigation of our former CEO, Mr. Lei Chen, for alleged embezzlement of our company's assets, which, although did not result in any material adverse impact on our financial reporting, caused harm to our company. In addition, we may also face disputes with former or current disgruntled employees. Any allegations against us, with or without merits, may negatively affect our reputation and corporate image.

Strategic alliances, investments or acquisitions may have a material and adverse effect on our business, reputation, results of operations and financial condition.

We may enter into strategic alliances with various third parties to further our business purposes from time to time. Strategic alliances with third parties could subject us to a number of risks, including risks associated with sharing proprietary information, nonperformance by the counterparty, and an increase in expenses incurred in establishing new strategic alliances, any of which may materially and adversely affect our business. We may have little ability to control or monitor their actions. To the extent the third parties suffer negative publicity or harm to their reputations from events relating to their business, we may also suffer negative publicity or harm to our reputation by virtue of our association with such third parties.

We have in the past invested in or acquired additional assets, technologies or businesses that are complementary to our existing business. If we are presented with appropriate opportunities, we may continue to do so in the future. Investments or acquisitions and the subsequent integration of new assets and businesses into our own would 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 costs of identifying and consummating investments and acquisitions may be significant. We may also incur significant expenses in obtaining necessary approvals from relevant government authorities in China and elsewhere in the world. In addition, investments and acquisitions could result in the use of substantial amounts of cash, potentially dilutive issuances of equity securities and exposure to potential unknown liabilities or legal risks of the acquired business. The cost and duration of integrating newly acquired businesses could also materially exceed our expectations. Even if we complete the desired acquisitions or investment, such acquisitions and investment may expose us to new operational, regulatory, market and geographic risks and challenges, including:

- our inability to maintain the key business relationships and the reputation of the businesses we acquire or invest in;
- our inability to retain key personnel of the acquired or invested company;
- uncertainty of entry into markets in which we have limited or no prior experience and in which competitors have stronger market positions;
- failure to comply with laws and regulations as well as industry or technical standards of the markets into which we expand;
- our dependence on unfamiliar affiliates and partners of the companies we acquire or invest in;
- unsatisfactory performance of the businesses we acquire or invest in;

- our responsibility for the liabilities associated with the businesses we acquire, including those that we may not anticipate;
- goodwill impairment risks associated with the businesses that we acquire;
- our inability to integrate acquired technology into our business and operations;
- our inability to develop and maintain a successful business model and to monetize and generate revenues from the businesses we acquire; and
- our inability to maintain internal standards, controls, procedures and policies.

Any of these events could disrupt our ability to manage our business. These risks could also result in our failure to derive the intended benefits of the acquisitions or investments, and we may be unable to recover our investment in such initiatives or may have to recognize impairment charges as a result.

Furthermore, the financing and payment arrangements we use in any acquisition could have a negative impact on you as an investor, because if we issue shares in connection with an acquisition, your holdings could be diluted. Moreover, if we take on significant debt to finance such acquisitions, we would incur additional interest expenses, which would divert resources from our working capital and potentially have a material adverse impact on our results of operations.

Our business, financial condition and results of operations, as well as our ability to obtain financing, may be adversely affected by the downturn in the global or Chinese economy.

The industries in which we operate, including the mobile internet industry, may be affected by economic downturns. For example, a prolonged slowdown in the world economy, including in the Chinese economy, may lead to a reduced amount of mobile internet advertising, which could materially and adversely affect our business, financial condition and results of operations. In addition, certain of our products and services may be viewed as discretionary by our users, who may choose to discontinue or reduce spending on such products and services during an economic downturn. In such an event, our ability to retain existing users and increase new users will be adversely affected, which would in turn negatively impact our business and results of operations.

Moreover, a slowdown or disruption in the global or Chinese economy may have a material and adverse impact on financings available to us. In addition, COVID-19 had a severe and negative impact on the Chinese and the global economy. 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. The growth rate of the Chinese economy had already been slowing since 2010. 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 some of the world's leading economies, including the United States and China, even before 2020. The weakness in the economy could erode investor confidence, which constitutes the basis of the credit market. Unrest, terrorist threats and the potential for war in the Middle East and elsewhere may increase market volatility across the globe. There have also been concerns about the relationship between China and other countries, including the surrounding Asian countries, which may potentially have economic effects. In particular, there is significant uncertainty about the future relationship between the United States and China with respect to trade policies, treaties, government regulations and tariffs. Economic conditions in China are sensitive to global economic conditions, as well as changes in domestic economic and political policies and the expected or perceived overall economic growth rate in China. The conflict between Ukraine and Russia and the imposition of broad economic sanctions on Russia may raise cost for our overseas business operations and even disrupt global markets. The unstable economy affecting the financial markets and banking system may significantly restrict our ability to obtain financing in the capital markets or from financial institutions on commercially reasonable terms, or at all. Although we are uncertain about the extent to which the global financial and economic fluctuations and slowdown of Chinese economy may impact our business in the short-term and long-term, there is a risk that our business, results of operations, financial condition and prospects would be materially and adversely affected by any severe or prolonged slowdown in the global or Chinese economy.

Our operations depend on the performance of the internet infrastructure in China.

The successful operation of our business depends on the performance of the internet infrastructure and telecommunications networks in China. In China, almost all access to the internet is maintained through state-owned telecommunications operators under the administrative control and regulatory supervision of the MIIT. Moreover, we have entered into contracts with various subsidiaries of a limited number of telecommunications service providers in each province for network-related services. On the one hand, if the internet industry in China does not grow as quickly as expected, our business and operations will be negatively affected. We have limited access to alternative networks or services in the event of disruptions, failures or other problems with China's internet infrastructure or the telecommunications networks provided by telecommunications service providers. In addition, our network and website regularly serve a large number of users and advertisers. With the expansion of our business, we may be required to upgrade our technology and infrastructure to keep up with the increasing traffic on our website. However, we have no control over the costs of the services provided by telecommunications service providers. If the prices we pay for telecommunications and internet services rise significantly, our results of operations may be materially and adversely affected. If internet access fees or other charges to internet users increase, our user traffic may decline and our business may be harmed. On the other hand, if the internet industry grows faster than expected and we cannot react to the market demand in a timely manner in terms of our research and development effort, the user experience and the attractiveness of our services may be harmed, which will negatively impact our business and results of operations.

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 or fail to meet our reporting obligations, and investor confidence in our company and the market price of our ADSs may be adversely affected.

We are subject to reporting obligations under the U.S. securities laws. The SEC, as required under Section 404 of the Sarbanes-Oxley Act of 2002, adopted rules requiring every public company 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 our internal control over financial reporting. We are subject to the requirement to provide attestation by our independent registered public accounting firm on effectiveness of internal control over financial reporting.

Our management, with the participation of our chief executive officer and chief financial officer, has performed an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of the end of the period covered by this annual report, as required by Rule 13a-15(b) under the Exchange Act. Our management has concluded that our internal control over financial reporting was effective as of December 31, 2022. Our independent registered public accounting firm also audited and concluded that our internal control over financial reporting is effective as of December 31, 2022. However, if we fail to maintain effective internal control over financial reporting in the future, we could suffer material misstatements in our financial statements and fail to meet our reporting obligations, which would likely cause investors to lose confidence in our reported financial information. This could in turn limit our access to capital markets, harm our results of operations and lead to a decline in the trading price of our ADSs. Additionally, ineffective internal control over financial reporting could expose us to increased risk of fraud or misuse of corporate assets and subject us to potential delisting from the stock exchange on which we list, regulatory investigations and civil or criminal sanctions. We may also be required to restate our financial statements from prior periods.

We have limited business insurance coverage and any uninsured business disruption may have an adverse effect on our results of operations and financial condition.

Insurance companies in China currently do not offer as extensive an array of insurance products as insurance companies do in more developed economies. We have limited business liability or disruption insurance to cover our operations. Any uninsured occurrence of business disruption may result in our incurring substantial costs and the diversion of resources, which could have an adverse effect on our results of operations and financial condition.

We face risks related to natural disasters such as earthquakes and health epidemics and other outbreaks, which could significantly disrupt our operations.

Our operations may be vulnerable to interruption and damage from natural and other types of catastrophes, including earthquakes, fire, floods, hail, windstorms, severe winter weather (including snow, freezing water, ice storms and blizzards), environmental accidents, power loss, communications failures, explosions, man-made events such as terrorist attacks and similar events. Due to their nature, we cannot predict the incidence, timing and severity of catastrophes. If any such catastrophe or extraordinary event occurs in the future, our ability to operate our business could be seriously impaired. Such events could make it difficult or impossible for us to deliver our services and products to our users and could decrease demand for our products. As we do not carry property insurance and significant amounts of time could be required to resume our operations, our financial position and results of operations could be materially and adversely affected in the event of any major catastrophic event.

In addition, our business could be materially and adversely affected by the outbreak of pandemics such as influenza A (H1N1), avian influenza, H7N9, severe acute respiratory syndrome (SARS) or other epidemics. Any occurrence of these pandemic diseases or other adverse public health developments in China or elsewhere could severely disrupt our staffing or the staffing of our business partners, including our advertisers, and otherwise reduce the activity levels of our work force and the work force of our business partners, causing a material and adverse effect on our business operations. In response to the COVID-19 pandemic, we made remote working arrangement and suspended our offline work and all our business travels in early 2020 to ensure the safety and health of our employees. As a result, our customer service capacity was compromised which might have adversely affected our users' experience. As of the end of April 2020, we had completely resumed our operations. China began to modify its zero-COVID policy at the end of 2022, and most of the travel restrictions and quarantine requirements were lifted in December 2022. There were surges of cases in many cities during this time which caused disruption to our and our business partners' operations, and there remains uncertainty as to the future impact of the virus, especially in light of this change in policy. 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. China 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 customers and 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 continue to materially and adversely affect our business, financial condition and results of operations in the current and future years.

Risks Related to Our Corporate Structure

If the PRC government finds that the agreements that establish the structure for operating our businesses in China do not comply with PRC governmental restrictions on foreign investment in internet-related business and foreign investors' mergers and acquisition activities in China, or if these regulations or the interpretation of existing regulations change in the future, we could be subject to severe penalties or be forced to relinquish our interests in those operations.

Current PRC laws and regulations place certain restrictions on foreign ownership of companies that engage in internet businesses, including the provision of online game and online advertising services. For example, foreign investors' equity interests in value-added telecommunication service providers, other than e-commerce service providers, may not exceed 50%. In addition, foreign investors are prohibited from investing in or operating entities engaged in, among others, internet cultural operating service, and online transmission of audio-visual programs service. We are a Cayman Islands exempted company and Giganology (Shenzhen) Co., Ltd., or Giganology Shenzhen and Xunlei Computer (Shenzhen) Co., Ltd., or Xunlei Computer, our PRC subsidiaries, are considered foreign-invested enterprises. Accordingly, neither of these two PRC subsidiaries is eligible to provide value-added telecommunication services and the aforementioned internet related services in China. As a result, we conduct our operations in China principally through contractual arrangements among Giganology Shenzhen and Shenzhen Xunlei and its shareholders. Shenzhen Xunlei or its subsidiaries hold the licenses and permits necessary to conduct our resource discovery network, online advertising, online games, cloud computing and related businesses in China, and Shenzhen Xunlei hold various operating subsidiaries that conduct a majority of our operations in China. Our contractual arrangements with Shenzhen Xunlei and its shareholders enable us to exercise effective control over Shenzhen Xunlei and its operating subsidiaries and hence treat them as our consolidated entities and consolidate their results. For a detailed discussion of these contractual arrangements, see "Item 4. Information on the Company—C. Organizational Structure."

We cannot assure you, however, that we will be able to enforce these contracts. Although we have been advised by TransAsia Lawyers, our PRC legal counsel, that each contract under these contractual arrangements with Shenzhen Xunlei and its shareholders is valid, binding and enforceable under current PRC laws and regulations, we cannot assure you that the PRC government would agree that these contractual arrangements comply with PRC licensing, registration or other regulatory requirements, with existing policies or with requirements or policies that may be adopted in the future. PRC laws and regulations governing the validity of these contractual arrangements are uncertain and the relevant government authorities have broad discretion in interpreting these laws and regulations. If the PRC government determines that we do not comply with applicable laws and regulations, it could revoke our business and operating licenses, require us to discontinue or restrict our operations, impose fines, restrict our right to collect revenues, block our website, require us to restructure our operations, impose additional conditions or requirements with which we may not be able to comply, or take other regulatory or enforcement actions against us that could be harmful to our business. The imposition of any of these penalties would result in a material and adverse effect on our ability to conduct our business. In addition, if the PRC government deems that our contractual arrangements with the variable interest entity do not comply with PRC 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. We may also not be able to repay the notes and other indebtedness, and our shares may decline in value or become worthless, if we are unable to assert our contractual control rights over the assets of our PRC subsidiaries and variable interest entity, which accounted for 88.1% of our revenues in 2022. Our holding company in the Cayman Islands, the variable interest entity, and investors of our company face uncertainty about potential future actions by the PRC government that could affect the enforceability of the contractual arrangements with the variable interest entity and, consequently, significantly affect the financial performance of the variable interest entity and our company as a group.

We rely on contractual arrangements with the variable interest entity in China and its shareholders for our operations, which may not be as effective as ownership in providing operational control the variable interest entity and its subsidiaries.

Since PRC laws restrict foreign equity ownership in companies engaged in internet business in China, we rely on contractual arrangements with Shenzhen Xunlei, the VIE, and the shareholders of Shenzhen Xunlei to operate our business in China. If we had ownership of Shenzhen Xunlei we would be able to exercise our rights as a shareholder to effect changes in the board of directors of Shenzhen Xunlei, which in turn could effect changes at the management level, subject to any applicable fiduciary obligations. However, under the current contractual arrangements, we rely on Shenzhen Xunlei and its shareholders' performance of their contractual obligations to exercise effective control. In addition, our operating contract with Shenzhen Xunlei has an initial term of ten years and an extended term of ten years since 2016. The operating contract will be automatically extended for an additional 10-year period subject to Giganology Shenzhen's unilateral termination right. In general, none of Shenzhen Xunlei and its shareholders may terminate the contracts prior to the expiration date. However, the shareholders of Shenzhen Xunlei may not act in the best interests of our company or may not perform their obligations under these contracts, including the obligation to renew these contracts when their initial contract term expires. Such risks exist throughout the period in which we intend to operate our business through the contractual arrangements with Shenzhen Xunlei. We may replace the shareholders of Shenzhen Xunlei at any time pursuant to our contractual arrangements with Shenzhen Xunlei and its shareholders. However, if any dispute relating to these contracts remains unresolved, we will have to enforce our rights under these contracts through the operations of PRC law and courts and therefore will be subject to uncertainties in the PRC legal system. See "—Any failure by Shenzhen Xunlei or its shareholders to perform their obligations under our contractual arrangements with them may have a material adverse effect on our business" and "Item 4. Information on the Company—C. Organizational Structure." Therefore, these contractual arrangements may not be as effective as ownership in providing us with control over Shenzhen Xunlei.

Any failure by Shenzhen Xunlei or its shareholders to perform their obligations under our contractual arrangements with them may have a material adverse effect on our business.

Shenzhen Xunlei or its shareholders may fail to take certain actions required for our business or follow our instructions despite their contractual obligations to do so. If they fail to perform their obligations under their respective agreements with us, we may have to rely on legal remedies under PRC law, including seeking specific performance or injunctive relief, which may not be effective. As of the date of this annual report, Mr. Sean Shenglong Zou, our co-founder and director, owned 76% of the equity interest in Shenzhen Xunlei, the variable interest entity. Under the equity pledge agreement among Giganology Shenzhen and the shareholders of Shenzhen Xunlei, as amended, the shareholders of Shenzhen Xunlei have pledged all of their equity interests in Shenzhen Xunlei to Giganology Shenzhen to guarantee Shenzhen Xunlei and its shareholders' performance of their respective obligations under the related contractual arrangements. In addition, the shareholders of Shenzhen Xunlei have completed the registration of equity pledge under the equity pledge agreement with the competent governmental authority. Pursuant to the contractual arrangements, we have the right to replace any shareholders of Shenzhen Xunlei at any time. For example, if any of the shareholders of Shenzhen Xunlei refuses or fails to perform his or her obligations under the contractual arrangements due to his or her significant equity interest in Shenzhen Xunlei and his or her relatively smaller percentage of equity interest in our company, we can enforce the contractual arrangements and transfer his or her equity interests to another appointee of Giganology Shenzhen. However, we cannot assure you that such transfer can be implemented successfully or without significant costs. As a result, there are risks that we might not be able to have an effective control over the variable interest entity in the future.

Moreover, the exercise of call options under the equity interest disposal agreement, the intellectual properties purchase option agreement and certain other contractual arrangements will be subject to the review and approval of competent governmental authorities and incur additional expenses.

All of these contractual arrangements are governed by PRC law and provide for the resolution of disputes through arbitration in the PRC. Accordingly, these contracts would be interpreted in accordance with PRC law and any disputes would be resolved in accordance with PRC legal procedures. The legal environment in the PRC is not as developed as in certain other jurisdictions, such as the United States. As a result, uncertainties in the PRC legal system could limit our ability to enforce these contractual arrangements, which may make it difficult to exert effective control over the variable interest entity and its subsidiaries, and our ability to conduct our business may be adversely affected.

Contractual arrangements with the variable interest entity may result in adverse tax consequences to us.

Under applicable PRC tax laws and regulations, arrangements and transactions among related parties may be subject to audit or scrutiny by the PRC tax authorities within ten years after the taxable year when the arrangements or transactions are conducted. See "Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on tax—PRC enterprise income tax." We could face material and adverse tax consequences if the PRC tax authorities were to determine that any contractual arrangements among Giganology Shenzhen, our wholly owned subsidiary in China, and Shenzhen Xunlei, the variable interest entity in China and its shareholders, as well as the intellectual property framework agreement between Xunlei Computer and Shenzhen Xunlei was not entered into on an arm's-length basis and therefore constituted unfavorable transfer pricing arrangements. Unfavorable transfer pricing arrangements could, among other things, result in an upward adjustment on taxation, and the PRC tax authorities may impose interest on late payments on Shenzhen Xunlei, for the adjusted but unpaid taxes. Our results of operations may be materially and adversely affected if Shenzhen Xunlei's tax liabilities increase significantly or if it is required to pay interest on late payments.

The shareholders of Shenzhen Xunlei may have potential conflicts of interest with us, which may materially and adversely affect our business.

Sean Shenglong Zou, Hao Cheng, Fang Wang, Jianming Shi and Guangzhou Shulian Information Investment Co., Ltd. are shareholders of Shenzhen Xunlei. We provide no incentives to the shareholders of Shenzhen Xunlei for the purpose of encouraging them to act in our best interests in their capacity as the shareholders of Shenzhen Xunlei. We may replace the shareholders of Shenzhen Xunlei at any time pursuant to the currently effective equity option agreements between us and these shareholders.

As a director of our company, Mr. Zou owes a fiduciary duty to act in good faith and in the best interests of our company under Cayman Islands law. We are not aware that other publicly listed companies in China with a similar corporate and ownership structure as ours have brought conflicts of interest claims against the shareholders of their respective variable interest entities. However, we cannot assure you that when conflicts arise, the shareholders of Shenzhen Xunlei will act in the best interests of our company or that conflicts will be resolved in our favor. If we cannot resolve any conflicts of interest or disputes between us and the shareholders of Shenzhen Xunlei, we would have to rely on legal proceedings, which may be expensive, time-consuming and disruptive to our operations. There is also substantial uncertainty as to the outcome of any such legal proceedings.

We may rely principally on dividends and other distributions on equity paid by our PRC subsidiaries to fund any cash and financing requirements we may have. Any limitation on the ability of Giganology Shenzhen and Xunlei Computer to pay dividends to us could have a material adverse effect on our ability to conduct our business.

We are a holding company and we may rely principally on dividends and other distributions on equity paid by our wholly owned PRC subsidiaries including Giganology Shenzhen and Xunlei Computer, for our cash and financing requirements, including the funds necessary to pay dividends and other cash distributions to our shareholders and service any debt we may incur. If Giganology Shenzhen incurs debt on its own behalf in the future, the instruments governing the debt may restrict its ability to pay dividends or make other distributions to us. In addition, the PRC tax authorities may require us to adjust our taxable income under the contractual arrangements, Giganology Shenzhen currently has in place with Shenzhen Xunlei, the variable interest entity, as well as the intellectual property framework agreement between Xunlei Computer and Shenzhen Xunlei, in a manner that would materially and adversely affect its ability to pay dividends and other distributions to us. As of December 31, 2022, we had cash or cash equivalents of approximately RMB699.4 million (US\$100.4 million) and US\$31.2 million located within the PRC, of which RMB411.7 million (US\$59.1 million) and US\$0.6 million is held by Shenzhen Xunlei and its subsidiaries. We also have restricted cash of RMB53.3 million (US\$7.7 million) as of December 31, 2022. The transfer of all the cash or cash equivalents is subject to PRC government's restrictions on currency conversion.

Under PRC laws and regulations, Giganology Shenzhen and Xunlei Computer, as wholly foreign-owned enterprises in the PRC, may pay dividends only out of its accumulated after-tax profits as determined in accordance with PRC accounting standards and regulations. In addition, wholly foreign-owned enterprises such as Giganology Shenzhen and Xunlei Computer are required to set aside at least 10% of their accumulated after-tax profits each year, if any, to fund certain statutory reserve funds, until the aggregate amount of such a fund reaches 50% of their respective registered capital. At their discretion, wholly foreign-owned enterprises may allocate a portion of their after-tax profits based on PRC accounting standards to staff welfare and bonus funds. These reserve funds and staff welfare and bonus funds are not distributable as cash dividends. Any limitation on the ability of Giganology Shenzhen and Xunlei Computer to pay dividends or make other distributions to us could materially and adversely limit our ability to grow, make investments or acquisitions that could be beneficial to our business, pay dividends, or otherwise fund and conduct our business. See also “—Risks Related to Doing Business in China—Our global income may be subject to PRC taxes under the PRC EIT Law, which may have a material adverse effect on our results of operations.”

PRC regulation of loans to, and direct investment in, PRC entities by offshore holding companies and governmental control of currency conversion may restrict or prevent us from making loans to our PRC subsidiaries and variable interest entity and its subsidiaries or making additional capital contributions to our PRC subsidiaries, which may materially and adversely affect our liquidity and our ability to fund and expand our business.

We may (i) make additional capital contributions to our PRC subsidiaries, (ii) establish new PRC subsidiaries and make capital contributions to these new PRC subsidiaries, (iii) make loans to our PRC subsidiaries or variable interest entity and its subsidiaries, or (iv) acquire offshore entities with business operations in China in an offshore transaction. However, most of these uses are subject to PRC regulations and approvals. For example:

- loans by us to our PRC subsidiaries, which are foreign-invested enterprises, to finance their respective activities cannot exceed statutory limits and must be registered with the PRC State Administration of Foreign Exchange, or SAFE, or its local branches; and
- loans by us to the variable interest entity, which is a domestic PRC entity, may not exceed the statutory limit, and any medium or long-term loan we extend to the variable interest entity must be recorded and registered by the National Development and Reform Commission and SAFE or its local branches.

On March 30, 2015, SAFE issued *the Circular on Reform of the Administrative Rules of the Payment and Settlement of Foreign Exchange Capital of Foreign Invested Enterprises*, or the SAFE Circular 19, which became effective on June 1, 2015. SAFE Circular 19 adopts a concept of “discretionary conversion,” which is defined as the conversion of a foreign-invested enterprise’s foreign currency registered capital in accordance with the enterprise’s actual business needs. No review of the purpose of the funds is required at the time of conversion under SAFE Circular 19. However, use of any Renminbi funds converted from its registered capital shall be based on actual transactions. In addition, equity investments using converted registered capital are no longer prohibited under SAFE Circular 19.

SAFE issued *the Circular on Reforming and Regulating Policies on the Control over Foreign Exchange Settlement of Capital Accounts*, or SAFE Circular 16, on June 9, 2016, which became effective on the same day. Pursuant to SAFE Circular 16, enterprises registered in China may also convert their foreign debts from foreign currency to Renminbi in their own discretion. SAFE Circular 16 provides an integrated standard for the conversion of foreign exchange under capital account items (including but not limited to foreign currency capital and foreign debts) on a self-discretionary basis, which applies to all enterprises registered in China. SAFE Circular 16 reiterates the principle that Renminbi converted from foreign currency-denominated capital of a company may not be directly or indirectly used for purposes beyond its business scope or prohibited by PRC laws or regulations, while such converted Renminbi shall not be provided as loans to its non-affiliated entities, or used for construction and purchase of non-self-used real estate (excluding real estate enterprises) or unless otherwise expressly provided in law, directly or indirectly used in securities investment or other financial management excluding the bank capital preservation products.

Although SAFE Circular 19 and SAFE Circular 16 allow for the use of Renminbi converted from the foreign currency denominated capital for equity investments in the PRC, the restrictions on Renminbi capital of foreign-invested enterprises will continue to apply as to foreign-invested enterprises’ use of the converted Renminbi for purposes beyond the business scope, for the loans to non-associated companies or issuing inter-company Renminbi loans. Violations of SAFE Circular 19 and SAFE Circular 16 could result in administrative penalties. SAFE Circular 19 and SAFE Circular 16 may significantly limit our ability to transfer any foreign currency we hold, including the net proceeds from our equity offering and notes offering, to our PRC subsidiaries, which may adversely affect our liquidity and our ability to fund and expand our business in China.

On October 23, 2019, SAFE issued *the Notice of the State Administration of Foreign Exchange on Further Promoting the Facilitation of Cross-border Trade and Investment*, or SAFE Circular 28. SAFE Circular 28 allows non-investment foreign-invested enterprises to use their capital funds to make equity investments in China, provided that such investments do not violate the Negative List and that the target investment projects are genuine and in compliance with PRC laws. In light of the various requirements imposed by PRC regulations on loans to and direct investment in PRC entities by offshore holding companies, we cannot assure you that we will be able to complete the necessary government registrations or obtain necessary government approvals on a timely basis, if at all, with respect to future loans by us to our PRC subsidiaries or with respect to future capital contributions by us to our PRC subsidiaries. If we fail to complete such registrations or obtain such approvals, our ability to use the proceeds from our equity offering and notes offering and to capitalize or otherwise fund our PRC operations may be negatively affected, which could materially and adversely affect our liquidity and our ability to fund and expand our business.

We may lose the ability to use and enjoy assets held by the variable interest entity and its subsidiaries that are important to the operation of our business if any of such entities goes bankrupt or becomes subject to a dissolution or liquidation proceeding.

As part of our contractual arrangements with the variable interest entity, the variable interest entity and its subsidiaries hold certain assets that are important to the operation of our business, including patents for the proprietary technology and related domain names and trademarks. If any of the variable interest entity or its subsidiaries 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. Under the contractual arrangements, the variable interest entity and its subsidiaries may not, in any manner, sell, transfer, mortgage or dispose of their assets or legal or beneficial interests in the business without our prior consent. If the variable interest entity 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.

Uncertainties exist with respect to the interpretation and implementation of the enacted PRC Foreign Investment Law and how it may impact the viability of our current corporate structure, corporate governance and business operations.

On March 15, 2019, the National People's Congress enacted the *Foreign Investment Law*, which came into effect on January 1, 2020 and replace the trio of existing laws regulating foreign investment in 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. The *Foreign Investment Law* embodies an expected PRC regulatory trend 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. However, since it is relatively new, uncertainties still exist in relation to its interpretation and implementation. For instance, under the *Foreign Investment Law*, "foreign investment" refers to the investment activities directly or indirectly conducted by foreign individuals, enterprises or other entities in China. Though it does not explicitly classify contractual arrangements as a form of foreign investment, there is no assurance that foreign investment via contractual arrangement would not be interpreted as a type of indirect foreign investment activities under the definition in the future. In addition, the definition contains a catch-all provision which includes investments made by foreign investors through means stipulated in laws or administrative regulations or other methods prescribed by the State Council. Therefore, it still leaves leeway for future laws, administrative regulations or provisions promulgated by the State Council to provide for contractual arrangements as a form of foreign investment. In any of these cases, it will be uncertain whether our contractual arrangements will be deemed to be in violation of the market access requirements for foreign investment under the PRC laws and regulations. Furthermore, if future laws, administrative regulations or provisions prescribed by the State Council mandate further actions to be taken by companies with respect to existing contractual arrangements, we may face substantial uncertainties as to whether we can complete such actions in a timely manner, or at all. Failure to take timely and appropriate measures to cope with any of these or similar regulatory compliance challenges could materially and adversely affect our current corporate structure, corporate governance and business operations.

Risks Related to Doing Business in China

Changes in China's economic, political or social conditions or government policies could have a material adverse effect on our business and operations.

A majority of our assets and operations are located in China. Accordingly, our business, financial condition, results of operations and prospects may be influenced to a significant degree by political, economic and social conditions in China generally and by continued economic growth in China as a whole.

The Chinese economy differs 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 and allocation of resources. Although the Chinese government has implemented measures emphasizing the utilization of market forces for economic reform, the reduction of state ownership of productive assets, and the establishment of improved corporate governance in business enterprises, a substantial portion of productive assets in China are still owned by the government. In addition, the Chinese government continues to play a significant role in regulating industry development by imposing industrial policies. The Chinese government also exercises significant control over China's economic growth through allocating resources, controlling payment of foreign currency-denominated obligations, setting monetary policy and providing preferential treatment to particular industries or companies, such as those qualified to operate in free trade zones designated in certain major cities in China.

While the Chinese economy has experienced significant growth over the past decades, growth has been uneven, both geographically and among various sectors of the economy and the rate of growth has been slowing down. The Chinese government has implemented various measures to encourage economic growth and guide the allocation of resources. Some of these measures may benefit the overall Chinese economy, but may have a negative effect on us. For example, our financial condition and results of operations may be adversely affected by government control over capital investments or changes in tax regulations. The growth rate of the Chinese economy has gradually slowed down since 2010, and the impact of COVID-19 on the Chinese economy in 2022 was severe. Any prolonged slowdown in the Chinese economy may reduce the demand for our products and services and materially and adversely affect our business and results of operations.

Regulation and censorship of information disseminated over the internet in China have adversely affected our business and may continue to adversely affect our business, and we may be liable for the digital media content on our platform.

China has strict regulations governing telecommunication service providers, internet and wireless access and the distribution of news and other information. Under these regulations, internet content providers, or ICPs, like us, are prohibited from posting or displaying over the internet or wireless networks content that, among other things, violates PRC laws and regulations. If an ICP finds that prohibited content is transmitted on its website or stored in its system, it must terminate the transmission of such information or delete such information immediately and keep records and report to relevant authorities. Failure to comply with these requirements could lead to the revocation of the VATS License, which is required for our ICP services and other required licenses and the closure of the offending websites, and cloud network operators or website operators may also be held liable for prohibited content displayed on, retrieved from or linked to such network or website. We monitor digital media contents on our platform and periodically review and inspect whether there are contents that violate relevant PRC laws and regulations. However, we cannot assure you that we will always be able to identify and remove in a timely manner all digital media contents on our platform that violate relevant PRC laws and regulations. If we fail to timely remove relevant contents, we may be subject to relevant legal liabilities. In addition, efforts to constantly self-monitor in order to comply with these requirements could negatively impact user experience and lead to a decline in the number of users.

The Chinese government intensified its efforts to remove inappropriate content disseminated over the internet and wireless networks, and our efforts to monitor content on our platform and website led to a decline in the number of subscribers in the past few years. In April 2014, the Chinese government initiated a campaign to enhance and enforce its scrutiny on internet content in China, particularly for pornographic content, and various websites were subject to penalties and in some cases outright suspension of website operations. In December 2018, the Office of the Central Cyberspace Affairs Commission of China, or CAC, launched a campaign against illegal activities and inappropriate content on mobile apps and undertook restrictive measures against thousands of mobile apps, including suspension of mobile app operations for an indefinite period of time or permanently shutting down the mobile app operations. We regularly conducted internal compliance investigation to ensure that the content transmitted by our products is in compliance with the standards set out by the authorities. To date, we have blocked over one million digital files and added thousands of key words to our automatic keyword filtration system. We may experience further declines in the numbers of users and subscribers as we continue in our efforts to comply with the rules and regulations of the Chinese government.

We are subject to changing law and regulations regarding regulatory matters, corporate governance and public disclosure that have increased both our costs and the risk of non-compliance.

We are subject to rules and regulations by various governing bodies, including, for example, the United States Securities and Exchange Commission, which is charged with the protection of investors and the oversight of companies whose securities are publicly traded, and the various regulatory authorities in China and the Cayman Islands, and to new and evolving regulatory measures under applicable law. Our efforts to comply with new and changing laws and regulations have resulted in and are likely to continue to result in, increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities.

Moreover, because these laws, regulations and standards are subject to varying interpretations, their application in practice may evolve over time as new guidance becomes available. This evolution may result in continuing uncertainty regarding compliance matters and additional costs necessitated by ongoing revisions to our disclosure and governance practices. If we fail to address and comply with these regulations and any subsequent changes, we may be subject to penalty and our business may be harmed.

The PRC government's significant oversight and discretion over our business operation could result in a material adverse change in our operations and the value of our ADSs.

We conduct our business primarily through our PRC subsidiaries and the variable interest entity and its subsidiaries in China. Our operations in China are governed by PRC laws and regulations. The PRC government has significant oversight and discretion over the conduct of our business, and it may influence our operations, which could result in a material adverse change in our operation and the value of our common shares and ADSs. For example, we submitted the security assessment report regarding Hiya Voice on the National Internet Security Service Platform in June 2022 pursuant to the *Provisions for the Security Assessment of Internet Information Services Having Public Opinion Properties or Social Mobilization Capacity*, or the Provisions, and received the approval after the onsite inspection conducted by the competent authority. However, in September 2022, we were informed by the app store operator that Hiya Voice had been removed from the app store. The removal was due to the implementation of more stringent security assessment requirements under the Provisions, as determined by the CAC. We have been actively communicating with the competent authority to resolve this issue. However, we cannot assure you that Hiya Voice will be made available on the app store again. The complexities and constantly evolving laws and the uncertainties of their application in practice by PRC government have resulted in non-compliance risk and the additional costs for our compliance activities.

Also, the PRC government has recently indicated an intent to exert more oversight and control over offerings that are conducted overseas and foreign investment in China-based issuers. For example, on July 6, 2021, the relevant PRC government authorities made public *the Opinions on Strictly Cracking Down Illegal Securities Activities in Accordance with the Law*. These opinions emphasized the need to strengthen the administration over illegal securities activities and the supervision on overseas listings by China-based companies and proposed to take effective measures, such as promoting the construction of relevant regulatory systems to deal with the risks and incidents faced by China-based overseas-listed companies. On February 17, 2023, the CSRC issued *the Trial Administrative Measures of Overseas Securities Offerings and Listings by Domestic Companies*, or the Trial Measures, with effect from March 31, 2023, and the No. 1 to No. 5 Supporting Guidance Rules, or collectively the Guidance Rules. The Trial Measures, together with the Guidance Rules, establish a new filing-based regime to regulate overseas offerings and listings by domestic companies. Specifically, an overseas follow-on offering or listing, or equivalent offering activities, including issuance of convertible notes, exchangeable notes or preferred shares, by a domestic company, whether directly or indirectly, must be filed with the CSRC and comply with the requirements under the Trial Measures.

On April 13, 2020, the CAC, the NDRC and other PRC government authorities jointly promulgated *the Measures for Cybersecurity Reviews*, which was amended on December 28, 2021 with effect from February 15, 2022. *The Measures for Cybersecurity Reviews* require that, among others, operators of “critical information infrastructure” purchasing internet products or services or network platform operators carrying out data processing activities, that affect or may affect national security, shall apply with the Cybersecurity Review Office for a cybersecurity review. In addition, a network platform operator holding over one million users’ personal information shall apply with the Cybersecurity Review Office for a cybersecurity review before any public offering and listing on a foreign stock exchange. On July 7, 2022, the CAC published the *Outbound Data Transfer Security Assessment Measures*, effective on September 1, 2022, which requires a data processor to apply for a security assessment with the CAC before providing important data or personal information to overseas recipients under certain circumstances. Failure to comply with such requirements may subject data processors to administrative penalties, such as warnings, rectification, confiscation of illegal gains, suspension of business, revocation of relevant license or fines. On February 22, 2023, the CAC promulgated *the Personal Information Outbound Transfer Standard Contract Measures*, effective on June 1, 2023, which provides that the personal information processor who provides personal information to overseas recipients through execution of standard contracts with such overseas recipients shall satisfy certain criteria, conduct a personal information protection impact assessment before providing any personal information to an overseas recipient, and complete the filing with local cybersecurity authority within ten working days from the effective date of the standard contracts.

Since the *Draft Measures for Internet Data Security* are in the process of being formulated and the *Measures for Cybersecurity Review, the Outbound Data Transfer Security Assessment Measures, the Personal Information Outbound Transfer Standard Contract Measures* and the *Trial Measures* are relatively new, it remains unclear how these rules and regulations will be interpreted and implemented by the relevant PRC governmental authorities, and it is uncertain whether we will be able to obtain such approvals or complete the filing or other procedures in a timely manner, or at all, and such approvals may be rescinded even if obtained. Any such circumstance could result in administrative penalties, such as warnings, rectification, confiscation of illegal gains, suspension of business, revocation of relevant license or fines on us, 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 be worthless. In addition, implementation of industry-wide regulations directly targeting our operations could cause the value of our securities to significantly decline. Therefore, investors of our company and our business face potential uncertainty from actions taken by the PRC government affecting our business.

Uncertainties with respect to the PRC legal system could adversely affect us.

We conduct our business primarily through our PRC subsidiaries and variable interest entity and its subsidiaries in China. Our operations in China are governed by PRC laws and regulations. Giganology Shenzhen is a foreign-invested enterprise and is subject to laws and regulations applicable to foreign investment in China and, in particular, laws applicable to foreign-invested enterprises. The PRC legal system is a civil law system based on written statutes. Unlike the common law system, prior court decisions under the civil law system may be cited for reference but have limited precedential value.

Over the past three decades, the PRC government has enacted legislation that has significantly enhanced the protections afforded to various forms of foreign investments in China. However, China has not developed a fully integrated legal system, and recently enacted laws and regulations may not sufficiently cover all aspects of economic activities in China. In particular, the interpretation and enforcement of these laws and regulations involve uncertainties. Since PRC administrative and court authorities have significant discretion in interpreting and implementing statutory and contractual terms, it may be difficult to evaluate the outcome of administrative and court proceedings and the level of legal protection we enjoy. These uncertainties may affect our judgment on the relevance of legal requirements and our ability to enforce our contractual or tort rights. In addition, the regulatory uncertainties may be exploited through unmerited or frivolous legal actions or threats in attempts to extract payments or benefits from us.

Furthermore, the PRC legal system is based in part on government policies and internal rules, some of which are not published on a timely basis or at all and may have retroactive effects. Regulatory authorities may also stretch the interpretations of existing laws and regulations. As a result, we may not be aware of our violation of any of these policies and rules until sometime after the violation or the stretched interpretation, which may subject us to liabilities and can materially and adversely affect our business. The PRC government has significant oversight over the conduct of our business and it has recently indicated an intent to exert more oversight over offerings that are conducted overseas and/or foreign investment in China-based issuers. Any such action could significantly limit or completely hinder our ability to offer or continue to offer securities to investors and cause the value of such securities to significantly decline or be worthless. In addition, any administrative and court proceedings in China may be protracted, resulting in substantial costs and diversion of resources and management's attention.

We believe that our patents, trademarks, trade secrets, copyrights and other intellectual property are important to our business. We rely on a combination of patent, trademark, copyright and trade secret protection laws in China and other jurisdictions as well as confidentiality procedures and contractual provisions to protect our intellectual property and our brand. Protection of intellectual property rights in China may not be as effective as in the United States or other jurisdictions, and as a result, we may not be able to adequately protect our intellectual property rights, which could adversely affect our revenues and competitive position.

We may be adversely affected by the complexity, uncertainties and changes in PRC regulations of internet-related business and companies.

The PRC 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 PRC regulation of the internet business include, but are not limited to, the following:

- We only have contractual control over our resource discovery network and cloud computing. We do not own the resource discovery network and cloud computing due to the restriction of foreign investment in businesses providing value-added telecommunication services in China, including internet content provision or CDN services. 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 China, including evolving licensing practices and the requirement for real-name registrations. This means that permits, licenses or operations at some of our companies 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. If we fail to maintain any of these required licenses or approvals, we may be subject to various penalties, including fines and discontinuation of or restriction on our operations. Any such disruption in our business operations may have a material and adverse effect on our results of operations.
- New laws and regulations may be promulgated that will regulate internet activities, including live streaming, online games and online advertising businesses. If these new laws and regulations are promulgated, additional licenses may be required for our operations. If our operations 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.

The interpretation and application of existing PRC laws, regulations and policies and possible new laws, regulations or policies relating to the internet industry have created substantial uncertainties regarding the legality of existing and future foreign investments in, and the businesses and activities of, internet businesses in China, including our business. For example, in September 2009, GAPPRFT and the National Office of Combating Pornography and Illegal Publications jointly published a notice, or Circular 13, which expressly prohibits foreign investors from participating in online game operating business via wholly owned, equity joint venture or cooperative joint venture investments in China, and from controlling and participating in such businesses directly or indirectly through contractual or technical support arrangements. Other government agencies with substantial regulatory authority over online game operations and foreign investment entities in China, such as MIIT and MOCT, did not join GAPPRFT in issuing Circular 13. While Circular 13 is applicable to us and our online game business on an overall basis, to date, GAPPRFT or SAPPRT has not issued any interpretation of Circular 13 and, to our knowledge, has not taken any enforcement action under Circular 13 against any company that relies on contractual arrangements with affiliated entities to operate online games in China. We cannot assure you that we have obtained all the permits or licenses required for conducting our business in China or will be able to maintain our existing licenses or obtain any new licenses required under any new laws or regulations. There are also risks that we may be found to violate the existing or future laws and regulations given the uncertainty and complexity of China's regulation of internet business.

Subject to interpretation by the relevant authorities, it may not be possible for us to determine in all cases the type of content that could result in liability for us, especially if the Chinese government continues to maintain or strengthen its heightened scrutiny on internet content in China. We may not be able to control or restrict all of the digital media content generated, transmitted or placed on our network by our users, despite our attempt to monitor and filter such content. To the extent that regulatory authorities find any portion of our content on our network or website objectionable or requiring any license or permit that we have not obtained, they may require us to limit or eliminate the dissemination of such information or otherwise curtail the nature of such content, and keep records and report to relevant authorities, which may reduce our user traffic. In addition, we may be subject to significant penalties for violations of those regulations arising from prohibited content displayed on, retrieved from or uploaded to our network or website, including a suspension or shutdown of our operations. The enforcement activities may be intensified in connection with any ongoing government campaigns. In addition, while we maintain a regular internal monitoring and compliance protocol, we cannot ascertain that we would not fall foul of any changing or new government regulations or standards in the future. If we receive a public warning from the relevant government authorities or our licenses for acceleration services are revoked, our reputation would be harmed and if the operation of our acceleration services or other products is suspended or shut down entirely or in part, our revenues and results of operation may be materially and adversely affected. Furthermore, the internal compliance investigation and the removal of content may have a material impact on our subscription services, which in turn may lead to a decrease in the number of users and have an adverse effect on our revenues and results of operations. To date, we have not been able to quantify the magnitude and extent of such impact.

We may be sued by our game players and held liable for losses of virtual assets by such players, which may negatively affect our reputation and business, financial condition and results of operations.

While playing online games or participating in other online activities, players acquire and accumulate some virtual assets, such as special equipment and other accessories. Such virtual assets may be important to online game players and have monetary value and, in some cases, are sold for actual money. In practice, virtual assets can be lost for various reasons, often through unauthorized use of the game account of one user by other users and occasionally through data loss caused by a delay of network service, a network crash or hacking activities.

Under the *Civil Code of the People's Republic of China*, effective in January 2020, where any laws provide for the protection of data and network virtual property, such laws shall apply. However, currently, there is no PRC law or regulation specifically governing virtual asset property rights. As a result, there is uncertainty as to who the legal owner of virtual assets is, whether and how the ownership of virtual assets is protected by law, and whether an operator of online games like us would have any liability to game players or other interested parties (whether in contract, tort or otherwise) for loss of such virtual assets. Based on recent PRC court judgments, the courts have typically held online game operators liable for losses of virtual assets by game players, and ordered online game operators to return the lost virtual items to game players or pay damages and losses, as well as required the game operators to provide well-developed security systems to protect such virtual assets owned by game players. In the case of a loss of virtual assets, we may be sued by our game players or users and held liable for damages, which may negatively affect our reputation and business, financial condition and results of operations.

Non-compliance with the laws or regulations governing virtual currency may result in penalties that could have a material adverse effect on our live streaming business and results of operations.

The *Notice on the Reinforcement of the Administration of Online Games* issued by the Ministry of Culture and other governmental authorities on February 15, 2007 directs the People's Bank of China to strengthen the administration of virtual currency to avoid any adverse impact on the PRC economic and financial system. This notice provides that the total amount of virtual currency issued by an operator and the amount of purchased by individual users should be strictly limited, with a strict and clear division between virtual transactions and real transactions carried out by way of electronic commerce. This notice also provides that virtual currency should only be used to purchase virtual items. We created virtual currency "Golden Coins" for the operation of our live streaming services. Users can purchase "Golden Coins" from us so that they can purchase virtual gifts on our live streaming platforms to reward broadcasters they like. "Golden Coins" can also be used to purchase other value-added services on our live streaming platforms. Other than virtual gifts and value-added services, "Golden Coins" cannot be used for any other purposes.

On June 4, 2009, the Ministry of Culture and the MOFCOM jointly issued *the Notice on Strengthening the Administration of Online Game Virtual Currency*, or the Virtual Currency Notice. The Virtual Currency Notice requires that the operators who engage in issuance of online game virtual currency or offering of online game virtual currency transaction services shall apply for approval from the MOC through its provincial branches. The term “virtual currency” is widely used in the live streaming industry, such term as used in the live streaming industry does not fall under the definition under the Virtual Currency Notice. Although we do not think Virtual Currency Notice applies to the operation of our live streaming platform, given the wide discretion of relevant governmental authorities and uncertainties in the regulatory environment, we cannot assure you that relevant governmental authorities will not in the future interpret the Virtual Currency Notice in a different way and subject our operation to the scope of the Virtual Currency Notice or issue new rules to regulate the virtual currency in our industry. In that case, our operation may be adversely affected.

Intensified government regulation of the internet industry in China could restrict our ability to maintain or increase our user base.

The PRC government has, in recent years, intensified regulation on various aspects of the internet industry in China. For example, in January 2011, the MIIT and seven other PRC central government authorities jointly issued a circular entitled *Implementation Scheme regarding Parental Guardianship Project for Minors Playing Online Games*, under which online game operators are required to adopt various measures to maintain a system to communicate with the parents or other guardians of minors playing their online games and are required to monitor online game activities of minors and suspend the accounts of minors if so required by their parents or guardians. In October 2019, General Administration of Press and Publication issued the Anti-indulgence Notice which imposed an array of restrictions on online game operators to prevent underage users from indulging in online games. The Anti-indulgence Notice also requires online game operators to take effective measures to restrict minors from using paid services that are inconsistent with their capacity for civil conduct. See “Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on anti-fatigue system, real-name registration system and parental guardianship project.” While we support these measures, these restrictions could also limit our ability to grow our user base for our online game business. Furthermore, if these restrictions are expanded to apply to adult game players in the future, our ability to grow our user base could be further limited and online games business could be materially and adversely affected.

In addition, the Chinese government has in recent years intensified its efforts to remove inappropriate content disseminated over the internet. In April 2014, the Chinese government initiated a campaign to enhance and enforce its scrutiny over internet content in China, particularly for pornographic content, and various websites were subject to penalties and in some cases outright suspension of website operations. In August 2017, the CAC promulgated *the Provisions on the Administration of Internet Comments Posting Services*, the most recent amendment of which became effective on December 15, 2022, and *the Provisions on the Administration of Internet Forum and Community Services*, both of which require providers of relevant services to establish information review and inspection mechanism. In December, 2019, the CAC promulgated *the Regulations on the Ecological Governance of Network Information Content*, which provides that network information content service platforms should fulfill the main responsibility of content management and establish an ecological governance mechanism for network information, and improve their systems for user registration, account management, information publishing review, emergency response, and etc. In October, 2021, the CAC issued *the Notice on Further Strengthening the Regulation on Online Information of Entertainment Celebrities*, which requires internet platforms to, among others, monitor information posted by celebrities online so as to timely identify hot topics that could involve illegal or undesirable actions and to promptly report to the competent authorities in such event. As we implemented programs to comply with these regulations, we have experienced a decline in the number of subscribers and such number may continue to decline in the future. See “—Regulation and censorship of information disseminated over the internet in China have adversely affected our business and may continue to adversely affect our business, and we may be liable for the digital media content on our platform.”

We face uncertainties with respect to the promulgation, interpretation and implementation of Notice 78.

On November 12, 2020, the NRTA issued *the Notice on Strengthening the Management of Online Show Live Streaming and E-commerce Live Streaming*, or Notice 78. According to Notice 78, platforms providing online show live streaming or e-commerce live streaming services shall, among other things, register their information and business operations by November 30, 2020, ensure real-name registration for all live streaming hosts and virtual gifting users, prohibit users that are minors or without real-name registration from virtual gifting, and set a limit on the maximum amount of virtual gifting per time, per day, and per month.

There are currently no explicit provisions as to what limits on virtual gifting will be imposed by the NRTA pursuant to Notice 78 and it is unclear how and to what degree any such limits would be imposed on different platforms. Given there are no explicit provisions on how to set limits on virtual gifting, we are currently not able to assess the potential impact from this requirement under Notice 78 on the virtual gifting spending activities on our platform. Any such limits ultimately imposed may negatively impact our revenues derived from virtual gifting and our results of operations.

Notice 78 requests live streaming platforms for online shows and e-commerce to register with the National Internet Audio-Visual Platforms Information Management System. We are in the process of application for such registration for our live streaming business. Notice 78 also sets forth requirements for certain live streaming businesses with respect to, among others, real-name registration, limits on user spending on virtual gifting, restrictions on minors on virtual gifting, live streaming review personnel requirements, and content tagging requirements. We have implemented a real-name registration system for all of our live streaming hosts and users. For more information on Notice 78, see “Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on online live-streaming services.”

Since some of the requirements in Notice 78 remain unclear and have no explicit provisions or implementation standards, we are still in the process of getting further guidance from regulatory authorities and evaluating the applicability and effect of the various requirements under Notice 78 on our business. Any further rulemaking under Notice 78 or other intensified regulation with respect to live streaming may increase our compliance burden in the live streaming business, and may have an adverse impact on our business and results of operations.

We may be adversely affected by PRC regulations to limit the methods that internet companies may apply when using algorithms, and the types of algorithms they may use.

Recently, the PRC government has taken steps to more closely regulate how internet companies use algorithms. For instance, the CAC, together with eight other governmental authorities, jointly issued *the Guidelines on Strengthening the Comprehensive Regulation of Algorithms for Internet Information Services* on September 17, 2021, which provides that daily monitoring of data use, application scenarios and effects of algorithms shall be carried out by the relevant regulators, and security assessments of algorithms shall be conducted by the relevant regulators. The guidelines also provide that an algorithm filing system shall be established, and classified security management of algorithms shall be promoted. In addition, the CAC, the MIIT, the Ministry of Public Security and the State Administration for Market Regulation jointly promulgated *the Administrative Provisions on Algorithm Recommendations of Internet Information Services* on December 31, 2021, effective on March 1, 2022, which provides that algorithms 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.

To comply with the *Administrative Provisions on Algorithm Recommendations of Internet Information Services*, we may need to further adjust our business and operations as we may be deemed to be an algorithm recommendation service provider capable of social mobilization or influencing public opinion, and thus are obligated to complete the filing with the internet information service algorithm filing system. Shenzhen Xunlei submitted the filing application in November 2022, which is currently under the review by the competent authority. In addition, algorithm recommendation service providers are required to publicly disclose the basic principles, purposes, intentions, and relevant operating mechanisms of algorithm-related products. In response to this requirement, we have publicly disclosed the operation mechanism on our Xunlei App and provided an option for our users to turn off algorithm-driven recommendation services. However, the impact on our business operations is still substantially uncertain since this rule is relatively new and uncertainties still exist in relation to its interpretation.

Fluctuations in exchange rates may have a material adverse effect on our results of operations and the value of your investment.

Fluctuation in the value of the Renminbi may have a material adverse effect on the value of your investment. The conversion of Renminbi into foreign currencies, including U.S. dollars, is based on rates set by the People's Bank of China. The Renminbi has fluctuated against the U.S. dollar at times significantly and unpredictably. The value of the Renminbi against the U.S. dollar and other currencies may fluctuate and is affected by changes in political and economic conditions and by China's foreign exchange policies, among other things. We cannot assure you that Renminbi will not appreciate or depreciate significantly in value against the U.S. dollar in the future. It is difficult to predict how market forces or PRC or U.S. government policy may impact the exchange rate between Renminbi and the U.S. dollar in the future.

Our financial statements are expressed in U.S. dollars, and most of our assets, costs and expenses are denominated in Renminbi. A majority of our revenues were denominated in Renminbi. Any significant appreciation or depreciation of the Renminbi may materially and adversely affect our revenues, earnings and financial positions, and the value of, and any dividends payable on, our ADSs in U.S. dollars. For example, to the extent that we need to convert U.S. dollars into Renminbi to pay our operating expenses, appreciation of the Renminbi against the U.S. dollar would have an adverse effect on the amount of Renminbi we would receive from the conversion. Conversely, if we decide to convert our Renminbi into U.S. dollars for the purpose of making payments for dividends on our common shares or ADSs or for other business purposes, appreciation of the U.S. dollar against the Renminbi would have a negative effect on the amount of U.S. dollar available to us. In addition, a significant appreciation or depreciation in the value of the Renminbi relative to U.S. dollars would significantly reduce the U.S. dollar equivalent of our earnings regardless of any underlying change in our business or results of operations, which in turn could adversely affect the price of our ADSs.

Very limited hedging options are available in China to reduce our exposure to exchange rate fluctuations. To date, we have not entered into any hedging transactions in an effort to reduce our exposure to foreign currency exchange risk. While we may decide to enter into hedging transactions in the future, the availability and effectiveness of these hedges may be limited and we may not be able to adequately hedge our exposure or at all. In addition, our currency exchange losses may be magnified by PRC exchange control regulations that restrict our ability to convert Renminbi into foreign currency. As a result, fluctuations in exchange rates may have a material adverse effect on your investment.

Governmental control of currency conversion may limit our ability to utilize our revenues effectively and affect the value of your investment.

The PRC government imposes controls on the convertibility of the Renminbi into foreign currencies and, in certain cases, the remittance of currency out of China. We receive a majority of our revenues in Renminbi. Under our current corporate structure, our Cayman Islands holding company primarily relies on dividend payments from our wholly owned PRC subsidiaries, to fund any cash and financing requirements we may have. Under existing PRC foreign exchange regulations, payments of current account items, including profit distributions, interest payments and trade and service-related foreign exchange transactions, can be made in foreign currencies without prior SAFE approval by complying with certain procedural requirements. However, approval from or registration with appropriate government authorities is required where the Renminbi is to be converted into foreign currency and remitted out of China to pay capital expenses such as the repayment of loans denominated in foreign currencies. Specifically, under the existing exchange restrictions, without prior approval of SAFE, cash generated from the operations of our PRC subsidiaries in China may be used to pay dividends by our PRC subsidiaries to our company and pay employees of our PRC subsidiaries who are located outside China in a currency other than the Renminbi. With prior approval from or registration with SAFE, cash generated from the operations of our PRC subsidiaries and affiliated entity may be used to pay off debt in a currency other than the Renminbi owed by our PRC subsidiaries and variable interest entity and its subsidiaries to entities outside China, and make other capital expenditures outside China in a currency other than the Renminbi. If any of the variable interest entity or its subsidiaries liquidates, the proceeds from the liquidation of its assets may be used outside of the PRC or be given to investors who are not PRC nationals. However, we may not be able to do so due to foreign exchange control imposed by the PRC government, which may at its discretion restrict access to foreign currencies for current account transactions in the future. If the foreign exchange control system prevents us from obtaining sufficient foreign currencies to satisfy our foreign currency demand, we may not be able to pay dividends in foreign currencies to our shareholders, including holders of our ADSs.

Certain regulations in the PRC may make it more difficult for us to pursue growth through acquisitions.

Among other things, the M&A Rules and certain regulations and rules concerning mergers and acquisitions established additional procedures and requirements that could make merger and acquisition activities by foreign investors more time-consuming and complex. For example, the M&A Rules require that the Ministry of Commerce be notified in advance of any change-of-control transaction in which a foreign investor takes control of a PRC domestic enterprise or a foreign company with substantial PRC operations, 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 by the State Council on September 18, 2018, are triggered. Moreover, *the Anti-Monopoly Law*, which was promulgated by the SCNPC on August 30, 2007, with the most recent amendment becoming effective on August 1, 2022, and its implementing rules issued on March 10, 2023 together require that transactions which are deemed concentrations and involve parties with specified turnover thresholds (i.e., 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 China, or (ii) the total turnover within 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 China) must be cleared by the Ministry of Commerce before they can be completed. In addition, according to *the Implementing Rules Concerning Security Review on the Mergers and Acquisitions by Foreign Investors of Domestic Enterprises* issued by the Ministry of Commerce in August 2011, mergers and acquisitions by foreign investors involved in an industry related to national security are subject to strict review by the Ministry of Commerce. These rules also prohibit any transactions attempting to bypass such security review, including by controlling entities through contractual arrangements. We believe that our business is not in an industry related to national security. However, we cannot preclude the possibility that the Ministry of Commerce or other government agencies may publish interpretations contrary to our understanding or broaden the scope of such security review in the future. Although we have no current definitive plans to make any acquisitions, we may elect to grow our business in the future in part by directly acquiring complementary businesses in China. Complying with the requirements of these regulations to complete such transactions could be time-consuming, and any required approval processes, including obtaining approval from the Ministry of Commerce, may delay or inhibit our ability to complete such transactions.

Any failure or perceived failure by us to comply with the anti-monopoly and anti-unfair competition laws and regulations may result in governmental investigations or enforcement actions, litigation or claims against us and could have an adverse effect on our business, financial condition and results of operations.

The PRC government has adopted a series of anti-monopoly and anti-unfair competition laws and regulations and has recently enhanced its enforcement of such laws and regulations. The *PRC Anti-Monopoly Law* and the relevant implementing rules (i) require that where concentration of undertakings reaches the filing threshold stipulated by the State Council, a filing must be made with the antimonopoly authority before the parties implement the concentration, (ii) prohibit a business operator with a dominant market position from abusing such position, such as by selling commodities at unfairly high prices or buying commodities at unfairly low prices, selling products at prices below cost without any justifiable cause, or refusing to trade with a trading party without any justifiable cause, and (iii) prohibit business operators from entering into monopoly agreements, which refer to agreements that eliminate or restrict competition with competing business operators or transaction counterparties, such as by boycotting transactions, fixing or changing the price of commodities, limiting the output of commodities or fixing the price of commodities for resale to third parties, unless the agreements satisfy certain exemptions under the *PRC Anti-Monopoly Law*. On June 24, 2022, the SCNPC adopted the new *Anti-Monopoly Law* with effect from August 1, 2022, which increases the fines for illegal concentration of business operators to no more than ten percent of its last year's sales revenue if the concentration of business operator has or may have an effect of excluding or limiting competition; or a fine of up to RMB5 million if the concentration of business operator does not have an effect of excluding or limiting competition. It also stipulates that where a concentration of undertakings does not meet the threshold for declaration set by the State Council, but there is evidence that the concentration of undertakings has or may have the effect of excluding or limiting competition, the law enforcement agencies may order the operators to file the concentration of undertakings. On March 10, 2023, the SAMR issued four implementing rules for the Anti-Monopoly Law. These rules provide further clarification on the new Anti-Monopoly Law. The implementing rules include the Provisions on Curbing Abuse of Administrative Power to Exclude or Restrict Competition, Provisions on Prohibition of Monopoly Agreements, Provisions on Prohibition of the Abuse of Market Dominance, and Provisions on the Review of Concentrations of Undertakings.

Furthermore, in February 2021, the Anti-Monopoly Commission of the State Council officially promulgated the *Anti-Monopoly Guidelines for the Internet Platform Economy Sector*, or the Anti-Monopoly Guidelines. The Anti-Monopoly Guidelines prohibit certain monopolistic acts of internet platforms so as to protect market competition and safeguard the interests of users and undertakings participating in the internet platform economy, including without limitation, prohibiting platforms with a dominant position from abusing their market dominance (such as discriminating against customers in terms of pricing and other transactional conditions using big data and analytics, coercing counterparties into exclusivity arrangements, using technology to block competitors' interfaces, 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 also reinforce antitrust merger review for internet platform related transactions to safeguard market competition. As the Anti-Monopoly Guidelines were newly promulgated, it is still uncertain how they will impact on our business, financial condition, results of operations and prospects.

According to the *PRC Anti-Unfair Competition Law*, unfair competition, which refers to the production and operating activities where the operator disrupts the market competition order and damages the legitimate rights and interests of other operators or consumers in violation of the provisions of the *PRC Anti-Unfair Competition Law*, shall be prohibited. Pursuant to the *PRC Anti-unfair Competition Law*, operators shall abide by the principle of voluntariness, equality, impartiality, integrity and adhere to laws and business ethics during market transactions. Operators in violation of the *PRC Anti-unfair Competition Law* may be subject to civil, administrative or criminal liabilities depending on the specific circumstances.

The PRC anti-monopoly enforcement agencies have strengthened enforcement under the *PRC Anti-Monopoly Law* in recent years. For example, on February 7, 2021, the Anti-Monopoly Commission of the State Council published *Anti-Monopoly Guidelines for the Internet Platform Economy Sector* that specified circumstances where an activity of an internet platform will be identified as monopolistic act as well as concentration filing procedures for business operators, including those involving variable interest entities. Also, in April 2021, the SAMR, the CAC and the State Taxation Administration, or the SAT, held an administrative guidance meeting for Internet platform enterprises. In addition, many platforms, including 34 enterprises which attended such administrative guidance meeting as representatives of Internet platform enterprises, are required to conduct a comprehensive self-inspection and make necessary rectification accordingly. Although we are not in the list of 34 enterprises, we have been actively conducting necessary self-inspection and rectifications in accordance with such guidance. We cannot guarantee you that we will be able to be in full compliance with all applicable rules and regulations at all times.

As a result of the regulators' focus on anti-monopoly and anti-unfair competition compliance and enhanced regulation of platform enterprises, our business practice and expansion strategy may be subject to heightened regulatory scrutiny. Any anti-monopoly or anti-unfair competition related lawsuit, regulatory investigations or administrative proceedings initiated against us could also result in constraints on our future investments and acquisitions. As a result, we may be subject to significant difficulties in pursuing our investment and acquisition strategy.

PRC regulations relating to the establishment of offshore SPVs by PRC residents may subject our PRC resident beneficial owners or our PRC subsidiaries to liability or penalties, limit our ability to inject capital into our PRC subsidiaries, limit our PRC subsidiaries' ability to increase their registered capital or distribute profits to us, or may otherwise adversely affect us.

SAFE has promulgated several regulations that require PRC residents and PRC corporate entities to register with local branches of SAFE in connection with their direct or indirect offshore investment activities. These regulations apply to our shareholders who are PRC residents and may apply to any offshore acquisitions that we make in the future. SAFE promulgated *the Circular on Relevant Issues Concerning Foreign Exchange Control on Domestic Residents' Offshore Investment and Financing and Roundtrip Investment through Special Purpose Vehicles*, or SAFE No. Circular No. 37, on July 4, 2014. SAFE Circular No. 37 requires PRC residents 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." The term "control" under SAFE Circular No. 37 is broadly defined as the operation rights, beneficiary rights or decision-making rights acquired by the PRC residents in the offshore special purpose vehicles or PRC companies by such means as acquisition, trust, proxy, voting rights, repurchase, convertible bonds or other arrangements. SAFE Circular No. 37 further requires amendment to the registration in the event of any changes with respect to the basic information of the special purpose vehicle, such as changes in a PRC resident individual shareholder, name or operation period; or 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 events. If the shareholders of an offshore holding company who are PRC residents do not complete their registration with the local SAFE branches, the PRC subsidiaries of the offshore holding company may be prohibited from distributing their profits and proceeds from any reduction in capital, share transfer or liquidation to the offshore company, and the offshore company may be restricted in its ability to contribute additional capital to its PRC subsidiaries. Moreover, failure to comply with SAFE registration and amendment requirements described above could result in liability under PRC law for evasion of applicable foreign exchange restrictions. In addition, on February 13, 2015, SAFE issued SAFE Circular 13, which took effect on June 1, 2015. SAFE Circular 13 delegates to the qualified banks the authority to register all PRC residents' investment in "special purpose vehicle" pursuant to SAFE Circular No. 37, except that those PRC residents who have failed to comply with SAFE Circular No. 37 will continue to fall within the jurisdiction of the relevant local SAFE branches and must continue to make their supplementary registration applications with the such local SAFE branches.

We have requested PRC residents holding direct or indirect interest in our company to our knowledge to make the necessary applications, filings and amendments as required under SAFE regulations. Mr. Sean Shenglong Zou, Mr. Hao Cheng and Ms. Fang Wang have completed the initial registration with the local SAFE branch as required by the SAFE regulations. However, we cannot assure you that these shareholders have completed and will complete all subsequent amendment registrations as required by the SAFE regulations as we do not have control over these shareholders. We may also not be informed of the identities of all the PRC residents holding direct or indirect interest in our company, and we cannot provide any assurances that these PRC residents will comply with our request to make or obtain any applicable registrations or comply with other requirements required by SAFE regulations since we do not have control over these the PRC resident shareholders. The failure or inability of our PRC resident shareholders or our future PRC resident shareholders to make any required registrations or comply with other requirements under SAFE regulations may subject such PRC residents or our PRC subsidiaries to fines and legal sanctions and may also limit our ability to raise additional financing and contribute additional capital into or provide loans to (including using the proceeds from our initial public offering) our PRC subsidiaries, limit our PRC subsidiaries' ability to pay dividends or otherwise distribute profits to us, or otherwise adversely affect us.

Furthermore, because of the uncertainty over how the SAFE regulations will be interpreted and implemented, and how SAFE will apply them to us, we cannot predict how these regulations will affect our business operations or future strategies. For example, we may be subject to a more stringent review and approval process with respect to our foreign exchange activities, such as remittance of dividends and foreign-currency-denominated borrowings, which may adversely affect our financial condition and results of operations. In addition, if we decide to acquire a PRC domestic company, we cannot assure you that we or the owners of such company, as the case may be, will be able to obtain the necessary approvals or complete the necessary filings and registrations required by the foreign exchange regulations. This may restrict our ability to implement our acquisition strategy and could adversely affect our business and prospects.

Failure to comply with PRC regulations regarding the registration requirements for employee stock ownership plans or share option plans may subject the PRC plan participants or us to fines and other legal or administrative sanctions.

In December 2006, the People's Bank of China promulgated *the Administrative Measures of Foreign Exchange Matters for Individuals*, which set forth the respective requirements for foreign exchange transactions by individuals (both PRC or non-PRC citizens) under either the current account or the capital account. 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, which 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. 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 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 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 PRC employees who have been granted stock options are subject to these regulations. Failure by us or our PRC stock option holders to comply with the SAFE regulations may subject us or these PRC residents to fines and legal sanctions and may also limit our ability to contribute additional capital into our PRC subsidiaries, limit our PRC subsidiaries' ability to distribute dividends to us, or otherwise materially adversely affect our business.

We face uncertainties with respect to indirect transfers of equity interests in PRC resident enterprises by their non-PRC holding companies.

The State Administration of Taxation, or the SAT, has issued several rules and notices to tighten its scrutiny over acquisition transactions in recent years, including *the Notice on Strengthening Administration of Enterprise Income Tax for Share Transfers by Non-PRC Resident Enterprises* issued in December 2009, or SAT Circular 698, *the Notice on Several Issues Regarding the Income Tax of Non-PRC Resident Enterprises* issued in March 2011, or SAT Circular 24, and *the Notice on Certain Corporate Income Tax Matters on Indirect Transfer of Properties by Non-PRC Resident Enterprises* issued in February 2015, or SAT Circular 7. Pursuant to these rules and notices, if a non-PRC resident enterprise indirectly transfers PRC taxable properties, which refer to properties of an establishment or a place in the PRC, real estate properties in the PRC or equity investments in a PRC tax resident enterprise, by disposing of equity interest in an overseas non-public holding company without a reasonable commercial purpose and resulting in the avoidance of PRC enterprise income tax, such indirect transfer should be deemed a direct transfer of PRC taxable properties, and gains derived from such indirect transfer may be subject to the PRC withholding tax at a rate of up to 10%. SAT Circular 7 sets out several factors to be taken into consideration by tax authorities in determining whether an indirect transfer has a reasonable commercial purpose. An indirect transfer satisfying all the following criteria will be deemed to lack reasonable commercial purpose and be taxable under PRC law: (i) 75% or more of the equity value of the intermediary enterprise being transferred is derived directly or indirectly from the PRC taxable properties; (ii) at any time during the one-year period before the indirect transfer, 90% or more of the asset value of the intermediary enterprise (excluding cash) is comprised directly or indirectly of investments in the PRC, or 90% or more of its income is derived directly or indirectly from the PRC; (iii) the functions performed and risks assumed by the intermediary enterprise and any of its subsidiaries that directly or indirectly hold the PRC taxable properties are limited and are insufficient to prove their economic substance; and (iv) the foreign tax payable on the gain derived from the indirect transfer of the PRC taxable properties is lower than the potential PRC enterprise income tax on the direct transfer of such assets. Nevertheless, the indirect transfer falling into the safe harbor available under SAT Circular 7 may not be subject to PRC tax and the scope of the safe harbor includes qualified group restructuring, public market trading and tax treaty exemptions. On October 17, 2017, the SAT issued *the Public Notice on Issues Concerning the Withholding of Non-resident Enterprise Income Tax at Source*, or SAT Public Notice 37, which took effect on December 1, 2017. SAT Public Notice 37 replaced a series of important circulars, including but not limited to SAT Circular 698 and amended the rules governing the administration of withholding tax on China-source income derived by the non-resident enterprise. SAT Public Notice 37 also introduced certain key changes to the current withholding regime, such as (i) non-resident enterprise's withholding obligation for dividend was changed to arise on the date the payment is actually made as opposed to dividend declaration date; and (ii) non-resident enterprise's obligation to self-report tax within seven days upon withholding agent's failure to withhold was removed.

Under SAT Circular 7 and SAT Public Notice 37, the entities or individuals obligated to pay the transfer price to the transferor are the withholding agents and must withhold the PRC enterprise income tax from the transfer price. If the withholding agent fails to do so, the transferor should report to and pay the PRC enterprise income tax to the PRC tax authorities. In the event that neither the withholding agent nor the transferor fulfills their obligations under SAT Circular 7 and SAT Public Notice 37, apart from imposing penalties such as late payment interest on the transferor, the tax authority may also hold the withholding agent liable and impose a penalty of 50% to 300% of the unpaid tax on the withholding agent. The penalty imposed on the withholding agent may be reduced or waived if the withholding agent has submitted the relevant materials in connection with the indirect transfer to the PRC tax authorities in accordance with SAT Circular 7.

However, there is a lack of clear statutory interpretation of these rules and notices, we face uncertainties on the reporting and consequences on future private equity financing transactions, share exchange or other transactions involving the transfer of shares in our company by investors that are non-PRC resident enterprises, or sale or purchase of shares in other non-PRC resident companies or other taxable assets by us. Our Cayman Islands holding company and other non-resident enterprises in our company may be subject to filing obligations or may be taxed if our Cayman Islands holding company and other non-resident enterprises in our company are transferors in such transactions, and may be subject to withholding obligations if our Cayman Islands holding company and other non-resident enterprises in our company are transferees in such transactions. For the transfer of shares in our Cayman Islands holding company by investors that are non-PRC resident enterprises, our PRC subsidiaries may be requested to assist in the filing under the rules and notices. As a result, we may be required to expend valuable resources to comply with these rules and notices or to request the relevant transferors from whom we purchase taxable assets to comply, or to establish that our Cayman Islands holding company and other non-resident enterprises in our company should not be taxed under these rules and notices, which may have a material adverse effect on our financial condition and results of operations. There is no assurance that the tax authorities will not apply the rules and notices to our offshore restructuring transactions where non-PRC resident investors were involved if any of such transactions were determined by the tax authorities to lack reasonable commercial purpose. As a result, we and our non-PRC resident investors may be at risk of being taxed under these rules and notices and may be required to comply with or to establish that we should not be taxed under such rules, which may have a material adverse effect on our financial condition and results of operations or such non-PRC resident investors' investments in us. We have conducted acquisition transactions in the past and may conduct additional acquisition transactions in the future. We cannot assure you that the PRC tax authorities will not, at their discretion, adjust any capital gains and impose tax return filing obligations on us or require us to provide assistance for the investigation of PRC tax authorities with respect thereto. Heightened scrutiny over acquisition transactions by the PRC tax authorities may have a negative impact on potential acquisitions we may pursue in the future.

Discontinuation or reduction of any of the preferential tax treatments or other government incentives available to us in the PRC, or imposition of any additional PRC taxes could adversely affect our financial condition and results of operations.

Under the PRC Enterprise Income Tax Law, or the EIT Law, the statutory enterprise income tax rate is 25%. Under certain circumstances, preferential tax rates may be applied if an enterprise meets the corresponding standards and qualifications and completes certain procedures. See "Item 5. Operating and Financial Overview and Prospects—A. Operating Results—Taxation" for details of tax benefits applicable to us. Preferential tax treatment and other government incentives granted to the variable interest entity and subsidiaries are subject to review and may be adjusted or revoked at any time. The discontinuation or reduction of any preferential tax treatment currently available to us and our wholly owned PRC subsidiaries will cause our effective tax rate to increase, which could have a material adverse effect on our financial condition and results of operations. We cannot assure you that we will be able to maintain our current effective tax rate in the future.

Our global income may be subject to PRC taxes under the PRC EIT Law, which may have a material adverse effect on our results of operations.

Under the EIT Law and its implementation rules, an enterprise established outside of the PRC with a “de facto management body” within the PRC is considered a resident enterprise and will be subject to the enterprise income tax at the rate of 25% on its global income. The implementation rules define the term “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.” On April 22, 2009, the SAT issued a circular, 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 China. See “Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on tax—PRC enterprise income tax.” Although SAT Circular 82 applies only to offshore enterprises controlled by PRC enterprises or PRC enterprise groups and not to those controlled by PRC individuals or foreigners, the determining criteria set forth in the SAT Circular 82 may reflect the SAT’s general position on how the “de facto management body” test should be applied in determining the tax resident status of all offshore enterprises.

According to SAT Circular 82, an offshore incorporated enterprise controlled by a PRC enterprise or a PRC enterprise group will be regarded as a PRC tax resident by virtue of having its “de facto management body” in China and will be subject to PRC enterprise income tax on its worldwide income only if all of the following conditions set forth in the SAT Circular 82 are met: (i) the primary location of the day-to-day operational management is in the PRC; (ii) decisions relating to the enterprise’s financial and human resource matters are made or are subject to approval by organizations or personnel in the PRC; (iii) the enterprise’s primary assets, accounting books and records, company seals, and board and shareholder resolutions are located or maintained in the PRC; and (iv) at least 50% of voting board members or senior executives habitually reside in the PRC.

Xunlei Limited is not controlled by a PRC enterprise or PRC enterprise group and we do not believe that Xunlei Limited meets all of the conditions above. Xunlei Limited is a company incorporated outside the PRC. As a holding company, certain of Xunlei Limited’s key assets, including a significant amount of cash, are located, and records (including the resolutions of its board of directors and the resolutions of its shareholders) are maintained, outside the PRC. Therefore, we do not believe Xunlei Limited should be treated as a “resident enterprise” for PRC tax purposes if the criteria for “de facto management body” as set forth in the relevant SAT Circular 82 were deemed applicable to us. However, as the tax resident status of an enterprise is subject to determination by the PRC tax authorities and uncertainties remain with respect to the interpretation of the term “de facto management body” as applicable to Xunlei Limited, we may be considered a resident enterprise and may therefore be subject to the enterprise income tax at 25% on our global income. If we are considered a resident enterprise and earn income other than dividends from our PRC subsidiaries, a 25% enterprise income tax on our global income could increase our tax burden and adversely affect our cash flow and profitability. In addition to the uncertainty regarding how the new “resident enterprise” classification may apply, it is also possible that the rules may change in the future, possibly with retroactive effects.

Dividends paid by us to our foreign investors and gains on the sale of our ADSs or common shares by our foreign investors may be subject to taxes under PRC tax laws.

Under the EIT Law and its implementation regulations issued by the State Council, a 10% PRC withholding tax is applicable to dividends paid to investors that are “non-resident enterprises,” which do not have an establishment or place of business in the PRC or which have such establishment or place of business but the dividends are not effectively connected with such establishment or place of business, to the extent such dividends are derived from sources within the PRC. Any gain realized on the transfer of ADSs or common shares by such investors is subject to PRC tax, at a rate of 10% unless otherwise reduced or exempted by relevant tax treaties, if such gain is regarded as income derived from sources within the PRC. If we are deemed a “PRC resident enterprise,” dividends paid on our common shares or ADSs, and any gain realized from the transfer of our common shares or ADSs, may be treated as income derived from sources within the PRC and may as a result be subject to PRC taxation (which in the case of dividends would be withheld at source). It is unclear whether our non-PRC individual investors would be subject to any PRC tax in the event we are deemed a “PRC resident enterprise.” If any PRC tax were to apply to such dividends or gains of non-PRC individual investors, it would generally apply at a rate of 20% (unless a reduced rate is available under an applicable tax treaty). It is also unclear whether, if we are considered a PRC “resident enterprise,” holders of our ADSs or common shares would be able to claim the benefit of income tax treaties or agreements entered into between China and other countries or areas (and we do not expect to withhold at treaty rates if any withholding is required). If dividends payable to our non-PRC investors, or gains from the transfer of our common shares or ADSs by such investors are subject to PRC tax, the value of your investment in our common shares or ADSs may be adversely affected.

Increases in labor costs and enforcement of stricter labor laws and regulations in the PRC may adversely affect our business and our profitability.

China's overall economy and the average wage in China have increased in recent years and are expected to continue to grow. The average wage level for our employees has also increased in recent years. We expect that our labor costs, including wages and employee benefits, will continue to increase. Unless we are able to pass on these increased labor costs to our users by increasing prices for our products or services, our profitability and results of operations may be materially and adversely affected.

In addition, we have been subject to stricter regulatory requirements in terms of entering labor contracts with our employees and paying various statutory employee benefits, including pensions, housing fund, medical insurance, work-related injury insurance, unemployment insurance and childbearing insurance to designated government agencies for the benefit of our employees. Pursuant to *the PRC Labor Contract Law*, or the Labor Contract law, that became effective in January 2008, as amended on December 28, 2012 and effective as of July 1, 2013, and its implementation rules that became effective 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. In the event that we decide to terminate some of our employees or otherwise change our employment or labor practices, the Labor Contract Law and its implementation rules may 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 SCNPC promulgated *the PRC Social Insurance Law*, or the Social Insurance Law, which became effective on July 1, 2011. 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.

As the interpretation and implementation of labor-related laws and regulations are still evolving, we cannot assure you that our employment practice do not and will not violate labor-related laws and regulations in China, which may subject us to labor disputes or government investigations. If we are deemed to have violated relevant labor laws and regulations, we could be required to provide additional compensation to our employees and our business, financial condition and results of operations could be materially and adversely affected.

The PCAOB had historically been unable to inspect our auditor in relation to their audit work performed for our financial statements and the inability of the PCAOB to conduct inspections of our auditor in the past has deprived our investors with the benefits of such inspections.

Our auditor, the independent registered public accounting firm that issues the audit report included elsewhere in this annual report, as an auditor of companies that are traded publicly in the United States and a firm registered with the PCAOB, is subject to laws in the United States pursuant to which the PCAOB conducts regular inspections to assess its compliance with the applicable professional standards. The auditor is located in mainland China, a jurisdiction where the PCAOB was historically unable to conduct inspections and investigations completely before 2022. As a result, we and investors in the ADSs were deprived of the benefits of such PCAOB inspections. The inability of the PCAOB to conduct inspections of auditors in China in the past has made it more difficult to evaluate the effectiveness of our independent registered public accounting firm's audit procedures or quality control procedures as compared to auditors outside of China that are subject to the PCAOB inspections. 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. However, if the PCAOB determines in the future that it no longer has full access to inspect and investigate completely accounting firms in mainland China and Hong Kong, and we use an accounting firm headquartered in one of these jurisdictions to issue an audit report on our financial statements filed with the Securities and Exchange Commission, we and investors in our ADSs would be deprived of the benefits of such PCAOB inspections again, which could cause investors and potential investors in the ADSs to lose confidence in our audit procedures and reported financial information and the quality of our financial statements.

Our ADSs may be prohibited from trading in the United States under the HFCAA in the future if the PCAOB is unable to inspect or investigate completely auditors located in China. The delisting of the ADSs, or the threat of their being delisted, may materially and adversely affect the value of your investment.

Pursuant to the HFCAA, if the SEC determines that we have filed audit reports issued by a registered public accounting firm that has not been subject to inspections by the PCAOB for two consecutive years, the SEC will prohibit our shares or ADSs from being traded on a national securities exchange or in the over-the-counter trading market in the United States.

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 auditor was subject to that determination. In May 2022, the SEC conclusively listed us as a Commission-Identified Issuer under the HFCAA following the filing of our annual report on Form 20-F for the fiscal year ended December 31, 2021. On December 15, 2022, the PCAOB removed mainland China and Hong Kong from the list of jurisdictions where it is unable to inspect or investigate completely registered public accounting firms. For this reason, 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 for the fiscal year ended December 31, 2022.

Each year, the PCAOB will determine whether it can inspect and investigate completely audit firms in mainland China and Hong Kong, among other jurisdictions. If the PCAOB determines in the future that it no longer has full access to inspect and investigate completely accounting firms in mainland China and Hong Kong and we use an accounting firm headquartered in one of these jurisdictions to issue an audit report on our financial statements filed with the Securities and Exchange Commission, we would be identified as a Commission-Identified Issuer following the filing of the annual report on Form 20-F for the relevant fiscal year. In accordance with the HFCAA, our securities would be prohibited from being traded on a national securities exchange or in the over-the-counter trading market in the United States if we are identified as a Commission-Identified Issuer for two consecutive years in the future. If our shares and ADSs are prohibited from trading in the United States, there is no certainty that we will be able to list on a non-U.S. exchange or that a market for our shares will develop outside of the United States. A prohibition of being able to trade in the United States would substantially impair your ability to sell or purchase our ADSs when you wish to do so, and the risk and uncertainty associated with delisting would have a negative impact on the price of our ADSs. Also, such a prohibition would significantly affect our ability to raise capital on terms acceptable to us, or at all, which would have a material adverse impact on our business, financial condition, and prospects.

The approval of and the filing with the CSRC or other PRC government authorities may be required in connection with our future offshore offerings (if any) under PRC law, and, if required, we cannot predict whether or for how long we will be able to obtain such approval.

The Regulations on Mergers and Acquisitions of Domestic Enterprises by Foreign Investors, or the M&A Rules, adopted by six PRC regulatory agencies in 2006 and amended in 2009, requires an overseas special purpose vehicle formed for listing purposes through acquisitions of PRC domestic companies 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. The interpretation and application of the regulations remain unclear, and our future offshore offerings (if any) 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 future offshore offerings (if any), or a rescission of such approval if obtained by us, would subject us to sanctions imposed by the CSRC or other PRC regulatory authorities, which could include fines and penalties on our operations in China, restrictions or limitations on our ability to pay dividends outside of China, and other forms of sanctions that may materially and adversely affect our business, financial condition, and results of operations.

On April 13, 2020, the CAC, the NDRC and other PRC governmental authorities jointly promulgated the *Measures for Cybersecurity Reviews*, which was amended on December 28, 2021 with effect from February 15, 2022. The *Measures for Cybersecurity Reviews* require that, among others, operators of “critical information infrastructure” purchasing internet products or services or network platform operators carrying out data processing activities, which affect or may affect national security, shall apply with the Cybersecurity Review Office for a cybersecurity review. In addition, a network platform operator holding over one million users’ personal information shall apply with the Cybersecurity Review Office for a cybersecurity review before any public offering and listing on a foreign stock exchange. On November 14, 2021, the CAC released the *Draft Administrative Measures for Internet Data Security*, or the Draft Measures for Internet Data Security, for public comments, which requires, among others, that a prior cybersecurity review would be required for the overseas listing of data processors that process over one million users’ personal information, or the listing of data processors in Hong Kong that affects or may affect national security.

On July 6, 2021, the relevant PRC government authorities issued *Opinions on Strictly Cracking Down Illegal Securities Activities in Accordance with the Law*. These opinions emphasized the need to strengthen the administration over illegal securities activities and the supervision on overseas listings by China-based companies and proposed to take effective measures, such as promoting the construction of relevant regulatory systems to deal with the risks and incidents faced by China-based overseas-listed companies. On February 17, 2023, the CSRC issued *Trial Administrative Measures of Overseas Securities Offering and Listing by Domestic Companies*, or the Trial Measures, with effect from March 31, 2023, and the No. 1 to No. 5 Supporting Guidance Rules, or collectively the Guidance Rules. The Trial Measures, together with the Guidance Rules, establish a new filing-based regime to regulate overseas offerings and listings by domestic companies. Specifically, an overseas follow-on offering or listing, or other equivalent offering activity, including issuance of convertible notes, exchangeable notes or preferred shares, by a domestic company, whether directly or indirectly, must be filed with the CSRC and comply with the requirements under the Trial Measures. The indirect overseas listing of domestic companies refers to companies that conduct business mainly in China but issue shares or other similar rights and seek listing in overseas jurisdictions through their overseas holding companies. See “Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on Overseas Listings.” The Trial Measures have no retroactive effect and thus are not applicable to our listing and offering prior to their promulgation. However, as the Trial Measures are newly promulgated and there are substantial uncertainties with respect to the filing requirements and overall implementation at this stage. We cannot assure you that, if the conditions are met and any filing or other procedure is required, we would be able to complete such filing or procedure for our future offering or listing, if any, and fully comply with the Trial Measures on a timely basis, or at all. Any failure to complete or not being able to complete the requisite filing for our future offering or listing, if any, or any failure or perceived failure by us to comply with the requirements under the Trial Measures may result in rectification, warnings or fines against us and could materially hinder our ability to conduct securities offerings.

On February 24, 2023, the CSRC together with other PRC governmental authorities issued *the Provisions on Strengthening the Management of Confidentiality and Archives regarding Overseas Securities Offerings and Listings by Domestic Companies*, or the Confidentiality and Archives Management Provisions, effective March 31, 2023, which require, among others, domestic companies involved in overseas offerings and listings to obtain approvals from the competent authority and file with the state secrets protection administration of the same level before providing or publicly disclosing any document or material that involves state secrets or secrets of state organizations. The Confidentiality and Archives Management Provisions also require domestic companies to complete relevant procedures before providing accounting archives to entities, including securities companies, securities service institutions, overseas regulators, and individuals. Additionally, domestic companies, securities companies and securities service institutions must obtain relevant approval before providing documents and information in response to inspections and investigations by overseas regulators. These inspections and investigations shall be conducted via the cross-border supervision mechanism whereby the PRC regulators will provide necessary assistance. See “Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on Overseas Listings”. As the Confidentiality and Archives Management Provisions are relatively new and there are substantial uncertainties with respect to the enforcement of the requirements and the specific procedures and approvals required thereunder, we cannot assure you that, if applicable to us, we would be able to obtain the necessary approvals on a timely basis or at all, which may hinder our ability to comply with the requirements under the Confidentiality and Archives Management Provisions and carry out future offerings or listings of securities overseas.

On December 27, 2021, the NDRC and the Ministry of Commerce jointly issued *the Special Administrative Measures (Negative List) for Foreign Investment Access (2021 Version)*, or the 2021 Negative List, which became effective on January 1, 2022. Pursuant to the Special Administrative Measures, if a PRC company engaging in a prohibited business stipulated in the 2021 Negative List seeks an overseas offering and listing, it shall obtain the approval from the competent governmental authorities. In addition, the foreign investors of the issuer 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 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 operations, financial condition and business prospect may be adversely and materially affected.

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 approval from and filing with the CSRC or other regulatory authorities or other procedures, including the cybersecurity review under *the Measures for Cybersecurity Reviews* and *the Draft Measures for Internet Data Security*, are required for our future offshore offerings (if any), it is uncertain whether we can or how long it will take us to obtain such approval or complete such filing 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 future offshore offerings (if any), or a rescission of any such approval or filing if obtained by us, would subject us to sanctions by the CSRC or other PRC regulatory authorities for failure to seek CSRC approval or filing or other government authorization for our future offshore offerings (if any). These regulatory authorities may impose fines and penalties on our operations in China, limit our ability to pay dividends outside of China, limit our operating privileges in China, delay or restrict the repatriation of the proceeds from our future offshore offerings (if any) into 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 PRC regulatory authorities also may take actions requiring us, or making it advisable for us, to halt our future offshore offerings (if any) 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 future offshore offerings (if any), 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 and reputation as well as the trading price of our listed securities.

Risks Related to Our ADSs

The market price for our ADSs may be volatile.

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 similarly situated companies in China that have listed their securities in the United States in recent years. The securities of some of these companies have experienced significant volatility since their initial public offerings, including, in some cases, substantial declines in the trading prices of their securities. The trading performances of these Chinese companies' securities after their offerings, including companies in the internet businesses, may affect the attitudes of investors toward Chinese companies listed in the United States, 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 Chinese companies may also negatively affect the attitudes of investors towards Chinese companies in general, including us, regardless of whether we have engaged in such practices. In addition, securities markets may from time to time experience significant price and volume fluctuations that are not related to our operating performance, which may have a material adverse effect on the market price of our ADSs.

The market price for our ADSs is likely to be highly volatile and subject to wide fluctuations in response to factors including the following:

- regulatory developments affecting us, our advertisers or our industry;
- announcements of studies and reports relating to our services or those of our competitors;

- changes in the economic performance or market valuations of other internet companies in China;
- actual or anticipated fluctuations in our quarterly results of operations and changes of our expected results;
- changes in financial estimates by securities research analysts;
- conditions in the internet or online advertising industry in China;
- announcements by us or our competitors of new services, acquisitions, strategic relationships, joint ventures or capital commitments;
- additions to or departures of our senior management;
- fluctuations of exchange rates between the Renminbi and the U.S. dollar;
- release or expiry of lock-up or other transfer restrictions on our outstanding shares or ADSs; and
- sales or perceived potential sales of additional shares or ADSs.

In addition, the securities market has from time to time experienced significant price and volume fluctuations that are not related to the operating performance of any particular companies. These market fluctuations may also have a material adverse effect on the market price of our ADSs.

If securities or industry analysts cease to 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.

As we do not expect to pay dividends in the foreseeable future, you must rely on price appreciation of our ADSs for return on your investment.

We currently intend to retain most, if not all, of our available funds and any future earnings to fund the development and growth of our business. Subject to our ongoing financial performance, cash position, budget and business plan and market conditions, we may consider paying special dividends. However, we do not plan to pay dividends in the foreseeable future and you should not rely on an investment in our ADSs as a source for any future dividend income.

Our board of directors has discretion as to whether to distribute dividends, subject to applicable laws. In addition, our shareholders may by ordinary resolution declare dividends, but no dividend may exceed the amount recommended by our board of directors. Under Cayman Islands law, a Cayman Islands company may pay a dividend out of either profit or share premium account, provided that in no circumstances may a dividend be paid if this would result in the company being unable to pay its debts as they fall due in the ordinary course of business. Even if our board of directors decides to declare and pay dividends, the timing, amount and form of future dividends, if any, will depend on, among other things, our future results of operations and cash flow, our capital requirements and surplus, the amount of distributions, if any, received by us from our subsidiaries, our financial condition, contractual restrictions and other factors deemed relevant by our board of directors. Accordingly, the return on your investment in our ADSs will likely depend entirely upon any future price appreciation of our ADSs. There is no guarantee that our ADSs will appreciate in value or even maintain the price at which you purchased the ADSs. You may not realize a return on your investment in our ADSs and you may even lose your entire investment in our ADSs.

Substantial future sales or perceived potential sales of our ADSs in the public market could cause the price of our ADSs to decline.

Sales of our ADSs in the public market, or the perception that these sales could occur, could cause the market price of our ADSs to decline. As of March 31, 2023, we had 323,775,666 common shares outstanding, which excludes (i) 1,370,285 common shares representing 274,057 ADSs and 9,519,144 common shares held by Leading Advice Holdings Limited, a share incentive awards holding platform, and (ii) 40,336,845 common shares, consisting of shares issued to our depositary bank for bulk issuance of ADSs reserved for future issuances upon the exercise or vesting of awards granted under our share incentive plans and shares repurchased by us but not yet cancelled. All our outstanding common shares represented by ADSs were freely transferable by persons other than our “affiliates” without restriction or additional registration under the Securities Act of 1933, as amended, or Securities Act. The remaining common shares will be available for sale subject to volume and other restrictions as applicable under Rules 144 and 701 under the Securities Act. Certain holders of our common shares have the right to cause us to register under the Securities Act the sale of their shares. Registration of these shares under the Securities Act would result in ADSs representing these shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration. Sales of these registered shares in the form of ADSs, in the public market could cause the price of our ADSs to decline.

Your right to participate in any future rights offerings may be limited, which may cause dilution to your holdings, and you may not receive cash dividends if it is impractical to make them available to you.

We may from time to time distribute rights to our shareholders, including rights to acquire our securities. However, we cannot make rights available to you in the United States unless we register both the rights and the securities to which the rights relate under the Securities Act or an exemption from the registration requirements is available. Under the deposit agreement, the depositary will not make rights available to you unless both the rights and the underlying securities to be distributed to ADS holders are either registered under the Securities Act or exempt from registration under the Securities Act. We are under no obligation to file a registration statement with respect to any such rights or securities or to endeavor to cause such a registration statement to be declared effective and we may not be able to establish a necessary exemption from registration under the Securities Act. Accordingly, you may be unable to participate in our rights offerings and may experience dilution in your holdings.

The depositary of our ADSs has agreed to pay to you the cash dividends or other distributions it or the custodian receives on our common shares or other deposited securities after deducting its fees and expenses. You will receive these distributions in proportion to the number of common shares your ADSs represent. However, the depositary may, at its discretion, decide that it is inequitable or impractical to make a distribution available to any holders of ADSs. For example, the depositary may determine that it is not practicable to distribute certain property through the mail, or that the value of certain distributions may be less than the cost of mailing them. In these cases, the depositary may decide not to distribute such property to you.

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

Your ADSs are transferable on the books of the depositary. However, the depositary may close its transfer books at any time or from time to time when it deems expedient in connection with the performance of its duties. In addition, the depositary may refuse to deliver, transfer or register transfers of ADSs generally when our books or the books of the depositary are closed, or at any time if we or the depositary deems it 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.

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 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 the ADSs, you will not have any direct right to attend general meetings of our shareholders or to cast any votes at such meetings. You will only be able to exercise the voting rights which are carried by the underlying 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. If we instruct the depositary to ask for your instructions, then upon receipt of your voting instructions, the depositary will try, as far as is practicable, to vote the underlying common shares which are represented by your ADSs in accordance with your instructions. If we do not instruct the depositary to ask for your instructions, the depositary may still vote in accordance with instructions you give under specific circumstances when it is not required to do so. You will not be able to directly exercise your right to vote with respect to the underlying common shares represented by your ADSs unless you convert your ADSs into the underlying common shares and become the registered holder of such common shares prior to the record date for the general meeting. When a general meeting is convened, you may not receive sufficient advance notice of the meeting to withdraw the underlying common shares represented by your ADSs and become the registered holder of such common 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 memorandum and articles of association, for the purposes of determining those shareholders who are entitled to attend and vote at any general meeting, our directors may close our register of members and/or 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 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, at the sole discretion of the depositary and as soon as practicable, notify you of the upcoming vote and will arrange to deliver our voting materials to you. We have agreed to give the depositary at least 30 days' prior notice of shareholder meetings. Nevertheless, 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 common shares represented by your ADSs.

You may face difficulties in protecting your interests, and your ability to protect your rights through the U.S. federal courts may be limited because we are incorporated under Cayman Islands law, we conduct almost all of our operations in China and substantially all of our directors and officers reside outside the United States.

We are incorporated in the Cayman Islands and conduct almost all of our operations in China through our PRC subsidiaries and variable interest entity and its subsidiaries. Substantially all of our directors and officers reside 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 Cayman Islands or in the United States in the event that you believe that your rights have been infringed under the U.S. securities laws or otherwise. Even if you are successful in bringing an action of this kind, the laws of the Cayman Islands and of China may render you unable to enforce a judgment against our assets or the assets of our directors and officers.

There is uncertainty as to whether Cayman Islands courts or PRC courts would:

- recognize or enforce judgments of courts of the United States obtained against us based on certain civil liability provisions of U.S. securities laws; or
- entertain original actions brought in the Cayman Islands or the PRC against us, based on certain civil liability provisions of U.S. securities laws.

Although there is no statutory enforcement in the Cayman Islands of judgments obtained in the federal or state courts of the United States, (and the Cayman Islands are not a party to any treaties for the reciprocal enforcement or recognition of such judgments), 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 any reexamination of the merits of the underlying dispute 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 such judgment (i) is final and conclusive, (ii) is not in respect of taxes, a fine or a penalty; (iii) is not inconsistent with a Cayman Island judgment in respect of the same matter, and (iv) 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 U.S. courts under civil liability provisions of the U.S. federal securities law 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.

The recognition and enforcement of foreign judgments are provided for under the PRC Civil Procedures Law. PRC courts may recognize and enforce foreign judgments in accordance with the requirements of the PRC Civil Procedures Law based either on treaties between China and the country where the judgment is made or on principles of reciprocity between jurisdictions. China does not have any treaties with the United States or the Cayman Islands that provide for the enforcement of foreign judgments and PRC courts strictly adopt the principle of reciprocity in judicial practice. In addition, according to the PRC Civil Procedures Law, courts in the PRC will not enforce a foreign judgment against us or our directors and officers if they decide that the judgment violates the basic principles of PRC law or national sovereignty, security, or public interest. As a result, it is uncertain whether and on what basis a PRC court would enforce a judgment rendered by a court in the United States or in the Cayman Islands.

Our corporate affairs are governed by our memorandum and articles of association, as amended and restated from time to time, and by the Companies Act (As Revised) and common law of the Cayman Islands. The rights of shareholders to take legal actions against us and our directors, actions by minority shareholders and the fiduciary duties 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 English common law, which provides persuasive, but not binding, authority in a court in the Cayman Islands. The rights of our shareholders and the fiduciary duties of our directors under Cayman Islands law are not as clearly established as they would be under statutes or judicial precedents in the United States. In particular, the Cayman Islands has a less developed body of securities laws than the United States and provides significantly less protection to investors. In addition, shareholders in Cayman Islands companies may not have standing to initiate a shareholder derivative action in U.S. federal courts.

It is also difficult or impossible for you to bring an action against us or against our directors and officers in China. Under the PRC Civil Procedures Law, foreign shareholders may bring an action based on PRC law against a company in China for disputes if they can establish sufficient nexus to the PRC for a PRC court to have jurisdiction, and meet other procedural requirements, including, among others, the plaintiff must have a direct interest in the case, and there must be a concrete claim, a factual basis and a cause for the suit. It will be, however, difficult for U.S. shareholders to bring actions against us in the PRC in accordance with PRC laws because we are incorporated under the laws of the Cayman Islands and it will be difficult for U.S. shareholders, by virtue only of holding the ADSs or common shares, to establish a connection to the PRC for a PRC court to have jurisdiction as required under the PRC Civil Procedures Law.

As a result, our public shareholders may have more difficulties in protecting their interests through actions against us, our management, our directors or our controlling shareholders than would shareholders of a corporation incorporated in a jurisdiction in the United States.

Since we are a Cayman Islands exempted company, the rights of our shareholders may be more limited than those of shareholders of a company organized in the United States.

Under the laws of some jurisdictions in the United States, majority and controlling shareholders generally have certain fiduciary responsibilities to the minority shareholders. Shareholder action must be taken in good faith, and actions by controlling shareholders which are obviously unreasonable may be declared null and void. Cayman Islands law protecting the interests of minority shareholders may not be as protective in all circumstances as the law protecting minority shareholders in some U.S. jurisdictions. In addition, the circumstances in which a shareholder of a Cayman Islands company may sue the company derivatively, and the procedures and defenses that may be available to the company, may result in the rights of shareholders of a Cayman Islands company being more limited than those of shareholders of a company organized in the United States.

Furthermore, our directors have the power to take certain actions without shareholder approval which would require shareholder approval under the laws of most U.S. jurisdictions. The directors of a Cayman Islands company, without shareholder approval, may implement a sale of any assets, property, part of the business, or securities of the company. Our ability to create and issue new classes or series of shares without shareholders' approval could have the effect of delaying, deterring or preventing a change in control without any further action by our shareholders, including a tender offer to purchase our common shares at a premium over then current market prices.

Our memorandum and articles of association contains anti-takeover provisions that could adversely affect the rights of holders of our common shares and ADSs.

Our currently effective memorandum and articles of association contains certain provisions that could limit the ability of others to acquire control of our company, including a provision that grants authority to our board directors to establish from time to time one or more series of preferred shares without action by our shareholders. The provisions could have the effect of depriving our shareholders of the opportunity to sell their shares at a premium over the prevailing market price by discouraging third parties from seeking to obtain control of our company in a tender offer or similar transactions.

Our corporate actions are substantially controlled by our directors, executive officers and other principal shareholders, who can exert significant influence over important corporate matters, which may reduce the price of our ADSs and deprive you of an opportunity to receive a premium for your shares.

As of March 31, 2023, our directors, executive officers and existing principal shareholders beneficially owned approximately 51.6% of our outstanding common shares. These shareholders, if acting together, could exert substantial influence over matters such as electing directors and approving material mergers, acquisitions or other business combination transactions. This concentration of ownership may also discourage, delay or prevent a change in control of our company, which could have the dual effect of depriving our shareholders of an opportunity to receive a premium for their shares as part of a sale of our company and reducing the price of our ADSs. These actions may be taken even if they are opposed by our other shareholders. In addition, these persons could divert business opportunities away from us to themselves or others.

We incur increased costs as a result of being a public company, particularly after we have ceased to qualify as an “emerging growth company.”

As a public company in the United States, we incur significant accounting, legal and other expenses that we did not incur as a private company. The Sarbanes-Oxley Act, as well as rules subsequently implemented by the Securities and Exchange Commission and the NASDAQ Global Select Market, require significantly heightened corporate governance practices of public companies, including Section 404 relating to internal control over financial reporting. We expect these rules and regulations to increase our legal and financial compliance costs and to make some corporate activities more time-consuming and costly. In particular, as we are no longer an “emerging growth company,” we expect to incur significant expenses and devote substantial management efforts in assessing our internal control over financial reporting and comply with the auditor attestation requirement under Section 404 of the Sarbanes-Oxley Act of 2002. Compliance with these rules and requirements may be especially difficult and costly for us because we may have difficulty locating sufficient personnel in China with experience and expertise relating to U.S. GAAP and U.S. public company reporting requirements, and such personnel may command high salaries relative to similarly experienced personnel in the United States. If we cannot employ sufficient personnel to ensure compliance with these rules and regulations, we may need to rely more on outside legal, accounting and financial experts, which may be costly. If we fail to comply with these rules and requirements, or are perceived to have weaknesses with respect to our compliance, we could become the subject of a governmental enforcement action and investor confidence could be negatively impacted and the market price of our ADSs could decline. In addition, we will incur additional costs associated with our public company reporting requirements. We are currently evaluating and monitoring developments with respect to these rules and regulations, and we cannot predict or estimate with reasonable certainty the amount of additional costs we may incur or the timing of such costs.

We were named as a defendant in putative shareholder class action lawsuits in the United States, and we may be involved in more class action lawsuits in the future. Such lawsuits could divert a significant amount of our management’s attention and other resources from our business and operations, which could harm our results of operations and require us to incur significant expenses to defend the lawsuits. Any such class action suit, whether or not successful, could harm our reputation and restrict our ability to raise capital in the future. In addition, if a claim is successfully made against us, we may be required to pay significant damages, which could have a material adverse effect on our financial condition and results of operations.

We believe we were a passive foreign investment company for our taxable year ended December 31, 2022, which could subject United States investors in the ADSs or common shares to significant adverse United States federal income tax consequences.

Based upon the nature and composition of our assets (in particular, the retention of substantial amounts of cash and investments), and the market price of our ADSs, we believe that we were a “passive foreign investment company” (a “PFIC”) for United States federal income tax purposes for our taxable year ended December 31, 2022, and we will very likely be a PFIC for our current taxable year ending December 31, 2023 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. In addition, it is possible that one or more of our subsidiaries may be or become classified as a PFIC for United States federal income tax purposes. A non-U.S. corporation will be classified as a PFIC for any taxable year if either (1) 75% or more of its gross income consists of certain types of passive income or (2) 50% or more of the value of its assets (generally determined on the basis of a quarterly average) during such year is attributable to assets that produce or are held for the production of passive income.

If we are classified as a PFIC for any taxable year during which a U.S. Holder (as defined in Item 10. Additional Information—E. Taxation—United States Federal Income Tax Considerations) holds our ADSs or common shares, such U.S. Holder will generally be subject to reporting requirements and may incur significantly increased United States federal income tax on gain recognized on the sale or other disposition of the ADSs or common shares and on the receipt of distributions on the ADSs or 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 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 common shares, unless we cease to be a PFIC and such U.S. Holder makes a “deemed sale” election with respect to the ADSs or common shares. For more information, see the section titled “Item 10. Additional Information—E. Taxation—United States Federal Income Tax Considerations—Passive Foreign Investment Company Considerations” and “Item 10. Additional Information—E. Taxation—United States Federal Income Tax Considerations—Passive Foreign Investment Company Rules.”

Item 4. Information on the Company

A. History and Development of the Company

We commenced operations in January 2003 through the establishment of Shenzhen Xunlei, which currently, together with its various subsidiaries in the PRC, operates our Xunlei internet platform.

In February 2005, we established Xunlei Limited as our holding company in the Cayman Islands. Xunlei Limited directly owns Giganology Shenzhen, our wholly owned subsidiary in China established in June 2005. Giganology Shenzhen primarily engages in the research and development of new technologies.

Giganology Shenzhen has entered into a series of contractual arrangements with Shenzhen Xunlei and its shareholders. These contractual arrangements enable us to exercise effective control over Shenzhen Xunlei and receive substantially all of the economic benefits of Shenzhen Xunlei. As a result, Shenzhen Xunlei is the variable interest entity and we have consolidated the financial results of Shenzhen Xunlei and its subsidiaries in our consolidated financial statements in accordance with U.S. GAAP. The existing principal subsidiaries of Shenzhen Xunlei include the following:

- Shenzhen Xunlei Wangwenhua Co., Ltd. (formerly known as “Shenzhen Fengdong Networking Technologies Co., Ltd.”), or Wangwenhua, which was established in December 2005 and primarily engages in software development, technical consulting and other related technical services.
- Xunlei Games Development (Shenzhen) Co., Ltd., or Xunlei Games, which was established in February 2010 and primarily engages in the development of online game and computer software and advertising services.
- Shenzhen Onething Technologies Co., Ltd., which was established in September 2013 and currently a subsidiary of Shenzhen Xunlei, and primarily engages in cloud computing technology development and related services with valid VATS Licenses.
- Beijing Xunjing Technology Co., Ltd., which was established in October 2015 and currently a subsidiary of Wangwenhua and primarily engages in technology development and related services.
- Henan Tourism Information Co., Ltd., which we acquired 80% of the total equity interest from an independent third party in June 2018 and primarily engages in computer software development, information consultation, entertainment services, advertising, and certain information services under Type II value-added telecommunication businesses.
- Jiangxi Node Technology Services Co., Ltd., which was established in July 2020 and primarily engages in bandwidth purchasing.

In February 2011, we established a direct wholly owned subsidiary, Xunlei Network Technologies Limited, or Xunlei Network BVI, in the British Virgin Islands. In March 2011, we established Xunlei Network Technologies Limited, or Xunlei Network HK, in Hong Kong, which is the direct wholly owned subsidiary of Xunlei Network BVI. Xunlei Network HK primarily engages in the development of computer software. In November 2011, we established Xunlei Computer in China, which is the direct wholly owned subsidiary of Xunlei Network HK. Xunlei Computer primarily engages in the development of computer software and information technology services.

In June 2014, we completed the initial public offering of our ADSs, which are listed on the NASDAQ Global Select Market under the symbol “XNET.”

In September 2014, we, through Shenzhen Xunlei, acquired from subsidiaries of Kingsoft Corporation Limited Kuaipan Personal and Kansunzi, both software services in support of cloud-sourced storage and sharing, and their related business and assets, for an aggregate cash consideration of US\$33 million. In August 2016, we discontinued our Kuaipan Personal services due to a change of business focus.

In July 2015, we completed the sale of our entire stake in Xunlei Kankan to Beijing Nesound International Media Corp., Ltd., an independent third party, for a consideration of RMB130.0 million. As of December 31, 2019, Beijing Nesound International Media Corp., Ltd. had fully paid the whole consideration of RMB130.0 million to us. This sale is part of our strategy to streamline our business and continue our transition into mobile internet.

In April 2021, Xunlei Network HK acquired all equity interest of Funi. Pte. Ltd, or Funi, from an independent third party. Funi was established in Singapore and primarily engages in audio live streaming business in the Middle East, North Africa and Southeast Asia and business development for international markets.

Our principal executive offices are located at: 3709 Baishi Road, Nanshan District, Shenzhen, 518000, the People's Republic of China. Our telephone number at this address is +86-0755 61111571. Our registered office in the Cayman Islands is located at the offices of Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104, Cayman Islands.

See "Item 5. Operating and Financial Review and Prospects—B. Liquidity and Capital Resources—Capital Expenditures" for a discussion of our capital expenditures.

B. Business Overview

Overview

We are a leading innovator in shared cloud computing and blockchain technology in China. We operate a powerful internet platform in China based on cloud technology to enable our users to quickly access, store, manage, and consume digital media content on the internet. In recent years, we have expanded our products and services from PC-based devices to mobile devices in part through pre-installed acceleration products in mobile phones to further enlarge our user base and offer our users a wider range of access points. We provide a wide range of products and services across cloud acceleration, shared cloud computing and digital entertainment to deliver an efficient, smart and safe internet environment to our users.

Entertainment Ecology

To address deficiencies of digital media transmission over the internet in China, such as low speed and high delivery failure rates, we provide users with quick and easy access to online digital media content through core product and services below:

- Xunlei Accelerator, our most popular and free product, which enables users to accelerate digital transmission over the internet and has approximately 51.1 million monthly unique visitors in December 2022, according to our internal record; and
- Subscription services, which are delivered through our product, Green Channel, and offer users premium services for speed, reliability and storage.

In addition to our core product, Xunlei Accelerator, we have also provided and developed cloud computing services and products, live streaming services and other internet value-added services to speed up corporate development and to keep pace with the latest industry trend and users' changing needs. These value-added services and products primarily include online advertising and online game services, which provide us with synergies in our business operations.

As a part of our cloud-based mobile strategies, we launched Mobile Xunlei, a mobile app that allows users to search, download, consume and store digital media content on their mobile devices in a user friendly way, in 2012 as an important step in expanding our value-added services to mobile devices, which further enhances our user experience and monetization capabilities. Mobile Xunlei gained popularity while bigger-screen phones with enhanced storage capacity changed mobile phone users' behavior in accessing and consuming digital media content. Based on our own record, the monthly average daily active user of this application was about 4.7 million in 2022. Mobile Xunlei is also one of the most downloaded applications in its category. In the fourth quarter of 2015, we started to monetize our mobile traffic through advertising sales and generated our first mobile advertising revenues. Mobile Xunlei supplements our existing subscriptions business, enabling us to reach a wider scope of user base and expand our services to additional devices of a user who has multiple devices.

Our mobile initiatives also benefit from our relationship with Xiaomi, one of our previous strategic shareholders. Since 2014, we have entered into a pre-installing services agreement with a Xiaomi group company, which manufactures Xiaomi phones, a well-recognized brand of smart phones in China. Pursuant to the agreement, we agree to provide our Mobile Xunlei acceleration plug-in, and the mobile phone manufacturer agrees to install such plug-in on its phones, free of charge. Such pre-installment arrangement provides mobile phone users with access to our acceleration services, which we believe enhances our ability to generate more user traffic. Our mobile acceleration software has been officially adopted by Xiaomi's operating systems and the software has been installed on Xiaomi phones sold in China, including both new phones shipments and system upgrades from existing Xiaomi phones.

Beside our core digital media transmission product and services, we launched our video live streaming business in 2016 and audio live streaming business in 2018. We further diversified our live streaming products portfolio in 2021 by rolling out Hiya in April 2021, an audio live streaming product for overseas markets primarily in the Middle East, North Africa and Southeast Asia, and Hiya Voice in September 2021, another audio live streaming product mainly focusing on the Chinese market. Users can enjoy the chats and interaction with broadcasters, and they can purchase virtual gifts from the platform to reward the broadcasters they like.

Shared Computing Ecology

Another key part of our strategies is to continue our innovation in crowdsourcing of idle bandwidth capacity and potential storage from users of our cloud computing hardware devices so that we can continuously deliver computing resources to third parties, such as internet content providers, through our CDN services. We started to generate revenue from selling crowdsourced uplink capacity we collected from users of our cloud computing services to third parties in the third quarter of 2015. To further develop our cloud computing business, we launched our decentralized cloud computing product, OneThing Cloud, in 2017. OneThing Cloud is essentially a cloud-based storage and sharing device that allows users to share their idle internet bandwidth and storage resources with our content delivery networks. The third parties that purchased our cloud computing services mainly include internet content providers such as ByteDance, Bilibili and iQiyi. In 2020, we launched our own reward program, which allows users of OneThing Cloud to share crowdsources idle uplink capacities and external storage with us in exchange for a small amount of cash rewards.

In 2018, we launched StellarCloud, a shared cloud computing platform that upgraded our existing content delivery network (CDN) services to Infrastructure as a Service (IaaS). It provides powerful and cost-effective cloud computing solutions and shares its extensive node distribution with its enterprise users, enabling efficient and cost-effective access. StellarCloud also offers edge computing, function computing and shared CDN (SCDN) solutions to our enterprise users. Our customers of our StellarCloud include some of the leading internet companies in China.

In 2019, we further expanded our CDN network by jointly establishing dozens of distributed cloud computing node rooms across China with local IDC and ISP service providers to collect idle bandwidth, storage space and other resources. We installed our OneThing Cloud devices in these locations while local IDC and ISP service providers provide us with internet access and data center management services.

In June 2022, we launched a new hardware product for edging computing, OneThing Edge Station. In January 2023, we further launched a new generation of OneThing Cloud, OneThing Edge Cube. Both OneThing Edge Station and OneThing Edge Cube employ the edge computing technology developed by us. By intelligently deploying users' idle network capacity, storage and computing resources, the technology can optimize the distribution of computing power on the edge cloud computing network. Clients and users are rewarded according to the level of resources they contribute to the network. OneThing Edge Station, which mainly serves corporate clients, has larger bandwidth transmission capacity with higher rewards. Whereas OneThing Edge Cube has more improved performance as compared with the previous generations of OneThing Cloud, and users generally can expect to obtain higher rewards under the same network conditions.

Blockchain Ecology

In 2018, we launched ThunderChain, an open platform that enables our enterprise users to develop and manage blockchain applications. It represents our first accomplishment after we shift our focus from developing application products based on blockchain technology to the research and development of blockchain infrastructures.

In September 2020, we launched a BaaS (Blockchain as a Service) platform, which is a high-performance blockchain technology platform based on the infrastructure of ThunderChain. With one-stop blockchain service solutions, it is designed to liberate enterprises and developers from complex technical issues in blockchain infrastructure and to drive innovation and productivity. In the current stage, our BaaS Platform on ThunderChain covers five modules including application, access, service, key technology and resources. The BaaS Platform possesses the following features to fully meet users' business-driven demands for blockchain applications: one-stop blockchain service solutions, resource-based pricing, cost-effectiveness, user-friendliness and blockchain application interchangeability.

In February 2022, we launched a blockchain based enterprise digital collection service platform, which aims to help enterprises and organizations achieve on-chain for their digital assets. This platform provides services such as digital collection minting, showcasing, management, among others, based on the infrastructure of ThunderChain.

Monetization

We generated revenues by monetizing our large user base, primarily through the following services:

- Subscription services. We provide premium subscription services to subscribers to enable faster and more reliable access as well as larger cloud storage to digital media content;
- Cloud computing services and products. We offer cloud computing services by crowdsourcing of idle bandwidth capacity and potential storage from users and continuously deliver computing resources to third parties, such as internet content providers, through our CDN services. In addition to the sales of our cloud computing services, we sell hardware devices that provide our users with easy access to our cloud computing services.
- Live streaming and other value-added services. We offer various live streaming products, including video livestreaming and audio livestreaming domestically and internationally. Users may interact with broadcasters and purchase virtual items from us to reward each other. We also offer other value-added services, including online advertising and online gaming services.

Our total revenues increased from US\$186.7 million in 2020 to US\$239.6 million in 2021 and further to US\$342.6 million in 2022. We had a net loss attributable to Xunlei Limited of US\$13.8 million in 2020 and a net income of US\$1.2 million in 2021 and US\$21.5 million in 2022.

Our platform

On our platform, users can accelerate internet content transmission and store the digital contents in the cloud drive, develop and operate blockchain-based services and applications and enjoy popular forms of internet-based entertainment, such as watching online digital contents and live performances, playing online games, and interacting with broadcasters through video and audio live streaming platforms.

Cloud-based acceleration

We provide data transmission acceleration services based on cloud computing technology to internet users. Our cloud computing technology utilizes a network of computers hosted on the internet to store, manage, and process data, thus providing our users with acceleration in internet data transmission and improves their download success rates. We provide our acceleration services to internet users with the following products and services.

Accelerator

We launched our core product, Xunlei Accelerator, in 2004 to address deficiencies of digital media content transmission over internet in China, such as low speed and high delivery failure rates. Xunlei Accelerator allows users to accelerate digital transmission over the internet for free. Xunlei Accelerator also bridges users with diverse needs to other services we offer, such as Xunlei Media Player, which supports both online and offline video watching, and our various online games, by recommending and providing links to these services on its user interface.

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Xunlei Accelerator is designed to provide an effective digital media content transmission solution to our users. In addition to our featured transmission acceleration function, we have integrated certain features into the interface of Xunlei Accelerator to enhance the overall user experience while helping users transmit their desired content efficiently. For example, Xunlei Accelerator provides a platform to integrate other third-party plug-in applications. Users can add application tabs to create shortcuts to various services that are provided by us, third-party application developers and application vendors who have business relationships with us. Xunlei Accelerator also has a task management console to allow users to track and manage their transmissions in progress, to manage and prioritize cloud-based data transmission tasks, or manage and synchronize transmitted content across multiple internet-enabled devices.

In 2020, we further tapped into our existing acceleration capacity and expanded the digital media content transmission solution provided by our Xunlei Accelerator to cover business users, in particular, online game companies. Depending on specific demands of online game companies, we are able to formulate individualized acceleration solutions tailored to such online game companies and help them better connect with target users of their online games.

In 2020, we also upgraded our Xunlei Accelerator by providing our users with personal cloud storage resources through launching Xunlei Cloud Drive. Instead of stretching increasingly inadequate local storage resources, Xunlei Cloud Drive allows users to save documents, files and other internet contents they downloaded on the cloud server. Users can also upload documents and files on Xunlei Cloud Drive with security control, which provides real-time back-ups. Our Xunlei Cloud Drive offers each user a free storage space of 1 TB. Users can retrieve the internet contents they stored on Xunlei Cloud Drive whenever they want through different terminals including tablets, smartphones and desktops. Xunlei Cloud Drive also allows users to share the data saved on the cloud server among each other. Users are able to access our Xunlei Cloud Drive service for free through our Xunlei Accelerator. Subscribers of our premium cloud acceleration service will be able to enjoy a cloud storage space of 3 TB to 12 TB.

Mobile acceleration plug-in

We offer a mobile acceleration plug-in, which provides mobile device users with benefits of download speed acceleration and download success rate improvements similar to those offered by the PC-based Xunlei Accelerator. Our mobile acceleration plug-in has been adopted by Xiaomi, a Chinese smartphone maker, on its operating systems MIUI6, MIUI7, MIUI8, MIUI9, MIUI10, MIUI11, MIUI12, MIUI13 and MIUI14. Xiaomi installs our mobile acceleration plug-in on all of its new phones sold in China free of charge and adds such plug-in to the existing ones via system upgrade. Xiaomi phone users thus have access to our acceleration services.

Subscription services

We charge monthly, quarterly or annual fees for our premium subscription services. The benefits and services within the subscription package, which typically include incrementally larger bandwidth, faster acceleration speed and larger cloud storage, are upgraded according to the VIP levels. Our subscription services are delivered through our major premium acceleration product, Green Channel. It allows our subscribers to transmit digital media files from the internet, which significantly improves speed and reliability of such transmission. This is particularly helpful when subscribers need to transmit files that are only available from slow or unreliable data transmission sources, or to transmit a group of files while having only limited internet connectivity time. In addition to our major premium acceleration product, our product, Fast Bird, also accelerates our subscribers' internet access by increasing the bandwidth of the network system provided by telecommunications service providers.

We adopted different strategies and various promotion programs for each VIP level. For example, when we discovered that some of our users were not aware of our subscription services, we provided users with greater exposure to our subscription services in different parts of our platform and promoted products with significant potential interests to specific users. We use our powerful digital data analysis capabilities to explore different areas of users' needs previously unmet by existing functions and research and develop relevant functions based on such analysis. We offer users promotional measures, such as providing some free trials of premium acceleration services, to show the differences in the data transmission speeds to demonstrate how our premium services tremendously enhance data delivery speed and overall subscriber experience. In order to promote customer loyalty, we may elevate the VIP levels of our subscribers if they actively engage in our services. Once upgraded to certain higher VIP levels, our subscribers may be offered additional independent accounts, internally termed as sub-accounts, and allow users to access our premium acceleration services, at no additional charges. Starting from September 2016, we have ceased to provide new sub-accounts to users with upgraded VIP levels. Users with existing independent accounts are still able to use such accounts.

We had a subscriber base of 3.8 million, 4.4 million and 5.0 million as of December 31, 2020, 2021 and 2022, respectively. In this annual report, the number of subscribers as of a given day excludes any sub-accounts.

Mobile Xunlei

Mobile Xunlei is a mobile application that allows users to search, download and consume digital media content on their mobile devices. The monthly average daily active user of this product was about 4.7 million in 2022. We monetize our mobile traffic through advertising sales. Moreover, this mobile application also supplements our existing subscriptions business. Some of our mobile application users also became users of our PC-based Xunlei Accelerator.

Cloud computing

We launched our cloud computing project in 2014, which crowdsources idle uplink capacity from internet users who have bought and connected our proprietary hardware, Zhuanqianbao, or ZQB, to their network router. Our ZQB devices can allocate those users' idle uplink capacity to us. We pay users of our ZQB devices for the use of their idle uplink capacity.

To further develop our cloud computing business and at the same time explore emerging blockchain technology, we launched our decentralized cloud computing product, OneThing Cloud, in 2017. OneThing Cloud is a cloud-based storage and sharing device, which crowdsources idle uplink capacity from our users who have bought and connected their OneThing Cloud devices to their network router. Similar to ZQB, users of OneThing Cloud can voluntarily share their idle computing resources to us. Through our proprietary technologies, we crowdsource idle computing resources contributed by users and convert them into cloud computing resources to be provided to our customers, such as internet content providers, through our CDN services. Users of OneThing Cloud can also voluntarily participate in our cash reward program and receive a small amount of cash while contributing idle uplink capacity to us.

In 2018, we further advanced our cloud computing business and launched StellarCloud. StellarCloud is a distributed cloud computing platform that integrates the idea of shared economy and blockchain technology with cloud computing technology. Leveraging our proprietary technologies, such as stellar scheduling, weak network acceleration and network dynamic defense, and the advantages of extensive distribution of nodes over traditional cloud vendors, StellarCloud provides powerful and cost-effective cloud computing solutions, such as edge computing, function computing and shared CDN (SCDN) and shares its extensive node distribution with its enterprise users. In 2019, we further expanded our CDN network by jointly establishing dozens of distributed cloud computing node rooms across China with local IDC and ISP service providers. We installed our OneThing Cloud devices in these locations while local IDC and ISP service providers provide us with internet access and data center management services. By cooperating with these IDC and ISP service providers, we are able to collect idle bandwidth, storage space and other resources.

The crowdsourced uplink capacities are valuable resources that we target to commercialize with potential customers such as streaming websites and app stores. Depending on our own needs, we also utilize those crowdsourced uplink capacities for our business from time to time, reducing our purchase of bandwidth from traditional third-party carriers. In addition, relying on a large number of distributed cloud computing nodes, we have been researching and developing advanced edge computing applications in anticipation of a rising new industry. In June 2022, we launched a new hardware product for edging computing, OneThing Edge Station. In January 2023, we further launched a new generation of OneThing Cloud, OneThing Edge Cube. Both OneThing Edge Station and OneThing Edge Cube employ the edge computing technology developed by us. By intelligently deploying users' idle network capacity, storage and computing resources, the technology can optimize the distribution of computing power on the edge cloud computing network. Clients and users are rewarded according to the level of resources they contribute to the network. OneThing Edge Station, which mainly serves corporate clients, has larger bandwidth transmission capacity with higher rewards. Whereas OneThing Edge Cube has more improved performance as compared with the previous generations of OneThing Cloud, and users generally can expect to obtain higher rewards under the same network conditions.

ThunderChain

We rolled out our first blockchain infrastructure product, ThunderChain, in May 2018. ThunderChain is an open platform that enables our users to develop and manage blockchain applications. We are dedicated to exploring practical adoptions of blockchain in various industries and sectors, and providing tools, frameworks, and guidelines for blockchain development. Through our ThunderChain open platform, we provide smart contract development services, blockchain implementation services, and blockchain commercial ecosystem establishment services. In December 2019, we updated ThunderChain's portfolio of products across six major industry sectors, i.e. financial services, livelihood matters, justice, healthcare, government services and industries. With this set of releases, ThunderChain now can offer a wide range of effective blockchain product solutions.

Our ThunderChain platform addresses the difficulties that both enterprise users and developers face in applying blockchain in an all-dimensional approach. For example, our ThunderChain platform has a strong concurrent processing capability. It is able to process over a million transactions per second. By using dual consensus algorithm (DPoA+PBFT), our ThunderChain platform is also able to realize low latency, outstanding data consistency and avoid bifurcation of data. Our ThunderChain platform supports several programming languages such as solidity, C, and C++. Developers do not have to learn new languages to develop ThunderChain-based blockchain applications. In addition, blockchain applications that are developed based on our ThunderChain generally have a good scalability as our ThunderChain platform supports configurable consensus algorithm and underlying storage system replacement, which facilitates the upgrade of ThunderChain-based blockchain applications based on different application scenarios. In terms of data security and privacy, our ThunderChain platform provides several advanced privacy protection solutions and supports multiple cryptographic algorithms. With these difficulties solved, enterprise users and developers are able to focus on application innovation and functional development.

Based on ThunderChain, we launched BaaS (Blockchain as a Service) platform in 2020, which offers one-click deployment service and further lowers the thresholds for enterprise users and developers to develop blockchain-based products. The BaaS platform further frees enterprise users and developers from hassles in dealing with complex technical problems in developing blockchain-based products and enables enterprise users and developers to focus more on the functionality and business rationale of their products.

In February 2022, we launched a blockchain based enterprise digital collection service platform, which aims to help enterprises and organizations achieve on-chain for their digital assets. This platform provides a number of services including digital collection minting, showcasing, management, among others. The digital collections minted on Xunlei's ThunderChain are uniquely identified by the ThunderChain technology, and are permanently preserved in the ThunderChain with unique serial numbers on the chain through the deployment of smart contract technology.

Live streaming services

We launched our live streaming services in 2016 and adjusted our business model in 2017. Through our Xunlei Live website and mobile app, users are able to access our live video streaming services. While viewing live online performances delivered by broadcasters, users may interact with broadcasters, purchase virtual items from us to reward broadcasters they like. In May 2018, we supplemented our live streaming business by launching another audio live streaming service through our mobile app. Users and broadcasters may interact with each other in the chatrooms with different topics through audio streaming and purchase virtual items from our platform to reward each other.

We further diversified our live streaming offerings in 2021. We launched Hiya, an audio live streaming platform targeting overseas markets in April 2021. Similar to our audio live streaming platform we launched in May 2018, overseas users of Hiya can join different chatrooms with their favorite topics, then they are able to interact with broadcasters by purchasing virtual items from the platform and rewarding virtual items to broadcasters. In 2022, Hiya has achieved a rapid growth and generated a revenue of US\$38.5 million, accounting for 11.2% of our total revenues in 2022 as compared to 3.6% of that in 2021. As of the date of this annual report, users of Hiya are primarily from countries in the Middle East, Southeast Asia, South Asia and North Africa. In September 2021, we further launched Hiya Voice, another audio live streaming platform in China. Hiya Voice grew rapidly in 2022 and generated a revenue of RMB\$285.5 million (US\$42.1 million) in 2022, accounting for 12.2% of our total revenues in 2022 as compared to less than 0.4% of that in 2021. Currently, we operate Hiya Voice mainly in China. Although Hiya and Hiya Voice share similar names, these two mobile apps are developed separately with different functions and targeted user bases and are operated independently of each other.

Xunlei Media Player

Xunlei Media Player, which we launched in 2008, is a supplementary tool that helps to deliver a more comprehensive viewing experience of digital media content to the users of Xunlei Accelerator. Xunlei Media Player is our proprietary product that supports both online and offline play of digital media content as well as simultaneous play of digital media content while it is being transmitted by Xunlei Accelerator.

Online game services

To better serve our users, we partnered with third-party online game developers or service providers to offer our users an array of online games through our online game website and mobile app. Such game play platform helps raise the average spending of our subscribers. Online game players can play the games free of charge, but are offered the opportunity to purchase in-game virtual items for a fee to enhance their game-playing experience. We typically enter into cooperation agreements with third-party online game developers or service providers and share revenues generated from online game operations pursuant to revenue sharing arrangements in the agreements.

After we disposed of our web game business and discontinued PC-based MMOGs business in 2018, we only operated mobile game business under our online game business. We started to cooperate with third parties to operate web game business in 2019 under a business model different from that of our previous web game business. In 2019, we collaborate with a third-party online game provider to provide our users with an array of web games on our Xunlei game center website. In 2020, we partnered with additional third-party online game providers to operate web games. We also started to operate PC-based MMOGs in 2021 again. After logging into their Xunlei accounts, our users are able to play these web games provided by the third-party online game providers. Our users are also able to purchase virtual items in those web games using a payment channel provided by us. Mobile games developed by third-party online game developers are available on our mobile app as usual. Users can download mobile games they are interested in through our mobile app and login the games by using their Xunlei account.

In addition to the above value-added services, we may also from time to time offer other ancillary services to cater to users' needs and to supplement the major services we provide.

Advertising services

We provide advertising services primarily through various forms of advertisements placed on our mobile platform and PC websites. We experienced a decline in revenue from mobile advertising in 2019 and 2020, primarily due to a generally decreased demand for our online advertising services. With a view to improving the competitiveness of our advertising services, we entered into an advertising revenue sharing agreement with Itui, our largest shareholder, and outsourced our advertising business to Itui in 2020. Itui has developed a precision customer target algorithm, and by cooperating with them, we hope to improve advertisement placement and improve revenues as a result. Pursuant to the agreement, Itui is responsible for operating our advertising services and share a portion of revenue generated from placing advertisements on our PC websites and mobile platform. Our advertising revenue experienced further decline in 2021, primarily due to lower advertising placements starting from the second quarter of 2021 as a result of evolving regulations of the internet industry in China, which negatively affected our advertising business. In 2022, our advertising revenue continued to be negatively affected by more stringent regulatory policy for the Internet industry, lower demand for advertising placement due to the ongoing pandemic and economic slowdown, as well as volatility of foreign exchange rate.

Technology

We provide accelerated data transmission services, available on PC and mobile devices, based on our distributed file locating system, designed to utilize our proprietary file indexing technology.

Indexing technology

Key elements of our file indexing technology include:

File indexing. We have created, and continue to maintain, a proprietary file index database that stores a massive index of unique file signatures representing all digital media content file that Xunlei Accelerator has found across the internet. Each file signature uniquely identifies the index of a given file. We store a list of each unique file's available data transmission locations from across the internet, which may include both peer and server computers, along with the estimated speed and reliability of each location.

Data mining. We also employ data mining algorithms, studying user habits in order to maximize the speed of our data delivery by ranking the keyword indexes that users search for and placing digital media content more likely to be searched by users in the more easily accessible locations in our network for optimal delivery speed.

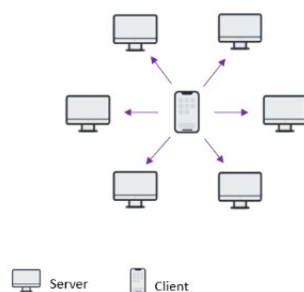
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Distributed internet crawling techniques. Our Xunlei Accelerator network acts as a system of distributed spiders to crawl the internet to search for digital media content files. Whenever the user initiates data transmission by using our Xunlei Accelerator, the URL of the data transmission location is uploaded to our server. We then use that URL to traverse and locate any other digital media content files that may also be available from the URL's internet page repositories. We then update our file index according to each traversal result.

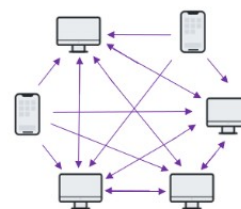
Distributed file locating system

Our distributed file locating system is based on distributed computing architecture, which consists of all Xunlei Accelerator clients that are running and connected to the internet at a given time, along with the server addresses stored in our file index database. When users launch Xunlei Accelerator on a network-connected device, they are automatically connected to our distributed file locating system and contribute their bandwidth and computing power to our distributed file locating system, which enables users to locate and connect efficiently.

Centralized (Server-based) Architecture



Distributed Computing Network Architecture



Key technologies include:

Multi-protocol file transfer technology. Our multi-protocol file transfer technology allows our product client to transmit, in parallel, from multiple sources that may use different file transfer protocols. Our multi-protocol file transfer technology significantly increases the number of data transmission sources available to further enhance data transmission performance.

Distributed file locating system. Our distributed file locating system helps users discover the best data transmission locations from across the internet, where a particular file may be transmitted or streamed for optimal performance. When a user requests data transmission using our Xunlei Accelerator, distributed file locating system will algorithmically prioritize and select from among the file's available data transmission locations an optimized subset of URLs based on their respective transmit speed and reliability, which is estimated through real-time collaborative interactions between our file index server and our massive network of active Xunlei Accelerator clients across the internet.

Network transport and traversal optimization. Our proprietary software algorithms perform dynamic internet bandwidth and throughput assessments across the Xunlei network and optimization of traffic routing to identify the most efficient path for data transport. These algorithms are designed to maximize delivery speed, reliability and efficiency, and support significant growth in network usage.

Cloud-based implementation for subscription services

We provide subscription services powered by our indexing technology and distributed file locating system. Our platform is compatible with different operating systems and hardware devices. As part of the infrastructure for the subscription services, except for proprietary load balancing and resource optimization algorithms, we maintain a virtual private network consisting of over one million third-party servers and over 2,685 servers that we own located throughout China.

We maintain proprietary load balancing and resource optimization algorithms, both of which help enhance our mass data mining on user habits to compile and maintain information on users' data transmission acceleration needs and requirements. As a cloud service provider, we use data mining for user habit prediction and co-location purposes. In user habit prediction, we analyze, sample and index user behavior data to help predict user acceleration needs and requirements. For co-location purposes, our program finds the most efficient and stable connection in our network for each transmission task. We also cooperate with telecom operators, maintaining logics and algorithms for our co-location centers in each telecom operator's network to enable real-time dynamic allocation of our servers and bandwidth to support user acceleration requirements. Our system automatically optimizes user connections based on key factors such as provincial network, firewall penetration and interconnection among various telecom operators.

Additionally, we entered into a framework service agreement with Alibaba Cloud Computing Co., Ltd., or Ali Cloud, in December 2018. Since then, Ali Cloud has provided us with cloud computing products and services. As of December 31, 2022, we were using 2,345 cloud servers and 5,502 cloud services provided by Ali Cloud through its 18 central nodes and 135 edge nodes.

Shared cloud computing model for edge computing services

We created a shared computing model and network by encouraging millions of personal users to share idle resources such as computing power, storage and bandwidth by deploying sharing economy smart devices such as OneThing Cloud and ZQB. With the shared cloud computing model, Xunlei provides high-quality, cost-effective cloud services for corporate clients. StellarCloud is a shared cloud computing platform which expands Xunlei's existing CDN services to a novel cloud computing service stack, offering edge computing, function computing and shared CDN solutions.

StellarCloud edge computing service allows users to deploy their own applications in the form of containers on shared nodes widely distributed on the internet, and make use of a considerable amount of resources such as computing power, storage and bandwidth on all these nodes. The key technology underlying the edge computing service is the container management system that we developed in-house. Unlike the mainstream container solutions designed for IDC environment, the system adopts a lightweight and highly fault-tolerant design that optimized for network and performance diversity of shared nodes, thus enables an efficient and reliable deployment and monitoring of containers among all the nodes.

StellarCloud CDN service is a distributed CDN service that integrates traditional cloud computing data centers and shared node networks. It provides common CDN capabilities such as video on demand, live video streaming, and file distribution. The system splits and encodes the data into segments and deploy them to multiple shared nodes according to a certain strategy. An end user requesting these data gets nearby nodes from our scheduling system, then establishes multiple peer-to-peer connections to fetch data segments concurrently and reassembles them into the original data. Combining our industry-leading peer-to-peer technology and the scheduling mechanism that has been improved for years, StellarCloud CDN moves data distribution from IDC to cost-effective shared nodes, cutting bandwidth costs without compromising the quality of service.

Blockchain platform

We launched ThunderChain, a high-performance blockchain infrastructure product, which can concurrently process millions of transactions per second. Based on our proprietary homogeneous multi-chain framework, ThunderChain is designed to realize confirmation and interaction among homogeneous chains and enable multiple transactions to be executed on different chains in parallel. ThunderChain adopts DPoA+PBFT dual consensus algorithm, which results in low latency and makes it possible to generate one block per second. PBFT, as a consistency algorithm, is also able to avoid soft fork. ThunderChain supports smart contracts written in solidity language and is compatible with Ethereum virtual machine, making it easy to migrate applications from other blockchain platforms.

Marketing

We built up our reputation and maintain our popularity primarily through word-of-mouth. We believe satisfied users and customers are more likely to recommend our services to others. Thus, we continue to focus on improving our services and enhancing our user experience. In the meantime, we also invest in a variety of marketing activities to further promote our brand awareness among existing and potential users as well as other customers. For example, we host or attend various public relations events, such as seminars, conferences and trade shows, in the advertising, online video and online game industries to attract users and advertisers. To retain and drive the growth of our subscribers, we market our premium paid services and place subscription advertisements at prominent locations throughout our integrated service offerings.

Intellectual property

Protection of our intellectual property

Our patents, copyrights, trademarks, trade secrets and other intellectual property rights are critical to our business. We rely on a combination of patent, copyright, trademark, trade secret and other intellectual property-related laws in the PRC and contractual restrictions to establish and protect our intellectual property rights. In addition, we require all of our employees to enter into agreements requiring them to keep confidential all information they obtain during the course of their employment relating to our technology, methods, business practices, customers and trade secrets. As of December 31, 2022, we had 340 patents granted in China and four patents granted in the United States, while another 315 patent applications are being examined by the State Intellectual Property Office of the PRC. We also seek to vigorously protect our Xunlei brand and the brands of our other services. As of December 31, 2022, we had 568 trademarks registered in different applicable trademark categories in the PRC and three trademarks registered with World Intellectual Property Organization. We had applied for registration of 284 trademarks in China.

Digital media data monitoring and copyright protection

We take initiatives to protect third-party copyrights. The internet industry in China suffers from copyright infringement issues and online digital media content providers are frequently involved in litigation based on allegations of infringement or other violations of copyrights. Assisted by an intellectual property team dedicated to copyright protection, we have implemented internal procedures pursuant to the legal requirements under relevant PRC laws and regulations to promptly disable the download URL of contents for which we receive notice of infringement from the legitimate rights holder, and we work closely with the relevant regulatory authorities in China to ensure compliance with all relevant rules and regulations. We seek assurances in our contracts with digital media content providers that (i) they have the legal right to license the digital media data for the uses we require; (ii) the digital media content itself as well as the authorization or rights granted to us neither breach any applicable law, regulations or public morals, nor impair any third-party rights; and (iii) they will indemnify us for losses resulting from both the non-compliance of such digital media content with the laws and claims from third parties.

As of the date of this annual report, we have implemented several initiatives to further commit to copyright protection. For example, we require our third-party content providers to provide relevant contents that they are duly authorized to provide and do not infringe intellectual property rights of any other parties. We also make available on our websites and mobile applications reporting channels so that we can timely remove contents that infringe intellectual property rights of other parties. Despite the fact that we put in place preventive measures, we may still be subject to copyright infringement suits. As of the date of this annual report, we are involved in two pending copyright lawsuits in China. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—The intellectual property protection mechanism we have implemented may not always be effective or sufficient. The premium acceleration services, Xunlei Cloud Drive and other value-added services we provide to our users have exposed us to and may continue to expose us to copyright infringement claims and other related claims, which could be time-consuming and costly. Any damage awards, injunctive relief and/or court orders could materially and adversely affect our existing business model, divert our management’s attention and adversely impact our business and reputation” and “Item 8. Financial Information—A. Consolidated Statements and Other Financial Information—Legal Proceedings.”

User data safety

User data safety is a significant advantage we offer to our users. We try to improve user experience by usually maintaining two to four copies of one specific user file for data recovery in extreme circumstances such as system shutdown, private transmission backbone network problems and/or other contingencies beyond our control. The read and write characteristics of our distributed file locating system are identical to those of hard disks, and our unique user file decomposition and encryption algorithm enables us to maintain high standards for user data safety.

Competition

Due to our multiple service offerings, we face competition in several aspects of the internet services market in China. We believe that the key competitive factors in the overall internet services market in China include brand recognition, user traffic, technology platform and monetization abilities. We also face competition for the advertisement budgets of our advertisers from other internet companies and other forms of media.

Regulation

We set forth below a summary of the most significant rules and regulations that affect our business activities in China.

PRC regulation on catalogue relating to foreign investment

The establishment, operation and management of corporate entities in the PRC are governed by *the Company Law* of the PRC, or the Company Law, which was promulgated by the Standing Committee of the National People's Congress, or the SCNPC, on December 29, 1993 and last amended and became effective on October 26, 2018. A foreign-invested company is also subject to the Company Law unless otherwise provided in the foreign investment laws.

The establishment and operations of wholly foreign-owned enterprises are mainly governed by the *Foreign Investment Law* enacted by the National People's Congress, or the NPC, on March 15, 2019 and became effective on January 1, 2020. On December 26, 2019, the State Council promulgated the Detailed Rules for *the Implementation of the Foreign Investment Law of the PRC*, which became effective on January 1, 2020.

Investment activities in the PRC by foreign investors and foreign-invested enterprises are regulated by *the Special Administrative Measures (Negative List) for Foreign Investment Access (2021 Version)*, or the Negative List (2021 Version), promulgated by the National Development and Reform Commission, or NDRC, and the MOFCOM in December, 2021 and effective on January 1, 2022, and *the Catalogue of Industries for Encouraging Foreign Investment (2020 Version)*, or Encouraging Catalogue (2020 Version) promulgated by the NDRC, in December 2020, and effective on January 27, 2021. Pursuant to the Encouraging Catalogue (2020 Version) and the Negative List (2021 Version), foreign-invested projects are categorized as encouraged, restricted and prohibited. Foreign-invested projects that are not listed in the Negative list are permitted foreign invested projects.

Establishment of wholly foreign-owned enterprises is generally allowed in industries not included in the Negative List. For the restricted industries within the Negative List, some of the industries are limited to equity or contractual joint ventures, while in some cases Chinese partners are required to hold the majority interests in such joint ventures. In addition, restricted category projects are subject to government approvals and certain special requirements. Foreign investors are not allowed to invest in industries in the prohibited category. The provision of value-added telecommunications services falls in the restricted category and the percentage of foreign ownership cannot exceed 50% (excluding e-commerce, domestic multi-party communications, store-and-forward, and call center services). The provision of internet cultural operating service (including online game operation services), internet publication service and online transmission of audio-visual programs service fall in the prohibited category and the foreign investors are prohibited to engage in such services. We conduct our operations in China principally through contractual arrangements among Giganology Shenzhen, our wholly owned PRC subsidiaries, and Shenzhen Xunlei, the VIE, and its shareholders. Shenzhen Xunlei or its relevant subsidiary, holds the licenses and permits necessary to conduct our resource discovery network, cloud computing, online advertising, online games and related businesses in China and Shenzhen Xunlei holds various operating subsidiaries that conduct a majority of our operations in China. Shenzhen Onething and one of its subsidiaries have obtained an updated VATS License to cover CDN service for our cloud computing business. Both of Giganology Shenzhen and Xunlei Computer, another wholly owned PRC subsidiary of ours, engage in the development of computer software, technical consulting and other related technical services and businesses, none of which falls into any of restricted or prohibited categories under the Negative List. Hence, these activities operated by Giganology Shenzhen and Xunlei Computer are deemed to be permitted and open to foreign investment.

In December 2019, the Ministry of Commerce and the State Administration for Market Regulation issued *Measures for the Reporting of Foreign Investment Information*, effective on January 1, 2020, which repealed the FIE Record-filing Interim Measures, pursuant to which where foreign investors carry out investment activities directly or indirectly within China, foreign investors or foreign-funded enterprises shall report investment information to relevant commerce departments.

PRC regulation on telecommunications and internet information services

The telecommunications industry, including the internet sector, is highly regulated in the PRC. Regulations issued or implemented by the State Council, MIIT, and other relevant government authorities cover many aspects of operation of telecommunications and internet information services, including entry into the telecommunications industry, the scope of permissible business activities, licenses and permits for various business activities and foreign investment.

The principal regulations governing the telecommunications and internet information services we provide in the PRC include:

- *Telecommunications regulations* (2016, revised), or the Telecom Regulations. The Telecom Regulations categorize all telecommunications businesses in the PRC as either basic or value-added. Value-added telecommunications services are defined as telecommunications and information services provided through public network infrastructures. The “Catalogue of Telecommunications Business”, an attachment to the Telecom Regulations and updated by MIIT’s Notice on Adjusting the Catalogue of Telecommunications Business effective from April 1, 2003 and amended on March 1, 2016, categorizes various types of telecommunications and telecommunications-related activities into basic or value-added telecommunications services, according to which, internet content provider services, or ICP services, are classified under the second category of value-added telecommunications businesses and the CDN services, the internet access services and the internet data center services are classified under the first category of value-added telecommunications business. Under the Telecom Regulations, commercial operators of value-added telecommunications services must obtain the VATS License covering the business classified under the relevant category from MIIT or its provincial level counterparts.
- *Administrative measures on internet information services* (2011, revised), or the Internet Measures. According to the Internet Measures, a commercial ICP service operator must obtain a VATS License from the relevant government authorities before engaging in any commercial ICP service within the PRC. When the ICP service involves areas of news, publication, education, medical treatment, health, pharmaceuticals, medical equipment and other industry and if required by law or relevant regulations, prior approval from the respective regulating authorities must be obtained prior to applying for the VATS License covering the ICP services from MIIT or its local branch at the provincial level. Moreover, an ICP service operator must display its ICP License number in a conspicuous location on its website and must monitor its website to remove categories of harmful content that are broadly defined.
- *Administrative measures for telecommunications business operating license* (2017, revised), or the Telecom License Measures. The Telecom License Measures set forth more specific provisions regarding the types of licenses required to operate value-added telecommunications services, the qualifications and procedures for obtaining such licenses and the administration and supervision of such licenses. For example, an ICP service operator conducting business within a single province must apply for the VATS License from MIIT’s applicable provincial level counterpart, while an ICP service operator providing ICP services across provinces must apply for a Trans-regional VATS License directly from MIIT. The appendix to the VATS License must detail the permitted activities to be conducted by the ICP service operator. An approved ICP service operator must conduct its business in accordance with the specifications recorded on its VATS License. The VATS License is subject to annual report requirement. An ICP service operator shall report certain information to the issuing authorities through the administrative platform in the first quarter every year. Such information includes the business performance of the telecommunications business in the previous year, service quality, the actual implementation of the network and information security guarantee systems and measures, among others. ICP service operator shall be responsible for the truthfulness of the information in the annual report.
- *Detailed rules on the administration of internet websites* (2005), which set forth that the website operator is required to apply for the ICP filing from MIIT or its local branches at the provincial level on its own or through the access service provider.
- *Provisions on Administration of Foreign-invested Telecommunications Enterprises* (2022, revised), or the FITE Regulations. The FITE Regulations set forth detailed requirements with respect to, among others, capitalization, investor qualifications and application procedures in connection with the establishment of a foreign-invested telecommunications enterprise. Under the FITE Regulations, a foreign entity is prohibited from owning more than 50% of the total equity interest in any value-added telecommunications service business in the PRC.

- *Circular on Strengthening the Administration of Foreign Investment in and Operation of Value-added Telecommunications Business (2006)*. Under this circular, a domestic PRC company that holds a VATS License is prohibited from leasing, transferring or selling the VATS License to foreign investors in any form, and from providing any assistance, including providing resources, sites or facilities, to foreign investors that conduct value-added telecommunications business illegally in the PRC. Further, the domain names and registered trademarks used by an operating company providing value-added telecommunications service shall be legally owned by such company and/or its shareholders. In addition, such company's operation premises and equipment should comply with the approved covering region on its VATS License, and such company should establish and improve its internal internet and information security policies and standards and emergency management procedures.
- *Circular of the Ministry of Industry and Information Technology on Clearing up and Regulating the Internet Access Service Market (2017)*, which, among others, further strengthens the supervision and management of the applications of cloud computing, big data and other applications. For an enterprise that conducts the CDN business without a VATS License specifically covering such business, it must submit a written commitment to the original license issuing authority before March 31, 2017, undertaking that an eligible VATS License will be obtained by the end of 2017. If such enterprise fails to make the commitment on time, it must carry out business activities strictly in compliance with their existing licenses. Furthermore, if the enterprise fails to obtain the eligible VATS License as committed it should terminate the relevant business starting from January 1, 2018.

To comply with these PRC laws and regulations, we operate our websites through Shenzhen Xunlei, our PRC variable interest entity. We, through Shenzhen Xunlei, currently hold a VATS License covering its ICP services expiring on April 30, 2025 and another VATS License for its provision of cloud computing services including internet data center services and internet access services expiring on October 31, 2024, and own the essential trademarks and domain names in relation to our value-added telecommunications business. Shenzhen Onething and one of its subsidiaries have obtained VATS Licenses to cover the CDN service for our cloud computing business.

Under various laws and regulations governing ICP services, ICP services operators are required to monitor their websites. They may not produce, duplicate, post or disseminate any content that falls within the prohibited categories and must remove any such content from their websites, including any content that:

- opposes the fundamental principles determined in the PRC's Constitution;
- compromises state security, divulges state secrets, subverts state power or damages national unity;
- harms the dignity or interests of the State;
- incites ethnic hatred or racial discrimination or damages inter-ethnic unity;
- sabotages the PRC's religious policy or propagates heretical teachings or feudal superstitions;
- disseminates rumors, disturbs social order or disrupts social stability;
- propagates obscenity, pornography, gambling, violence, murder or fear or incites the commission of crimes;
- insults or slanders a third party or infringes upon the lawful rights and interests of a third party; or
- includes other content prohibited by laws or administrative regulations.

The PRC government may shut down the websites of VATS License holders that violate any of such content restrictions and requirement, revoke their VATS Licenses or impose other penalties pursuant to applicable law. To comply with these PRC laws and regulations, we have adopted internal procedures to monitor content displayed on our website.

PRC regulation on online transmission of audio-visual programs

On April 25, 2016, SAPPRFT issued the *Administrative Provisions on Audio-Visual Program Services through Private Network and Targeted Communication*, which replaced the Measures for the Administration of Publication of Audio-visual Programs through Internet or Other Information Network, or the 2004 Internet A/V Measures, with the most recent amendment becoming effective on March 23, 2021. Pursuant to these provisions, “audio-visual program services through private network and targeted communication” refer to television, mobile phones and other kinds of fixed and mobile electronic equipment as terminal recipients, and through setting up virtual private network through local networks and internet or with Internet and other information networks as targeted transmission channels, oriented to the public to provide audio-visual program service activities, such as radio and television programs conducted by such forms as Internet protocol television (IPTV), private network mobile TV, Internet TV, and other forms of content provision, integrated broadcast control, transmission and distribution activities. Any provider who engages in aforesaid service must obtain a license from GAPPRFT. Foreign-invested enterprises are not allowed to engage in the above business. On April 13, 2005, the State Council promulgated the *Certain Decisions on the Entry of the Non-State-owned Capital into the Cultural Industry*. On July 6, 2005, MOC, GAPPRFT, the NDRC and the Ministry of Commerce, jointly adopted the *Several Opinions on Canvassing Foreign Investment into the Cultural Sector*. According to these regulations, non-State-owned capital and foreign investors are not allowed to conduct the business of transmitting audio-visual programs via information network.

On December 20, 2007, GAPPRFT and MIIT jointly promulgated the *Administrative Provisions on Internet Audio-visual Program Service*, or the Audio-visual Program Provisions, which came into effect on January 31, 2008 and was revised on August 28, 2015. The Audiovisual Program Provisions apply to the provision of audio-visual program services to the public via internet (including mobile network) within the territory of the PRC. Providers of internet audio-visual program services are required to obtain a License for Online Transmission of Audio-visual Programs issued by GAPPRFT or complete certain registration procedures with GAPPRFT. Providers of internet audio-visual program services are generally required to be either State-owned or State-controlled by the PRC government, and the business to be carried out by such providers must satisfy the overall planning and guidance catalog for internet audiovisual program services determined by GAPPRFT. In a press conference jointly held by GAPPRFT and MIIT to answer questions with respect to the Audio-visual Program Provisions in February 2008, GAPPRFT and MIIT clarified that providers of internet audio-visual program services who engaged in such services prior to the promulgation of the Audiovisual Program Provisions shall be eligible to register their business and continue their operation of internet audio-visual program services so long as those providers had not been in violation of the laws and regulations. On March 10, 2017, SAPPRFT promulgated the *Categories of the Internet Audio-Video Program Services*, which classifies internet audio-video programs into four categories.

On April 8, 2008, GAPPRFT issued a *Notice on Relevant Issues Concerning Application and Approval of License for Online Transmission of Audio-visual Programs* which further sets forth detailed provisions concerning the application and approval process regarding the License for Online Transmission of Audio-visual Programs. The notice also provides that providers of internet audio-visual program services who engaged in such services prior to the promulgation of the Audio-visual Program Provisions shall also be eligible to apply for the license so long as their violation of the laws and regulations is minor and can be rectified timely and they have no records of violation during the latest three months prior to the promulgation of the Audio-visual Program Provisions.

On December 28, 2007, GAPPRFT issued the *Notice on Strengthening the Administration of TV Dramas and Films Transmitted via the Internet, or the Notice on Dramas and Films*. According to this notice, if audio-visual programs published to the public through an information network fall under the film and drama category, the requirements of the Permit for Issuance of TV Dramas, Permit for Public Projection of Films, Permit for Issuance of Cartoons or academic literature movies and Permit for Public Projection of Academic Literature Movies and TV Plays will apply accordingly. In addition, providers of such services should obtain prior consents from copyright owners of all such audio-visual programs.

Further, on March 30, 2009, GAPPRFT issued the *Notice on Strengthening the Administration of the Content of Internet Audiovisual Programs*, or the *Notice on Content of A/V Programs* which reiterates the requirement of obtaining the relevant permit of audiovisual programs to be published to the public through information network, where applicable, and prohibits certain types of internet audiovisual programs containing violence, pornography, gambling, terrorism, superstition or other hazardous factors. In addition, on August 11, 2009, GAPPRFT issued the *Notice on Relevant Issues Regarding Strengthening of the Administration of Internet Audio/visual Program Services Received by Television Terminals*, which specifies that prior to providing audio-visual program services for television terminals, an ICP service operator shall obtain the License for Online Transmission of Audio-visual Programs containing the scope of “Integration and Operation Services of Audiovisual Programs Received by Television Terminals.”

To comply with these laws and regulations, Henan Tourism Information Co., Ltd., or Henan Tourism, one of our operating subsidiaries in the PRC, currently is holding a License for Online Transmission of Audio-visual Programs with an effective period from February 28, 2021 to February 28, 2024. However, neither Shenzhen Wangwenhua, the entity that operates a live streaming business, nor Shenzhen Xunlei, the entity that provides video content display services, is a registered owner of the license for online transmission of audio-visual programs. As a result, it is possible that relevant PRC government authorities could determine that these businesses are operating without sufficient license. In addition, we are in the process of application for the registration in the National Internet Audio-Visual Platforms Information Management System under the requirement of Notice 78 for operating a live streaming business and providing video content display services. We may be required to obtain additional licenses, permits, filings or approvals for the functions and services of our platform in the future. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—We are strictly regulated in China. Any lack of requisite licenses or permits applicable to our businesses or to our third-party services providers and any changes in government policies or regulations may have a material and adverse impact on our businesses, financial condition and results of operations.”

PRC regulation on online live streaming

On November 4, 2016, the CAC promulgated the Regulations on the Administration of Online Live Streaming Services, or the Online Live Streaming Regulations, which became effective on December 1, 2016.

The Online Live Streaming Regulations provide that online live streaming service providers and distributors must legally obtain the qualification for internet news information services before providing such services on the internet, and engage in online news information services only to the licensed extent. Online live streaming service providers must review all live internet news information and interactions before publishing them, and set up their “chief editor” position if they provide live streaming services of internet news information. The Online Live Streaming Regulations also stipulate that online live streaming service providers must carry out their subject responsibility, arrange professionals commensurate with its service size, establish and improve various management systems, and have the technical capability to immediately cut online live streaming, and its technical plans shall comply with relevant national standards. In addition, online live streaming service providers must conduct graded and categorized management according to the content category and user scale of online live streaming, and establish a credit rating management system for online live streaming distributors as well as a blacklist management system.

On August 1, 2018, the MIIT, the Ministry of Public Security of the PRC and other government agencies jointly issued the Notice on Strengthening the Administration of Internet Live Streaming Services, or the Online Live Streaming Services Circular, which specifies respective duties of online live streaming service providers, network access service providers and application stores, aiming to prompt relevant internet-based enterprises to fulfill their responsibilities. The Online Live Streaming Services Circular provides that an online live streaming service provider must make a record filing with the competent telecommunications authority as an internet content provider (ICP). Online live streaming service providers are also required to apply for a permit with the local authorities if they engage in telecommunications business, livestreaming business for internet news information, online performance, and/or online visual-audio programs. Online live streaming service providers must make record filings with the local public security authorities within 30 days after live streaming services have been published on the internet. In addition, online live streaming service providers are required to implement a real name verification system for users, intensify administration of online anchors, establish a blacklist system for online anchors, optimize their system for watching and censoring livestreamed content for regulatory purposes, and improve measures to better respond to harmful content.

On November 12, 2020, the NRTA issued the *Notice on Strengthening the Management of Online Show Live Streaming and E-commerce Live Streaming*, pursuant to which live streaming platforms for online shows are requested to strengthen positive value guidance and enable tasteful, meaningful, interesting and warm live streaming programs to have good traffic, and to prevent the spread of the trends of wealth flaunting, money worshiping and vulgarity. Notice 78 requests live streaming platforms for online shows and e-commerce to register with the National Internet Audio-Visual Platforms Information Management System. To date, we are still in process of making the application for such registration for our live streaming business. In addition, the number of content reviewers a platform is required to keep must in principle be no less than 1:50 of the number of live streaming rooms. Live streaming platforms for online shows need to manage the hosts and users making virtual gifting based on the real-name registration system, and users who have not registered with real names or who are minors are prohibited from virtual gifting. The live streaming platforms are required to implement real-name registration system by real-name verification, face recognition, manual review and other measures to prevent minors from virtual gifting. The platform shall limit the maximum amount of rewards each user may give per time, day and month. Live streaming platforms for e-commerce shall not illegally produce and broadcast, beyond their business scope of e-commerce, any commentary programs unrelated to sales of goods.

On February 9, 2021, the CAC and six other PRC governmental authorities jointly issued the *Circular on Issuing the Guiding Opinions on Strengthening Standardized Management of Online Live Streaming*, according to which live streaming platforms shall strictly abide by laws and regulations and relevant state provisions when providing live streaming information services; strictly fulfill their live online platform statutory duties and implement live webcast listing platform main body responsibility, control network broadcast industry main issues list to establish and strictly implement that the editor in chief is responsible for, content audit, user registration, post comments, emergency response, technology security, the host management, training, assessment, reporting acceptance of internal management system. Live streaming platforms that carry out commercial network performance activities must hold a Network Cultural Operation License and file for an ICP. A live broadcasting platform providing online audio-visual program services must hold the Permit for Spreading Audio-Visual Programs via Information Network (or complete registration in the National Information Registration and Management System for Online Audio-visual Platform) and put this on their ICP record. A live broadcast platform that provides Internet news and information service must hold an Internet News and Information Service License. A network live broadcasting platform shall go through the formalities of filing an enterprise with the local cyberspace and information authorities in a timely manner, and a platform that stops providing live broadcasting services shall cancel the filing in a timely manner.

On March 25, 2022, CAC, the SAT and SAMR jointly issued the *Opinions on Further Regulating the For-Profit Activities in Online Live Streaming to Promote a Healthy Development of the Industry*, which requires live streaming platforms' strict compliance with relevant laws and regulations, including real-name verification and voluntary registration. Platforms are obligated to authenticate live streaming publishers using their ID information and unified social credit code information. Additionally, platforms are required to report information such as the identity of the publisher, remuneration account, type of revenue, and profit-earning details to the local provincial-level cyberspace administration and competent tax authority every six months.

On May 7, 2022, CAC, together with three other authorities, jointly issued the *Opinions on Regulating Live Streaming Rewards and Strengthening Minor Protections*, or the Live Streaming Opinions, which iterates the requirements for live streaming platforms in respect of strengthening real-name registration, prohibiting minors from virtual gifting and restrictions on providing live streaming services to minors. Pursuant to the Live Streaming Opinions, online platforms are prohibited from ranking, introducing or recommending live streaming performers solely by the monetary amount of virtual gifts that they have received from users, nor could the platforms rank users based on the monetary amount of virtual gifts that they have given to live streaming performers. Any such rankings currently available on these online platforms is ordered to be removed by June 7, 2022 according to the Live Streaming Opinions. In addition, the online platforms shall procure that, during the peak hours (from 8 p.m. to 10 p.m.) every day, each live streaming performer shall not engage in "PKs" (i.e. real-time interactive competitive game between two performers) against another performer for more than twice, and the online platforms shall not impose penalty within the game or provide any technical support to facilitate imposing such penalty.

PRC regulation on online cultural activities

On February 17, 2011, the MOC promulgated the *Provisional Measures on Administration of Internet Culture*, or the Internet Culture Measures, which became effective as of April 1, 2011 and was amended on December 15, 2017. On March 18, 2011, the MOC issued the *Notice on Issues Relating to Implementing the Newly Amended Provisional Measures on Administration of Internet Culture*. The Internet Culture Measures regulates entities engaging in activities relating to “online cultural products.” “Online cultural products” are defined as cultural products produced, disseminated and circulated via internet which mainly include: (i) online cultural products particularly produced for the internet, such as online music entertainment, network games, network performance programs, online performing arts, online artworks and online animation features and cartoons; and (ii) online cultural products converted from music entertainment, games, performance programs, performing arts, artworks and animation features and cartoons, and disseminated via the internet. Pursuant to these measures, entities are required to obtain relevant Online Culture Operating Permits from the applicable provincial level culture administrative authority if they intend to commercially engage in any of the following types of activities:

- production, duplication, importation, distribution or broadcasting of online cultural products;
- publication of online cultural products on the internet or transmission thereof via information networks such as the internet and the mobile networks to computers, fixed-line or mobile phones, television sets or gaming consoles for the purpose of browsing, reviewing, using or downloading such products by online users; or
- exhibitions or contests related to online cultural products.

On December 2, 2016, the MOC issued the *Administrative Measures for Business Activities of Online Performances*, which became effective on January 1, 2017. According to these measures, the business of transmitting in real time the content of online games presented or narrated via information networks such as the internet, mobile communication networks and mobile internet or uploading such contents for communication in the audio-visual form shall be administered as online performances. An operator of online performances shall apply for Online Culture Operating Permit with the competent provincial cultural administration department, and the business scope indicated on the Online Culture Operating Permit shall clearly include online performances. In addition, an operator of online performances shall present the number of its Online Culture Operating Permit in a prominent position on the homepage of its websites.

To comply with these then and currently effective laws and regulations, Shenzhen Xunlei obtained an Online Culture Operating Permit, which was last renewed in February 2022 with an effective period from March 16, 2022 to March 15, 2025 to offer music entertainment product online, operate online performance business and online shows business, and engage in the exhibition of online culture products and competition activities. Shenzhen Wangwenhua obtained an Online Culture Operating Permit with an effective period from May 2, 2023 to May 1, 2026 to operate online performance business and online shows business.

PRC regulation on online games

On June 3, 2010, MOC promulgated the *Provisional Measures on the Administration of Online Games*, amended on December 15, 2017 and last repealed by the Decision of the Ministry of Culture and Tourism to Repeal the Measures for the Administration of Online Games and the Measures for the Administration of Tourism Development Plans, which became effective on July 10, 2019. Pursuant to the *Provisional Measures on the Administration of Online Games*, the contents of the online games are subject to the review of MOC. In accordance with these measures, ICP service operators engaging in any activities involving the operation of online games, issuance or trading of virtual currency must obtain the Online Culture Operating Permit and handle the censorship procedures for imported online games and the filing procedures for domestically developed online games with MOC and its provincial counterparts. Regarding virtual currency trading, ICP service operators can only issue virtual currency in exchange of the service provided by itself rather than trading for service or products provided by third parties. To comply with these laws and regulations, Shenzhen Xunlei, Xunlei Games, and Shenzhen Wangwenhua had obtained an Online Culture Operating Permit for our operation of online games.

Further, the online publication of online games is subject to the regulation of SAPPRFT, under the *Administrative Provisions on Online Publishing Services* and ICP service operators must obtain the Internet Publishing Services License prior to provision of any online game publishing services. On September 28, 2009, GAPPRFT, the National Copyright Administration and the National Office of Combating Pornography and Illegal Publications jointly published the *Notice Regarding the Consistent Implementation of the "Stipulations on 'Three Provisions' of the State Council and the Relevant Interpretations of the State Commission Office for Public Sector Reform and the Further Strengthening of the Administration of Pre-examination and Approval of Internet Games and the Examination and Approval of Imported Internet Games"*, or the Notice of Three Provisions and Internet Games, which expressly requires that all online games need to be approved by GAPPRFT through the advanced approvals before they are operated online, and any updated online game versions or any change to the online games shall be subject to further advanced approvals before they can be operated online. In addition, foreign investors are prohibited from operating online games by the forms of foreign invested enterprises. The indirect functions such as contractual control and technology supply are also prohibited.

On May 14, 2019, the MOCT issued a notice announcing the adjustment of the scope of business activities that are subject to the MOCT's approval for Online Culture Operation License. Pursuant the notice, the MOCT will no longer be responsible for issuing Online Culture Operation License to companies operating online games and issuance and trading of virtual currency in connection with online game operations. On July 10, 2019, the MOCT abolished the Provisional Measures on the Administration of Online Games, which required online game operators to obtain Online Culture Operation License for operating online games and issuance and trading of virtual currency in connection with online game operations. As a result, Online Culture Operation License is no longer required for online game operators.

Our online game services are operated by Shenzhen Wangwenhua, Shenzhen Xunlei and Xunlei Games. All of these online game operating subsidiaries have obtained a VATS License for operating our online games; and Shenzhen Xunlei, holding 100% of the equity interest in Shenzhen Wangwenhua and 70% of the equity interest in Xunlei Games, has obtained an Internet Publishing Services License for the publication of internet games, which has expired on September 17, 2022 and is in the process of renewal. However, neither Shenzhen Wangwenhua nor Xunlei Games has obtained an Internet Publishing Services License. Given the uncertainties of interpretation and implementation of relevant laws and regulations and the enforcement practices of relevant government authorities, we cannot assure you that Shenzhen Wangwenhua and Xunlei Games are not required to obtain Internet Publishing Services Licenses as well. For risks relating to the Internet Publishing Services License, see "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—We may not be able to successfully address the challenges and risks we face in the online games market, such as a failure to operate popular, high-quality games or to obtain all the licenses required to operate online games, which may subject us to penalties from relevant authorities, including the discontinuance of our online game business."

PRC regulation on anti-fatigue system, real-name registration system and parental guardianship project

In April 2007, GAPPRFT and several other government agencies issued a circular requiring the implementation of an anti-fatigue system and a real-name registration system by all PRC online game operators to curb addictive online game playing by minors. Under the anti-fatigue system, three hours or less of continuous playing by minors, defined as game players under 18 years of age, is considered to be "healthy," three to five hours to be "fatiguing," and five hours or more to be "unhealthy." Game operators are required to reduce the value of in-game benefits to a minor player by half if the minor has reached the "fatiguing" level, and to zero once reaching the "unhealthy" level.

To identify whether a game player is a minor and thus subject to the anti-fatigue system, a real-name registration system must be adopted to require online game players to register their real identity information before playing online games. The online game operators are also required to submit the identity information of game players to the public security authority for verification. In July 2011, GAPPRFT, together with several other government agencies, jointly issued *the Notice on Initializing the Verification of Real-name Registration for the Anti-Fatigue System on Online Games*, or the Real-name Registration Notice, to strengthen the implementation of the anti-fatigue and real-name registration system. The main purpose of the Real-name Registration Notice is to curb addictive online game playing by minors and protect their physical and mental health. This notice indicates that the National Citizen Identity Information Center of the Ministry of Public Security will verify identity information of game players submitted by online game operators. The Real-name Registration Notice also imposes stringent penalties on online game operators that do not implement the required anti-fatigue and real-name registration systems properly and effectively, including terminating their online game operations.

In January 2011, MOC, together with several other government agencies, jointly issued a circular entitled *Implementation Scheme regarding Parental Guardianship Project for Minors Playing Online Games* to strengthen the administration of online games and protect the legitimate rights and interests of minors. This circular indicates that online game operators must have person in charge, set up specific service webpages and publicize specific hotlines to provide parents with necessary assistance to prevent or restrict minors' improper game playing behavior. Online game operators must also submit a report regarding its performance under the Parental Guardianship Project to the local MOC office each quarter.

On February 4, 2015, the CAC promulgated *the Administrative Provisions on Account Names of Internet Users*, or the Account Names Provisions, which became effective as of March 1, 2015. The Account Name Provisions require internet service providers to authenticate registered users' identity information and to commit to complying with the "seven basic requirements," including, among other things, observing the laws and regulations, protecting state interests, as well as ensuring the authenticity of any information they provide. Relevant internet information service providers are responsible for protecting users' privacy, the consistency between user information, such as account names, avatars, and the requirements set forth in the Account Names Provisions, making reports to the competent authorities regarding any violation of the Account Names Provisions, and taking appropriate measures to stop any such violations, such as, notifying the user to make corrections within a specified time and suspending or closing accounts in the event of continuing non-compliance.

On August 22, 2019, the CAC issued *the Regulation on Cyber Protection of Children's Personal Information*, effective on October 1, 2019. Pursuant to this, network operators are required to establish special policies and user agreements to protect children's personal information, and to appoint special personnel in charge of protecting children's personal information. Network operators who collect, use, transfer or disclose personal information of children are required to, in a prominent and clear way, notify and obtain consent from children's guardians.

In October 2019, NPPA issued the Anti-indulgence Notice, under which the total period of time for underage users to play online games is strictly restricted. For example, from 22:00 p.m. each day to 8:00 a.m. of the next day, game operators are not allowed to provide underage users with any form of access to online games they operate, and the total length of time for game operators to provide underage users with access to online games cannot exceed three hours a day during statutory holidays or 1.5 hours a day on days other than statutory holidays. The Anti-indulgence Notice also requires game operators to implement the real-name registration system for players of online games and take effective measures to restrict underage players from using paid services that are inconsistent with their capacity for civil conduct.

On August 30, 2021, the NPPA issued *the Notice on Further Strict Management to Prevent Minors from Indulging in Online Games*, which requires all online game operators to provide services to minors only on any Friday, Saturday, Sunday and statutory holidays from 8:00 p.m. to 9:00 p.m., i.e., for one hour, and not to provide online games in any form to users who have not registered or logged in with their real names. In addition to the real-name registration system already in place, we have adjusted the systems in the games operated by us to comply with the requirements under this notice.

On October 26, 2021, the CAC issued draft *Administrative Provisions on the Account Names of Internet Users*, revising the Account Names Provisions. This draft provides that when registering an internet account, the user shall execute an agreement with the Internet user account services platform, provide authentic identity information, and obey the rules of the platform for content production and account management, the platform conventions and service agreement. Internet user account service platforms shall establish, improve and strictly implement, among others, account name information management system, information content security system, and personal information protection system. Internet user account service platforms should also establish an account name information dynamic check patrol system for the verification of real identity information, improve their technical measures for purposes of account information legal compliance, and support account name authenticity checks. When an Internet user account is in violation of the provisions of this draft, the Internet user account service platform shall suspend the service and inform the user to correct the issue within a limited time; and if the user refuses to correct it, the account shall be terminated.

For the online games on our platform, we have implemented a real-name registration system for our online games. For game players who do not provide verified identity information, we assume that they are minors under 18 years of age. Online game operators or developers rely on the identify information provide by us to implement their anti-indulgence measures. With respect to anti-indulgence measures, we have cooperated with third parties in developing anti-indulgence measures and are currently working with our third-party online game providers to implement anti-indulgence measures pursuant to the Anti-indulgence Notice. We have completed in preparing application materials and connecting to the national anti-indulgence and real-name registration system. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—We may not be able to successfully address the challenges and risks we face in the online games market, such as a failure to operate popular, high-quality games or to obtain all the licenses required to operate online games, which may subject us to penalties from relevant authorities, including the discontinuance of our online game business.”

PRC regulation on online game virtual currency

According to the Virtual Currency Notice, pursuant to which no enterprise may concurrently provide both virtual currency issuance service and virtual currency transaction service. The regulations prohibit companies that issue online game virtual currency from providing services that would enable the trading of such virtual currency. Any company that fails to submit the requisite application will be subject to sanctions, including but not limited to termination of operation, confiscation of incomes and fines. The regulations also prohibit online game operators from allocating virtual items or virtual currency to players based on random selection through lucky draw, wager or lottery that involves cash or virtual currency directly paid by the players. In addition, companies that issue online game virtual currency must comply with certain specific requirements, for example, online game virtual currency can only be used for products and services related to the issuance company’s own online games.

On May 14, 2019, the MOCT issued a notice announcing the adjustment of the scope of business activities that are subject to the MOCT’s approval for Online Culture Operation License. Pursuant the notice, the MOCT will no longer be responsible for issuing Online Culture Operation License to companies operating online games and issuance and trading of virtual currency in connection with online game operations. On July 10, 2019, the MOCT abolished *the Provisional Measures on the Administration of Online Games*, which required online game operators to obtain Online Culture Operation License for operating online games and issuance and trading of virtual currency in connection with online game operations. As a result, Online Culture Operation License is no longer required for online game operators.

Since Online Culture Operation License is no longer required for the issuance and trading of virtual currency in connection with online game operations, Xunlei Games did not renew its Online Culture Operation Licenses after expiration.

PRC regulation on internet publication

NPPA (formerly the SAPPRFT, GAPPRFT) is the government agency responsible for regulating publication activities in the PRC. In February 2016, the SAPPRFT and the MIIT jointly issued the *Administrative Measures on Network Publication*, which took effect in March 2016 and replaced the Internet Publication Measures. Pursuant to the Administrative Measures on Network Publication, Internet publishers shall be approved by and obtain an Internet Publishing Services License from NPPA to engage in network publication service. The network publication services refer to the activities of providing network publications to the public through information networks; and the network publications refer to the digitalized works with the publishing features such as editing, producing and processing. The Administrative Measures on Network Publication also provide the detailed qualifications and application procedures for obtaining an Internet Publishing Services License. The Notice of Three Provisions and Internet Games issued jointly by GAPPRFT and other relevant administrations confirmed that the entities operating internet games must obtain the Internet Publication Services License. On February 21, 2008, the GAPPRFT promulgated the *Rules for the Administration of Electronic Publication*, or the Electronic Publication Rules, which took effect on April 15, 2008 and was amended on August 28, 2015. Under the Electronic Publication Rules and other regulations, online games are classified as a kind of electronic publication, and publishing of online games is required to be conducted by licensed electronic publishing entities that have been issued standard publication codes. Pursuant to the Electronic Publication Rules, if a PRC company is contractually authorized to publish foreign electronic publications, it must obtain the approval of, and register the copyright license contract with, the NPPA.

Shenzhen Xunlei holds the Internet Publishing Services License for the publication of internet games, which has expired on September 17, 2022 and is in the process of renewal. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—We may not be able to successfully address the challenges and risks we face in the online games market, such as a failure to acquire and operate popular, high-quality games or to obtain all the licenses required to operate online games, which may subject us to penalties from relevant authorities, including the discontinuance of our online game business.”

PRC regulation on algorithm recommendations

On February 7, 2021, the Anti-Monopoly Commission of the State Council published *the Anti-Monopoly Guidelines for the Internet Platform Economy Sector*, which stipulates that online platform operators who use technological advantages, such as data and algorithms, to eliminate or restrict competition or impose price restrictions or exclusivity requirements on users, may be deemed as committing an abuse of dominant market position.

On September 17, 2021, the CAC, together with eight other governmental authorities, jointly issued *the Guidelines on Strengthening the Comprehensive Regulation of Algorithms for Internet Information Services*, which provides that daily monitoring of data use, application scenarios and effects of algorithms shall be carried out by the relevant regulators, and that security assessments of algorithms shall be conducted by the relevant regulators. The guidelines also provide that an algorithm filing system shall be established and classified security management of algorithms shall be promoted.

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 Recommendations 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.

We have taken several measures to comply these regulations, among others, providing an option for our users to turn off algorithm recommendation services. However, *the Administrative Provisions on Algorithm Recommendations of Internet Information Services* are relatively new thus uncertainties still exist as to its interpretation, and the potential impact on our business operations is still substantially uncertain. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—We may be adversely affected by PRC regulations to limit the method and manner that the internet companies may apply when using algorithms.”

PRC regulation on internet privacy

The PRC Constitution states that PRC law protects the freedom and privacy of communications of citizens and prohibits infringement of such rights. In recent years, PRC government authorities have enacted legislation on internet use to protect personal information from any unauthorized disclosure. The Internet Measures prohibit ICP service operators from insulting or slandering a third party or infringing upon the lawful rights and interests of a third party. Pursuant to the *Several Provisions on Regulating the Market Order of Internet Information Services* issued by MIIT on December 29, 2011, without the consent of a user, an ICP operator may not collect any user personal information or provide any such information to third parties. An ICP service operator shall expressly inform the users of the method, content and purpose of the collection and processing of such user personal information and may only collect such information necessary for the provision of its services. An ICP service operator is also required to properly keep the user personal information, and in case of any leak or likely leak of the user personal information, the ICP service operator shall take immediate remedial measures and in severe consequences, to make an immediate report to the telecommunications regulatory authority. In addition, pursuant to the *Decision on Strengthening the Protection of Online Information* issued by the SCNPC of the PRC on December 28, 2012, or the Decision, and the *Order for the Protection of Telecommunication and Internet User Personal Information* issued by MIIT on July 16, 2013, or the Order, any collection and use of user personal information shall 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 ICP service operator shall also keep such information strictly confidential, and is further prohibited from divulging, tampering or destroying of any such information, or selling or proving such information to other parties. Any violation of the Decision or the Order may subject the ICP service operator to warnings, fines, confiscation of illegal gains, revocation of licenses, cancellation of filings, closedown of websites or even criminal liabilities.

Pursuant to *the Ninth Amendment to the Criminal Law of the PRC* issued by the SCNPC on August 29, 2015, any internet service provider that fails to fulfill the obligations related to internet information security as required by applicable laws and refuses to take corrective measures, will be subject to criminal liability for (i) any large-scale dissemination of illegal information; (ii) any severe effect due to the leakage of users' personal information; (iii) any serious loss of evidence of criminal activities; or (iv) other severe situations, and any individual or entity that (a) sells or provides personal information to others unlawfully or (b) steals or illegally obtains any personal information will be subject to criminal liability in severe situations.

The SCNPC promulgated *the Cybersecurity Law of the PRC*, or the Cybersecurity Law, on November 7, 2016. Pursuant to the Cybersecurity Law, network operators shall follow their cybersecurity obligations according to the requirements of the classified protection system for cybersecurity, including: (a) formulating internal security management systems and operating instructions, determining the persons responsible for cybersecurity, and implementing the responsibility for cybersecurity protection; (b) taking technological measures to prevent computer viruses, network attacks, network intrusions and other actions endangering cybersecurity; (c) taking technological measures to monitor and record the network operation status and cybersecurity incidents; (d) taking measures such as data classification, and back-up and encryption of important data; and (e) other obligations provided by laws and administrative regulations. In addition, network operators shall follow the principles of legitimacy to collect and use personal information and 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.

On November 28, 2019, the Secretary Bureau of the Cyberspace Administration of China, the General Office of the MIIT, the General Office of the Ministry of Public Security and the General Office of the State Administration for Market Regulation promulgated *the Identification Method of Illegal Collection and Use of Personal Information Through App*, which 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 National Information Security Standardization Technical Committee issued the latest *Standard of Information Security Technology—Personal Information Security Specification*, which came into effect in October, 2020 and replaced the 2017 version. Under such standard, a personal information controller should follow the principles of legality, justification and necessity in handling personal information, obtain a consent from personal information providers and provide the personal information providers an independent choice when the product or service provided by the personal information controller has multiple functions.

On August 20, 2021, the SCNPC promulgated *the Personal Information Protection Law of the PRC*, or the Personal Information Protection Law, effective from November 1, 2021. The Personal Information Protection Law requires, among others, that (i) the processing of personal information should have a clear and reasonable purpose which should be directly related to the processing purpose, in a method that has the least impact on personal rights and interests, and (ii) the collection of personal information should be limited to the minimum scope necessary to achieve the processing purpose to avoid the excessive collection of personal information. Different types of personal information and personal information processing will be subject to various rules on consent, transfer, and security. Entities handling personal information bear responsibilities for their personal information handling activities, and shall adopt necessary measures to safeguard the security of the personal information they handle. Otherwise, the entities handling personal information could be ordered to correct, or suspend or terminate the provision of services, and face confiscation of illegal income, fines or other penalties. To comply with these laws and regulations, we have established information security systems to protect user's privacy, we also have adopted a risk detection mechanism for data security defects and vulnerabilities, and set up an emergency response mechanism for data security incidents. We also periodically review our privacy policies and amend as needed based on the development and changes of the personal information we will collect and process to ensure that we have comply with relevant, requirements including, among others, obtaining users' prior consent to the collection and processing of their personal information before such collecting and processing. However, our system may not be compliant with relevant laws and regulations in all respects. We have been ordered to rectify our app as it failed to explicitly inform users the purpose, method, and scope regarding personal data collection. We will continue to review and amend our privacy policies on our websites and mobile applications periodically based on the development and changes of our business operations so that we obtain proper consents from our users for collecting and using their personal information. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—Violation of existing or future laws, regulations or regulations on collection and use of personal data could damage our reputation, deter current and potential users from using our services and substantially harm our business and results of operations."

PRC regulation on internet medicine information service

The State Food and Drug Administration, or the SFDA, promulgated *the Administration Measures on Internet Medicine Information Service* on July 8, 2004, which was amended in November 2017, and certain implementing rules and notices thereafter. These measures set out regulations governing the classification, application, approval, content, qualifications and requirements for internet medicine information services. An ICP service operator that provides information regarding medicine or medical equipment must obtain an Internet Medicine Information Service Qualification Certificate from the applicable provincial level counterpart of SFDA. Shenzhen Xunlei has obtained a Medicine Information Service Qualification Certificate from Guangdong Food and Drug Administration for the provision of internet medical information services with an expiry date of August 21, 2023. Shenzhen Wangwenhua has also obtained a Medicine Information Service Qualification Certificate from Guangdong Food and Drug Administration for the provision of internet medical information services with the expiry date extended to August 23, 2027.

PRC regulation on advertising business

The State Administration for Market Regulation, or the SAMR, is the government agency responsible for regulating advertising activities in the PRC.

According to the PRC laws and regulations, companies that engage in advertising activities must obtain from SAMR or its local branches a business license which specifically includes operating an advertising business within its business scope. 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 law or regulation. PRC advertising laws and regulations set forth certain content requirements for advertisements in the PRC including, among other things, prohibitions on false or misleading content, superlative wording, socially destabilizing content or content involving obscenities, superstition, violence, discrimination or infringement of the public interest. Advertisers, advertising agencies, and advertising distributors are required by PRC advertising laws and regulations to ensure that the content of the advertisements they prepare or distribute is true and in full compliance with applicable law. 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. The release or delivery of advertisements through the Internet shall not impair the normal use of the network by users. The advertisements released in pop-up form on the webpage of the Internet and other forms shall indicate the close flag in prominent manner and ensure one-key close. 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. In circumstances involving serious violations, SAMR or its local branches may revoke violators' licenses or permits for their advertising business operations.

In July 2016, the SAIC issued *the Interim Measures for the Administration of Internet Advertising*, or the Interim Measures, to regulate internet advertising activities. According to the Interim Measures, no advertisement of any medical treatment, medicines, food for special medical purpose, medical apparatuses, pesticides, veterinary medicines, dietary supplement or other special commodities or services subject to examination by an advertising examination authority as stipulated by laws and regulations may be published unless the advertisement has passed such examination. In addition, no entity or individual may publish any advertisement of over-the-counter medicines or tobacco on the internet. An internet advertisement must be identifiable and clearly identified as an "advertisement" to the consumers. Paid search advertisements are required to be clearly distinguished from natural search results. In addition, the following internet advertising activities are prohibited: providing or using any applications or hardware to intercept, filter, cover, fast forward or otherwise restrict any authorized advertisement of other persons; using network pathways, network equipment or applications to disrupt the normal data transmission of advertisements, alter or block authorized advertisements of other persons or load advertisements without authorization; or using fraudulent statistical data, transmission effect or matrices relating to online marketing performance to induce incorrect quotations, seek undue interests or harm the interests of others. Internet advertisement publishers are required to verify relevant supporting documents and check the content of the advertisement and are prohibited from publishing any advertisement with unverified content or without all the necessary qualifications. Internet information service providers that are not involved in internet advertising business activities but simply provide information services are required to block any attempt to publish an illegal advertisement that they are aware of or should reasonably be aware of through their information services.

On February 25, 2023, the SAMR issued *the Measures for the Administration of Internet Advertising*, or the Measures, which will come into effect on May 1, 2023, and replace the Interim Measures. The Measures provide requirements for transparency, user rights protection, and responsibilities for advertising agents, advertising publishers, and platform operators. The Measures introduce requirements for various forms of online advertisements, including pop-up advertisements, open-screen advertisements, livestreaming advertisement, “soft text advertisements”, internet advertisements containing links, auction ranked advertisements, algorithm-recommended advertisements, internet live broadcast advertisements, and covert advertisements. For instance, when promoting goods or services through soft text advertisements such as knowledge introduction, experience sharing, and consumption evaluation with attached purchase methods like shopping links, the advertisement publisher must clearly indicate “advertisement” to distinguish it as such. The Measures specifically require internet platform operators to take measures to prevent and stop illegal advertisements, which include recording and storing the real identity information of users who publish advertisements for at least three years, monitoring and investigating advertisement content, and employing measures to stop illegal advertisements. Platform operators must also establish effective complaint and reporting mechanisms, cooperate with competent governmental authorities in investigating illegal conduct, and use measures such as warnings or suspending or terminating services for users who publish illegal advertisements. Platform operators are prohibited from using technical means or other methods to obstruct competent governmental authorities’ advertisement monitoring. Violation of these requirements may result in administrative penalties including fines, confiscation of illegal incomes, suspension of business operations and revocation of business licenses, among others. The administrative penalty decisions made by competent governmental authorities will be publicly disclosed through the National Enterprise Credit Information Publicity System.

We have outsourced our advertising business to Itui in 2020 and required Itui to set up an effective review mechanism for each advertisement it places on our websites and platform to ensure the contents are truthful, accurate, and in full compliance with relevant laws and regulations. See “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—Advertisements displayed on our platform may subject us to penalties and other administrative actions.”

PRC regulation on information security and censorship

The applicable PRC laws and regulations specifically prohibit the use of internet infrastructure where it may breach public security, provide content harmful to the stability of society or disclose state secrets. According to the Measures for the Administration of Computer Information Network and International Networking Security Protection, which was issued by the State Council on January 8, 2011 and other relevant regulations, it is mandatory for internet companies in the PRC to complete security filing procedures and regularly update information security and censorship systems for their websites with the local public security bureau. In addition, the amended *Law on Preservation of State Secrets* which became effective on October 1, 2010 provides that whenever an internet service provider detects any leakage of state secrets in the distribution of online information, it should stop the distribution of such information and report to the authorities of state security and public security. As per request of the authorities of state security, public security or state secrecy, the internet service provider should delete any content on its website that may lead to disclosure of state secrets.

On June 28, 2016, the CAC issued the *Administrative Provisions on Mobile Internet Applications Information Services*, which became effective on August 1, 2016 and the most recent amendment of which became effective on August 1, 2022, to further strengthen the administration over the mobile internet application information services. Pursuant to these provisions, owners or operators of mobile internet applications that provide information services are required to be responsible for information security management, which, among others, includes the following:

- certifying the identification information of the registered users;
- establishing and improving the protective mechanism for users information, following the principle of legality, rightfulness, necessity and good faith, and having clear and reasonable purposes, disclose processing rules, abide by the relevant regulations on the scope of necessary personal information and take necessary measures to ensure personal information security; and
- establishing and improving the verification mechanism for the content, taking measures against any illegal content, keeping the relevant records and reporting such content to relevant competent authorities.

On November 7, 2016, the SCNPC promulgated the *Cyber Security Law of the People's Republic of China*, or Cyber Security Law, which became effective on June 1, 2017 to protect cyberspace security and order. Pursuant to the Cyber Security Law, any individual or organization using the network must comply with the constitution and the applicable laws, follow the public order and respect social moralities, and must not endanger cyber security, or engage in activities by making use of the network that endanger the national security, honor and interests, or infringe on the fame, privacy, intellectual property and other legitimate rights and interests of others. In addition, the Cyber Security Law requires network operators must not collect personal information irrelevant to their services. The network operators are required to strictly keep confidential users' personal information that they have collected and to establish and improve user information protective mechanism. In the event of any unauthorized disclosure, damage or loss of collected personal information, network operators must take immediate remedial measures, notify the affected users and report the incidents to the relevant authorities in a timely manner.

On August 25, 2017, the CAC promulgated the Provisions on *the Administration of Internet Comments Posting Services*, which became effective on October 1, 2017 with the most recent amendment becoming effective on December 15, 2022. According to such provisions, internet comments posting services refer to the services of publishing transcripts, symbols, expressions, pictures, audio and video and other information offered by Internet websites, applications, interactive communication platforms and other types of website platforms having the capabilities of social mobilization or influencing public opinion by way of comment, reply, message, bullet screen, like and using other means. Providers of the internet comments posting services shall strictly assume the primary responsibilities and discharge the following obligations accordingly:

- verify the real identity information of registered users following the principle of using real name at foreground and volunteering to do so at background and forbid the provision of internet comments posting services for users whose real identity information is not verified or falsely use the identity information of the organization or others;
- establish and improve a user personal information protection system;
- establish a system to review new comments before they are published when providing internet comments posting services;
- establish and improve an internet comments posting review and management, real-time check, emergency response, report acceptance and other information security management systems, timely identify and process illicit and unhealthy information and submit a report to the relevant competent network information departments;
- develop information protection and management technologies for the internet comments posting, timely identify security flaws and bugs and other risks in internet comments posting services, take remedial measures and submit a report to the relevant competent internet and information departments; and
- set up a reviewing and editing team, strengthen the post review and review training and improve the professionalism of editors.

In addition, on August 25, 2017, the CAC promulgated the *Administrative Provisions on Internet Forum and Community Services*, which became effective on October 1, 2017, pursuant to which the internet forum and community service providers shall assume the primary responsibility for establishing and improving the information inspection and verification, public information real-time check, emergency response and personal information protection and other information security management systems, put in place safe and controllable preventative measures, employ professionals based on service scope, and provide necessary technical support for the relevant departments in performing duties according to the law. The internet forum and community service providers shall not use internet forum and community services to publish or disseminate information banned by laws, regulations and the relevant provisions of the state. Where the internet forum and community service providers identify any aforementioned information, they shall cease the transmission of such information forthwith, delete and take other measures, retain the relevant records and timely submit a report to the CAC or its local branches.

On November 15, 2018, the CAC and the Ministry of Public Security jointly promulgated *the Provisions for the Security Assessment of Internet Information Services Having Public Opinion Properties or Social Mobilization Capacity*, which deems microblogging, live streaming, information sharing services as internet information having the capabilities of social mobilization or influencing public opinion. The service providers providing such services are required to conduct security assessments when they launch new online services, expand the functionality of their existing services, introduce new technologies or applications, experience a significant increase in user base, witness the spread of unlawful or harmful information, or any other circumstance identified by the cybersecurity authorities. These service providers are required to submit security assessment reports to the local cybersecurity authorities and public security bureau via the National Internet Security Management Service Platform.

On June 27, 2022, the CAC promulgated the Administrative Provisions on the Account Information of Internet Users, with effect from August 1, 2022, which provides guidelines on the provision the account information of Internet users. Internet-based information service providers shall perform their responsibilities as the administrative subjects of the account information of internet users, have in place professionals and technical capacity appropriate to the scale of services, and establish, improve and strictly implement the authentication of real identity information, verification of account information, security of information content, ecological governance, emergency responses, protection of personal information and other management systems.

On September 9, 2022, the CAC, together with the MIIT and SAMR jointly issued the Administrative Provisions on Internet Pop-up Window Information Notification Services, with effect from September 30, 2022, which provides that providers of Internet pop-up window information push services shall implement the responsibilities as subjects of information content management and establish and improve management systems for censoring of information content, ecological governance, data security and personal information protection, and protection of minors.

Violation of these laws and provisions may result in penalties, including fines, confiscation of illegal income. In the case of serious violations, the competent telecommunication authority, public security authority and other relevant authorities may suspend relevant business, rectification or close down the website, or revoke licenses or permits for their business operations.

We are subject to the laws and regulations relating to information security and censorship. To comply with these laws and regulations, we have completed the mandatory security filing procedures with the local public security authorities, and regularly update its information security and content-filtering systems with newly issued content restrictions as required by the relevant laws and regulations, such as the Measures for the Administration of Computer Information Network and International Networking Security Protection. Although instances in the past have suggested that our information security and content-filtering systems may not be compliant with relevant laws and regulations in all respects, we strive to improve our systems by continuously implementing additional protective and examining measures to reduce the risk of cyber-incidents and to detect improper or illegal contents. See “Item 3. Key Information-D. Risk Factors-Risks Related to Our Business-System failure, interruptions and downtime, including those caused by cyber-attacks or security breaches, can result in user dissatisfaction, adverse publicity or leakage of confidential information of our users and customers, and our business, financial condition, results of operations may be materially and adversely affected.”

On June 10, 2021, the Standing Committee of the National People’s Congress promulgated the Data Security Law, which took effect on September 1, 2021. The Data Security Law establishes a classified and tiered system for data protection based on the level of importance of the data in the economic and social development, as well as the level of danger of the data imposed on national security, public interests, or the legal interests of individuals and organizations upon any manipulation, destruction, leakage, illegal acquisition or illegal usage. Furthermore, it is specified that the Cyber Security Law applies to the security administration of the cross-border transfer of important data collected and generated by operators of “critical information infrastructure” during their operations in China.

On November 14, 2021, the CAC published a discussion draft of *Administrative Measures for Internet Data Security* or the Draft Measures for Internet Data Security, which provides that data processors conducting the following activities shall apply for cybersecurity review: (i) merger, reorganization or separation of Internet platform operators that have acquired a large number of data resources related to national security, economic development or public interests affects or may affect national security; (ii) listing abroad of data processors processing over one million users' personal information; (iii) listing in Hong Kong which affects or may affect national security; (iv) other data processing activities that affect or may affect national security. The Draft Measures for Internet Data Security also provide that operators of large Internet platforms that set up headquarters, operation centers or R&D centers overseas shall report to the national cyberspace administration and competent authorities.

In addition, the Draft Measures for Internet Data Security requires data processors processing over one million users' personal information to comply with the regulations on important data processors, including, among others, appointing a person in charge of data security and establishing a data security management organization, filing with the competent authority within fifteen working days after identifying its important data, formulating data security training plans and organizing data security education and training for all staff every year, and that the education and training time of data security related technical and management personnel shall not be less than 20 hours per year. The Draft Measures for Internet Data Security also state that data processors processing important data or going public overseas shall conduct an annual data security assessment by themselves or entrust a data security service institution to do so, and submit the data security assessment report of the previous year to the local branch of CAC before January 31 of each year.

Further, the Draft Measures for Internet Data Security also require Internet platform operators to establish platform rules, privacy policies and algorithm strategies related to data, and solicit public comments on their official websites and personal information protection related sections for no less than 30 working days when they formulate platform rules or privacy policies or makes any amendments that may have a significant impact on users' rights and interests. Further, platform rules and privacy policies formulated by operators of large Internet platforms with more than 100 million daily active users, or amendments to such rules or policies by operators of large Internet platforms with more than 100 million daily active users that may have significant impacts on users' rights and interests shall be evaluated by a third-party organization designated by the CAC and reported to local branch of the CAC for approval. The CAC solicited comments on this draft, but there is no timetable as to when it will be enacted.

On December 28, 2021, the CAC, the NDRC, the MIIT, and several other authorities jointly promulgated *Measures for Cybersecurity Reviews*, or the Review Measures, which became effective on February 15, 2022. The Review Measures, upon effectiveness, will replace a previous version promulgated on April 13, 2020. According to the Review Measures, (i) when the purchase of network products and services by a critical information infrastructures operator or the data processing activities conducted by a network platform operator affect or may affect national security, a cybersecurity review shall be conducted pursuant to the Review Measures. The aforesaid operators shall file for a cybersecurity review with Cybersecurity Review Office under the CAC if their behavior affects or may affect national security; (ii) an application for cybersecurity review shall be made by an issuer who is a network platform operator holding personal information of more than one million users before such issuer applies to list its securities on a foreign stock exchange; and (iii) the relevant PRC governmental authorities may initiate cybersecurity review if such governmental authorities determine that the issuer's network products or services, or data processing activities affect or may affect national security. Cybersecurity reviews focus on assessing the following national security risks factors associated with relevant objects or circumstances: (i) the risk of illegal control, interference or destruction of critical information infrastructure, arising from the purchase and utilization of network products and services; (ii) the harm on the business continuity of critical information infrastructure incurring from a disruption of network products and services supply; (iii) the safety, openness, transparency, diversity of sources of network products and services; the reliability of suppliers; and the risk of supply disruption due to political, diplomatic, trade and other reasons; (iv) the level of compliance with the PRC laws, administrative regulations and ministry rules of the suppliers of network products and services; (v) the risk of core data, important data or a large amount of personal information being stolen, leaked, destroyed, and illegally used or illegally exited the country; (vi) the risk of critical information infrastructure, core data, important data or a large amount of personal information being affected, controlled, or maliciously used by foreign governments and the network information security risk in relation to listing abroad; and (vii) other factors that may harm critical information infrastructure, cyber security and/or data security.

On July 7, 2022, the CAC promulgated the *Outbound Data Transfers Security Assessment Measures*, or the Measures, which became effective on September 1, 2022. The Measures require the data processor providing data overseas and falling under any of the following circumstances to apply for the security assessment of cross-border data transfer with the local provincial-level counterparts of the national cybersecurity authority: (i) where the data processor intends to provide important data overseas; (ii) where a critical information infrastructure operator and a data processor who has processed personal information of more than 1,000,000 individuals intends to provide personal information overseas; (iii) where a data processor who has provided personal information of 100,000 individuals or sensitive personal information of 10,000 individuals to overseas recipients, in each case as calculated cumulatively, since January 1 of the last year, intends to provide personal information overseas; and (iv) other circumstances where the security assessment of data cross-border transfer is required as prescribed by the CAC. Furthermore, the data processor shall conduct a self-assessment on the risk of data cross-border transfer prior to applying for the foregoing security assessment, under which the data processor shall focus on certain factors including, among others, the legitimacy, fairness and necessity of the purpose, scope and method of data cross-border transfer and the data processing of overseas recipients, the risks that the cross-border data transfer may bring to national security, public interests and the legitimate rights and interests of individuals or organizations as well as whether the cross-border data transfer related contracts or the other legally binding documents to be entered with overseas recipients have fully included the data security protection responsibilities and obligations. Any violations of the Measures may result in the penalties for the data processor and its responsible person under the Cyber Security Law, the Data Security Law, the Personal Information Protection Law and other laws and regulations, which include, among others, warnings, rectification, suspension of business, revocation of relevant license or fines of up to RMB50 million or five percent of annual revenue for the data processor and up to RMB1 million for the relevant responsible individual.

PRC regulation on torts

The Tort Law was promulgated by the SCNPC on December 26, 2009 and became effective on July 1, 2010. In May 2020, the NPC promulgated *the Civil Code of the People's Republic of China*, which became effective on January 1, 2021 and replaced *the Tort Law*. Under *Civil Code of the People's Republic of China*, internet users and internet service providers shall bear tortious liability in the event they infringe upon other people's civil rights and interests through the internet. Where an internet user is infringing upon the civil rights or interests of another person via internet, the injured party shall have the right to demand the relevant internet service provider to take necessary measures such as deleting the infringing content, etc. by serving the internet service provider a notice. Where the internet service provider fails to take any necessary measures, it shall be jointly and severally liable with the internet user for any additional injury or damage incurred thereafter. Under the circumstance that the internet service provider is aware that an internet user is infringing upon the civil rights or interests of another person and fails to take necessary measures, the internet service provider shall be jointly liable for such infringement with such internet user.

PRC regulation on intellectual property rights

The PRC has adopted comprehensive legislation governing intellectual property rights, including copyrights, patents, trademarks and domain names.

Copyright law

Under *the Copyright Law* (1990), as revised in 2001, 2010 and 2020, and its related Implementing Regulations (2002), as revised in 2013, creators of protected works enjoy personal and property rights, including, among others, the right of dissemination via information network of the works. The term of a copyright, other than the rights of authorship, alteration and integrity of an author which shall be unlimited in time, is life plus 50 years for individual authors and 50 years for corporations.

To address the problem of copyright infringement related to content posted or transmitted on the internet, the PRC National Copyright Administration and MIIT jointly promulgated the *Measures for Administrative Protection of Copyright Related to Internet* on April 29, 2005. These measures, which became effective on May 30, 2005, apply to acts of automatically providing services such as uploading, storing, linking or searching works, audio or video products, or other contents through the internet based on the instructions of internet users who publish contents on the internet, without editing, amending or selecting any transmitted content. When imposing administrative penalties upon the act which infringes upon any users' right of communication through information networks, the *Measures for Imposing Copyright Administrative Penalties*, promulgated in 2009, shall be applied.

Pursuant to the *Regulation on Protection of the Right of Communication through Information Network (2006)*, as amended in 2013, an ICP service provider may be exempted from indemnification liabilities under certain circumstances:

- any ICP service provider, who provides automatic internet access service upon instructions of its users or provides automatic transmission service of works, performance and audio-visual products provided by its users, will not be required to assume the indemnification liabilities if (i) it has not chosen or altered the transmitted works, performance and audio-visual products; and (ii) it provides such works, performance and audio-visual products to the designated user and prevents any person other than such designated user from obtaining the access.
- any ICP service provider who, for the sake of improving network transmission efficiency, automatically provides to its own users, based on the technical arrangement, the relevant works, performances and audio-visual products obtained from any other ICP service providers will not be required to assume the indemnification liabilities if (i) it has not altered any of the works, performance or audiovisual products that are automatically stored; (ii) it has not affected such original ICP service provider in grasping the circumstances where the users obtain the relevant works, performance and audio-visual products; and (iii) when the original ICP service provider revises, deletes or shields the works, performance and audio-visual products, it will automatically revise, delete or shield the same based on the technical arrangement.
- any ICP service provider, who provides its users with information memory space for such users to provide the works, performance and audio-visual products to the general public via the information network, will not be required to assume the indemnification liabilities if (i) it clearly indicates that the information memory space is provided to the users and publicizes its own name, contact person and web address; (ii) it has not altered the works, performance and audio-visual products that are provided by the users; (iii) it is not aware of or has no reason to know the infringement of the works, performance and audio-visual products provided by the users; (iv) it has not directly derived any economic benefit from the provision of the works, performance and audio-visual products by its users; and (v) after receiving a notice from the right holder, it has deleted such works, performance and audio-visual products as alleged for infringement pursuant to such regulation.
- any ICP service provider, who provides its users with search services or links, will not be required to assume the indemnification liabilities if, after receiving a notice from the rights holder, it has deleted the works, performance and audio-visual products as alleged for copyright infringement pursuant to this regulation. However, the ICP service provider shall be subject to joint liabilities for copyright infringement if it is aware of or has reason to know the infringement of the works, performance and audio-visual products to which it provides links.

In December 2012, the Supreme People's Court of China promulgated the *Provisions on Certain Issues Related to the Application of Law in the Trial of Civil Cases Involving Disputes over Infringement of the Right of Dissemination through Information Networks*, the most recent amendment of which became effective on January 1, 2021. According to such provisions, the courts will require ICP service providers to remove not only links or content that have been specifically mentioned in the notices of infringement from rights holders, but also links or content they "should have known" to contain infringing content. The provisions further provide that where an ICP service provider has directly obtained economic benefits from any content made available by an internet user, it has a higher duty of care with respect to internet users' infringement of third-party copyrights.

To comply with these laws and regulations, we have implemented internal procedures to monitor and review the contents on our websites and platforms and remove any infringing content promptly after we receive notice of infringement from the legitimate rights holder.

Patent law

The NPC adopted *the Patent Law* in 1984, and amended it in 1992, 2000, 2008 and 2020, respectively. 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 or designs that are mainly used for marking the pattern, color or combination of these two of prints. The Patent Office under the CNIPA is responsible for receiving, examining and approving patent applications. A patent is valid for a twenty-year term in the case of an invention and a ten-year term in the case of a utility model and a fifteen-year term in the case of a design, starting from the application date. A third-party user must obtain consent or a proper license from the patent owner to use the patent except for certain specific circumstances provided by law. Otherwise, the use will constitute an infringement of the patent rights. As of December 31, 2022, we had 340 registered patents in the PRC and 315 patent applications were being examined by the Patent Office under the CNIPA.

Trademark law

Registered trademarks are protected under *the Trademark Law* adopted in 1982 and amended in 1993, 2001 2013 and 2019 and its implementation rules. The Trademark Office of CNIPA is responsible for the registration and administration of trademarks throughout the PRC. The Trademark Law has adopted a “first-to-file” principle with respect to trademark registration. Where a trademark for which a registration has been made is identical or similar to another trademark that has already been registered or been subject to a preliminary examination and approval for use on the same kind of or similar commodities or services, the application for registration of such trademark may be rejected. Any person applying for the registration of a trademark shall not prejudice the existing right of others obtained by priority, nor shall any person register in advance a trademark that has already been used by another person and has already gained “sufficient degree of reputation” through that person’s use. After receiving an application, the PRC Trademark Office will make a public announcement if the relevant trademark passes the preliminary examination. Within three months after such public announcement, any person may file an opposition against a trademark that has passed a preliminary examination. The PRC Trademark Office’s decisions on rejection, opposition or cancellation of an application may be appealed to the PRC Trademark Review and Adjudication Board, whose decision may be further appealed through judicial proceedings. If no opposition is filed within three months after the public announcement period or if the opposition has been overruled, the PRC Trademark Office will approve the registration and issue a registration certificate, upon which the trademark is registered and will be effective for a renewable ten-year period, unless otherwise revoked. As of December 31, 2022, we had 568 trademarks registered in different applicable trademark categories in China, and three trademarks registered with World Intellectual Property Organization. We had applied for registration of 284 trademarks in China.

Domain name

The domain names are protected under the *Administrative Measures on the Internet Domain Names* promulgated by MIIT on August 24, 2017 and effective on November 11, 2017. MIIT is the major regulatory body responsible for the administration of the PRC internet domain names, under supervision of which China Internet Network Information Center, or CNNIC, is responsible for the daily administration of CN domain names and Chinese domain names. On June 18, 2019, CNNIC issued the *Implementing Rules of National Top-Level Domain Names Registration*, Pursuant to the *Administrative Measures on the Internet Domain Names* and the *Implementing Rules of National Top-Level Domain Names Registration*, the registration of domain names adopts the “first to file” principle and the registrant shall complete the registration via the domain name registration service institutions. We have registered “xunlei.com” and other domain names.

PRC regulation on tax

PRC enterprise income tax

The PRC enterprise income tax is calculated based on the taxable income determined under the PRC laws and accounting standards. On March 16, 2007, the NPC enacted a new *PRC Enterprise Income Tax Law*, or the EIT Law, which became effective on January 1, 2008 and last revised on December 2018. On December 6, 2007, the State Council promulgated *the Implementation Rules to the PRC Enterprise Income Tax Law*, or the Implementation Rules, which also became effective on January 1, 2008 and last revised on April 23, 2019. On December 26, 2007, the State Council issued *the Notice on Implementation of Enterprise Income Tax Transition Preferential Policy under the PRC Enterprise Income Tax Law*, or the Transition Preferential Policy Circular, which became effective simultaneously with the EIT Law. The EIT Law imposes a uniform enterprise income tax rate of 25% on all domestic enterprises, including foreign-invested enterprises unless they qualify for certain exceptions, and terminates most of the tax exemptions, reductions and preferential treatments available under previous tax laws and regulations. Under the EIT Law and the Transition Preferential Policy Circular, enterprises that were established before March 16, 2007 and already enjoyed preferential tax treatments will continue to enjoy them (i) in the case of preferential tax rates, for a period of five years from January 1, 2008; during the five-year period, the tax rate will gradually increase from 15% to 25%, or (ii) in the case of preferential tax exemption or reduction for a specified term, until the expiration of such term. In addition, the EIT Law and its implementation rules permit qualified high and new technology enterprises, or HNTes, to enjoy a reduced enterprise income tax rate of 15%.

Moreover, under the EIT Law, enterprises organized under the laws of jurisdictions outside China with their “de facto management bodies” located within China may be considered PRC resident enterprises and therefore subject to PRC enterprise income tax at the rate of 25% on their worldwide income. The Implementation Rules define the term “de facto management body” as the management body that exercises full and substantial control and overall management over the business, productions, personnel, accounts and properties of an enterprise. In addition, the *Circular Related to Relevant Issues on the Identification of a Chinese holding Company Incorporated Overseas as a Residential Enterprise under the Criterion of De Facto Management Bodies* issued by the SAT on April 22, 2009 provides that a foreign enterprise controlled by a PRC enterprise or a PRC enterprise group will be classified as a “resident enterprise” with its “de facto management bodies” located within China if the following requirements are satisfied: (i) the senior management and core management departments in charge of its daily operations function mainly in the PRC; (ii) its financial and human resources decisions are subject to determination or approval by persons or bodies in the PRC; (iii) its major assets, accounting books, company seals, and minutes and files of its board and shareholders’ meetings are located or kept in the PRC; and (iv) at least half of the enterprise’s directors or senior management with voting rights reside in the PRC. Although the circular only applies to offshore enterprises controlled by PRC enterprises or PRC enterprise groups and not those controlled by PRC individuals or foreigners, the determining criteria set forth in the circular may reflect the SAT’s general position on how the “de facto management body” text should be applied in determining the tax resident status of offshore enterprises, regardless of whether they are controlled by PRC enterprises, individuals or foreigners.

In April 2020, the Ministry of Finance, the State Taxation Administration and the National Development and Reform Commission issued *the Announcement on Continuing the Enterprise Income Tax Policies for the Large-Scale Development of Western China*, which became effective on January 1, 2021, allowing enterprises operated in an encouraged industry that is established in western China to pay the enterprise income tax at a reduced rate of 15% from January 1, 2021 to December 31, 2030.

Although we are not controlled by a PRC enterprise or PRC enterprise group and we do not believe that we meet all of the above-mentioned conditions, substantial uncertainty exists as to whether we will be deemed a PRC resident enterprise for enterprise income tax purpose. 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, but the dividends that we receive from our PRC subsidiaries would be exempt from the PRC withholding tax since such income is exempted under the PRC Enterprise Income Tax Law for a PRC resident enterprise recipient. See “Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—Our global income may be subject to PRC taxes under the PRC EIT Law, which may have a material adverse effect on our results of operations.”

Under applicable PRC tax laws and regulations, arrangements and transactions among related parties may be subject to audit or scrutiny by the PRC tax authorities within ten years after the taxable year when the arrangements or transactions are conducted. We could face material and adverse tax consequences if the PRC tax authorities were to determine that the contractual arrangements among Giganology Shenzhen, our wholly owned subsidiary in China and Shenzhen Xunlei, the variable interest entity in China and its shareholders, as well as the intellectual property framework agreement between Xunlei Computer and Shenzhen Xunlei, were not entered into on an arm's-length basis and therefore constituted unfavorable transfer pricing arrangements. Unfavorable transfer pricing arrangements could, among other things, result in an upward adjustment to the tax liability of Shenzhen Xunlei, and the PRC tax authorities may impose interest on late payments on Shenzhen Xunlei for the adjusted but unpaid taxes. Our results of operations may be materially and adversely affected if Shenzhen Xunlei's tax liabilities increase significantly or if it is required to pay interest on late payments.

PRC value added tax

On May 24, 2013, the Ministry of Finance, or the MOF, and the SAT issued the *Circular on Tax Policies in the Nationwide Pilot Collection of Value Added Tax in Lieu of Business Tax in the Transportation Industry and Certain Modern Services Industries*, or the Pilot Collection Circular. The scope of certain modern services industries under the Pilot Collection Circular extends to the inclusion of radio and television services. On March 23, 2016, the MOF and the SAT jointly issued the Circular on the Pilot Program for Overall Implementation of the Collection of Value Added Tax Instead of Business Tax, or Circular 36, which took effect on May 1, 2016. Pursuant to the Circular 36, all of the companies operating in construction, real estate, finance, modern service or other sectors which were required to pay business tax are required to pay VAT, in lieu of business tax. The VAT rate is 6%, except for rate of 11% for real estate sale, land use right transferring and providing service of transportation, postal sector, basic telecommunications, construction, real estate lease; rate of 17% for providing lease service of tangible property; and rate of zero for specific cross-bond activities.

On April 4, 2018, the Ministry of Finance and the State Administration of Taxation issued the *Circular on Adjustment of VAT Rates*, which became effective on May 1, 2018. According to the *Circular on the Adjustment of VAT Rates*, relevant VAT rates have been reduced since May 1, 2018, such as (i) VAT rates of 17% and 11% applicable to the taxpayers who have VAT taxable sales activities or imported goods are adjusted to 16% and 10%, respectively; and (ii) VAT rate of 11% originally applicable to the taxpayers who purchase agricultural products is adjusted to 10%.

On March 20, 2019, the Ministry of Finance, the State Administration of Taxation and the General Administration of Customs of the PRC issued the *Announcement on Relevant Policies for Deepening Value-Added Tax Reform*, which became effective on April 1, 2019. According to the *Announcement on Relevant Policies for Deepening Value-Added Tax Reform*, starting from April 1, 2019, the VAT rate of 10% was adjusted to 9% while the VAT rate of 16% was adjusted to 13%.

PRC dividend withholding tax

Under the PRC tax laws effective prior to January 1, 2008, dividends paid to foreign investors by foreign-invested enterprises were exempt from PRC withholding tax. Pursuant to the EIT Law and the Implementation Rules, dividends generated after January 1, 2008 and payable by a foreign-invested enterprise in China to its foreign enterprise investors are subject to a 10% withholding tax, unless any such foreign investor's jurisdiction of incorporation has a tax treaty with China that provides for a different withholding arrangement. Under the China-Hong Kong Taxation Arrangement, income tax on dividends payable to a company resident in Hong Kong that holds more than a 25% equity interest in a PRC resident enterprise may be reduced to a rate of 5%. In February 2018, the SAT issued a new circular on issues relating to "beneficial owner" in tax treaties, or Circular No. 9, which will become effective on April 1, 2018 and replace Circular No. 601. Circular No. 9 provides a more flexible guidance to determine whether the applicant engages in substantive business activities. Furthermore, under the *Administrative Measures for Entitlement to Treaty Benefits for Non-resident Taxpayers*, non-resident taxpayers which satisfy the criteria for entitlement to tax treaty benefits may, at the time of tax declaration or withholding declaration through a withholding agent, enjoy the tax treaty benefits and are subject to further regulation by the tax authorities. If non-resident taxpayers fail to claim the tax treaty benefits with the withholding agent, or the materials and the information contained in the relevant reports and statements provided to the withholding agent do not satisfy the criteria for entitlement to tax treaty benefits, the withholding agent shall withhold tax pursuant to the provisions of PRC tax laws. In addition, according to a tax circular issued by SAT in February 2009, if the main purpose of an offshore arrangement is to obtain a preferential tax treatment, the PRC tax authorities have the discretion to adjust the preferential tax rate enjoyed by the relevant offshore entity. Although Xunlei Computer is currently wholly owned by Xunlei Network HK, we cannot assure you that we will be able to enjoy the preferential withholding tax rate of 5% under the China-Hong Kong Taxation Arrangement.

PRC regulation on labor laws and social insurance

Pursuant to *the PRC Labor Law and the PRC 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 abide by state rules and standards and provide employees with workplace safety training. Violations of *the PRC Labor Contract Law* and the PRC Labor Law may result in the imposition of fines and other administrative liabilities. Criminal liability may arise for serious violations.

In addition, according to *the PRC Social Insurance Law* and the *Regulations on the Administration of Housing Provident Funds* employers in China are obliged to provide employees with welfare schemes covering pension insurance, unemployment insurance, maternity insurance, work-related injury insurance, medical insurance and housing funds.

To comply with these laws and regulations, we have caused all of our full-time employees to enter into labor contracts and provide our employees with the proper welfare and employment benefits.

PRC regulation on foreign exchange control and administration

Foreign exchange regulation in the PRC is primarily governed by the following regulations:

- *Foreign Exchange Administration Rules*, or the Exchange Rules, promulgated by the State Council on January 29, 1996, which was amended on January 14, 1997 and on August 5, 2008 respectively; and
- *Administration Rules of the Settlement, Sale and Payment of Foreign Exchange*, or the Administration Rules promulgated by the People's Bank of The PRC on June 20, 1996.

Under the Exchange Rules, Renminbi is convertible for current account items, including the distribution of dividends, interest payments, trade and service-related foreign exchange transactions. As for capital account items, such as direct investments, loans, security investments and the repatriation of investment returns, however, the conversion of foreign currency is still subject to the approval of, or registration with, SAFE or its competent local branches; while for the foreign currency payments for current account items, the SAFE approval is not necessary for the conversion of Renminbi except as otherwise explicitly provided by laws and regulations. Under the Administration Rules, enterprises may only buy, sell or remit foreign currencies at banks that are authorized to conduct foreign exchange business after the enterprise provides valid commercial documents and relevant supporting documents and, in the case of certain capital account transactions, after obtaining approval from SAFE or its competent local branches. Capital investments by enterprises outside of the PRC are also subject to limitations, which include approvals by or registration with the Ministry of Commerce, SAFE and the National Development and Reform Commission, or their respective competent local branches. On July 21, 2005, the PRC government changed its policy of pegging the value of the Renminbi to the U.S. dollar. Under the new policy, the Renminbi is permitted to fluctuate within a band against a basket of certain foreign currencies.

In March 2015, the SAFE issued SAFE Circular 19, which took effect on June 1, 2015 and replaced SAFE Circular No. 142. Pursuant to SAFE Circular 19, foreign-invested enterprises may either continue to follow the current payment-based foreign currency settlement system or elect to follow the “conversion-at-will” regime of foreign currency settlement. Where a foreign-invested enterprise follows the conversion-at-will regime of foreign currency settlement, it may convert part or all of the amount of the foreign currency in its capital account into Renminbi at any time. The converted Renminbi will be kept in a designated account labeled as settled but pending payment, and if the foreign-invested enterprise needs to make payment from such designated account, it still needs to go through the review process with its bank and provide necessary supporting documents. SAFE Circular 19, therefore, has substantially lifted the restrictions on the usage by a foreign-invested enterprise of its Renminbi-registered capital converted from foreign currencies. According to SAFE Circular 19, such Renminbi capital may be used at the discretion of the foreign-invested enterprise and the SAFE will eliminate the prior approval requirement and only examine the authenticity of the declared usage afterwards. SAFE subsequently issued *the Circular on Reforming and Regulating Policies on the Control over Foreign Exchange Settlement of Capital Accounts*, or SAFE Circular 16 on June 9, 2016. SAFE Circular 16 provides an integrated standard for conversion of foreign exchange under capital account items (including but not limited to foreign currency capital and foreign debts) on discretionary basis which applies to all enterprises registered in China. SAFE Circular 16 reiterates the principle that Renminbi converted from foreign currency-denominated capital of a company may not be directly or indirectly used for purposes beyond its business scope or prohibited by PRC laws or regulations, while such converted Renminbi shall not be provided as loans to its non-affiliated entities, or used for construction and purchase of non-self-used real estate (excluding real estate enterprises) or unless otherwise expressly provided in law, directly or indirectly used in securities investment or other financial management excluding the bank capital preservation products.

On November 19, 2012, SAFE promulgated the *Circular of Further Improving and Adjusting Foreign Exchange Administration Policies on Foreign Direct Investment*, or Circular 59, which became effective on December 17, 2012. Circular 59 substantially amends and simplifies the current foreign exchange procedure. The major developments under Circular 59 are that the opening of various special purpose foreign exchange accounts (e.g. pre-establishment expenses account, foreign exchange capital account, guarantee account) no longer requires the approval of SAFE. Furthermore, multiple capital accounts for the same entity may be opened in different provinces, which was not possible before the issuance of Circular 59. Reinvestment of Renminbi proceeds by foreign investors in the PRC no longer requires SAFE approval or verification, and remittance of foreign exchange profits and dividends by a foreign-invested enterprise to its foreign shareholders no longer requires SAFE approval.

On May 10, 2013, SAFE promulgated the *Circular on Printing and Distributing the Provisions on Foreign Exchange Administration over Domestic Direct Investment by Foreign Investors and the Supporting Documents*, which specifies that the administration by SAFE or its local branches over direct investment by foreign investors in the PRC shall be conducted by way of registration. Institutions and individuals shall register with SAFE and/or its branches for their direct investment in the PRC. Banks shall process foreign exchange business relating to the direct investment in the PRC based on the registration information provided by SAFE and its branches.

In February 2015, SAFE promulgated the *Circular of the State Administration of Foreign Exchange on Further Simplifying and Improving the Policies Concerning Foreign Exchange Control on Direct Investment*, or SAFE Circular 13, which took effect on June 1, 2015. SAFE Circular 13 delegates the authority to enforce the foreign exchange registration in connection with the inbound and outbound direct investment under relevant SAFE rules to certain banks and therefore further simplifies the foreign exchange registration procedures for inbound and outbound direct investment. On April 26, 2016, SAFE issued the *Circular of the State Administration of Foreign Exchange on Further Promoting Trade and Investment Facilitation and Improving Authenticity Review*, which provides that for outward remittances of the profit equivalent of more than US\$ 50,000 (exclusive) by domestic institutions, banks shall review the relevant board resolution (or the partnership resolution) on profit distribution, the original copies of tax return forms and the financial statements evidencing the profits, in accordance with the principle of authentic transactions.

In January 2017, SAFE promulgated *the Circular on Further Improving the Reform of Foreign Exchange Administration and Optimizing Genuineness and Compliance Verification*, or SAFE Circular 3, which provides 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 should check board resolutions regarding profit distribution, the original version of tax filing records and audited financial statements; and (ii) domestic entities should hold income to account for previous years' losses before remitting the profits. Furthermore, according to SAFE Circular 3, domestic entities should 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.

On October 23, 2019, SAFE promulgated *the Notice of the State Administration of Foreign Exchange on Further Promoting the Facilitation of Cross-border Trade and Investment*, or SAFE Circular 28. Pursuant to SAFE Circular 28, restrictions on domestic equity investments made with capital funds by non-investing foreign-funded enterprises and restrictions on the use of funds in domestic asset realization accounts for foreign exchange settlement are cancelled.

PRC regulation on foreign exchange registration of offshore investment by PRC residents

On October 21, 2005, SAFE issued the *Circular on Several Issues concerning Foreign Exchange Administration for Domestic Residents to Engage in Financing and in Return Investments via Overseas Special Purpose Companies*, or Circular No. 75, which went into effect on November 1, 2005. Circular No. 75 and related rules provide that if PRC residents establish or acquire direct or indirect interests of offshore special purpose companies, or offshore SPVs, for the purpose of financing these offshore SPVs with assets of, or equity interests in, an enterprise in the PRC, or inject assets or equity interests of PRC entities into offshore SPVs, they must register with local SAFE branches with respect to their investments in offshore SPVs. Circular No. 75 also requires PRC residents to file changes to their registration if their offshore SPVs undergo material events such as capital increase or decrease, share transfer or exchange, merger or division, long-term equity or debt investments, and provision of guaranty to a foreign party. SAFE promulgated *the Circular on Relevant Issues Concerning Foreign Exchange Control on Domestic Residents' Offshore Investment and Financing and Roundtrip Investment through Special Purpose Vehicles*, or SAFE Circular No. 37, on July 4, 2014, which replaced the SAFE Circular No. 75. SAFE Circular No. 37 requires PRC residents 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." The term "control" under SAFE Circular No. 37 is broadly defined as the operation rights, beneficiary rights or decision-making rights acquired by the PRC residents in the offshore special purpose vehicles or PRC companies by such means as acquisition, trust, proxy, voting rights, repurchase, convertible bonds or other arrangements. SAFE Circular No. 37 further requires amendment to the registration in the event of any changes with respect to the basic information of the special purpose vehicle, such as changes in a PRC resident individual shareholder, name or operation period, or 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. If the shareholders of the offshore holding company who are PRC residents do not complete their registration with the local SAFE branches, the PRC subsidiaries may be prohibited from distributing their profits and proceeds from any reduction in capital, share transfer or liquidation to the offshore company, and the offshore company may be restricted in its ability to contribute additional capital to its PRC subsidiaries. Moreover, failure to comply with SAFE registration and the amendment requirements described above could result in liability under PRC law for the evasion of applicable foreign exchange restrictions. On February 13, 2015, SAFE issued SAFE Circular 13, which took effect on June 1, 2015. SAFE Circular 13 has delegated to the qualified banks the authority to register all PRC residents' investment in "special purpose vehicle" pursuant to the SAFE Circular No. 37, except that those PRC residents who have failed to comply with the SAFE Circular No. 37 will continue to fall within the jurisdiction of the relevant local SAFE branches and must make their supplementary registration application with such local SAFE branches.

We have requested PRC residents holding direct or indirect interest in our company to our knowledge to make the necessary applications, filings and amendments as required under Circular No. 37 and other related rules. However, we may not be informed of the identities of all the PRC residents holding direct or indirect interest in our company, and we cannot provide any assurances that these PRC residents will comply with our request to make or obtain any applicable registrations or comply with other requirements required by Circular No. 37 or other related rules. The failure or inability of our PRC resident shareholders to make any required registrations or comply with other requirements under Circular No. 37 and other related rules may subject such PRC residents or our PRC subsidiaries to fines and legal sanctions and may also limit our ability to raise additional financing and contribute additional capital into or provide loans to (including using the proceeds from our initial public offering) our PRC subsidiaries, limit our PRC subsidiaries' ability to pay dividends or otherwise distribute profits to us, or otherwise adversely affect us.

PRC regulation on employee share options

On December 25, 2006, the People's Bank of China promulgated the *Administrative Measures for Individual Foreign Exchange*. On February 15, 2012, SAFE issued 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, which 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 according to 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.

Our PRC citizen employees who have been granted share options or restricted shares, or PRC grantees, are subject to the Stock Option Rules. If we or our PRC grantees fail to comply with the Individual Foreign Exchange Rule and the Stock Option Rules, we and/or our PRC grantees may be subject to fines and other legal sanctions. We may also face regulatory uncertainties that could restrict our ability to adopt additional share incentive plans for our directors and employees under PRC law. In addition, the State Administration for Taxation has issued certain circulars concerning employee share awards. Under these circulars, our employees working in the PRC who exercise share options or hold the vested restricted shares will be subject to PRC individual income tax. Our PRC subsidiaries have obligations to file documents related to employee share awards with relevant tax authorities and to withhold individual income taxes of those employees who exercise their share options or hold the vested restricted shares. If our employees fail to pay or we fail to withhold their income taxes according to relevant laws and regulations, we may face sanctions imposed by the tax authorities or other PRC government authorities.

PRC regulation on dividend distributions

The Company Law primarily governs the distribution of dividends paid by wholly foreign-owned enterprises after the Foreign Investment Law of the People's Republic of China and Regulation on the Implementation of the Foreign Investment Law of the People's Republic of China came into effect. Under the Company Law, enterprises in the PRC may pay dividends only out of their accumulated profits, if any, as determined in accordance with PRC accounting standards and regulations. In addition, an enterprise in the PRC is required to set aside at least 10% of its after-tax profit based on PRC accounting standards each year to its statutory common reserves until its cumulative total reserve funds reaches 50% of its registered capital.

PRC regulation on overseas listings

On August 8, 2006, six PRC regulatory agencies, namely, the Ministry of Commerce, the State Assets Supervision and Administration Commission, the State Administration for Taxation, SAIC, CSRC and SAFE, jointly adopted *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 were amended on June 22, 2009. The M&A Rules purport, among other things, to require that offshore special purpose vehicles, or SPVs, that are controlled by PRC companies or individuals and that have been formed for overseas listing purposes through acquisitions of PRC domestic interest held by such PRC companies or individuals, to obtain the approval of the CSRC prior to publicly listing their securities on an overseas stock exchange. On September 21, 2006, the CSRC published a notice on its official website specifying documents and materials required to be submitted to it by SPVs seeking CSRC approval of their overseas listings. While the application of the M&A Rules remains unclear, our PRC legal counsel has advised us that based on its understanding of the current PRC laws, rules and regulations 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 given that (i) our PRC subsidiaries were directly established by us as wholly foreign-owned enterprises, and we have not acquired any equity interest or assets of a PRC domestic company owned by PRC companies or individuals as defined under the M&A Rules that are our beneficial owners after the effective date of the M&A Rules, and (ii) no provision in the M&A Rules clearly classifies the contractual arrangements as a type of transaction subject to the M&A Rules.

On July 6, 2021, the relevant PRC government authorities issued *Opinions on Strictly Cracking Down Illegal Securities Activities in Accordance with the Law*. These opinions emphasized the need to strengthen the administration over illegal securities activities and the supervision on overseas listings by China-based companies and proposed to take effective measures, such as promoting the construction of relevant regulatory systems to deal with the risks and incidents faced by China-based overseas-listed companies.

On February 17, 2023, the CSRC issued Trial Administrative Measures of Overseas Securities Offerings and Listings by Domestic Companies, or the Trial Measures, with effect from March 31, 2023, and the No. 1 to No. 5 Supporting Guidance Rules, or collectively the Guidance Rules. The Trial Measures, together with the Guidance Rules, establish a new filing-based regime to regulate overseas offerings and listings by domestic companies. Specifically, an overseas follow-on offering or listing, or other equivalent offering activity, including issuance of convertible notes, exchangeable notes or preferred shares, by a domestic company, whether directly or indirectly, must be filed with the CSRC and comply with the requirements under the Trial Measures. The indirect overseas listing of domestic companies refers to companies mainly engaged in business activities in the PRC domestic market, which issue shares or other similar rights based on their domestic equity, assets, earnings, or similar rights in the name of a company registered overseas for overseas listing. The Guidance Rules also provide that the examination and determination of an indirect offering and listing will be conducted on a substance-over-form basis, and an offering and listing shall be deemed as a PRC company's indirect overseas offering and listing if the issuer meets both of the following conditions: (i) any of the operating income, gross profit, total assets, or net assets of the PRC companies in the most recent fiscal year was more than 50% of the relevant line item in the issuer's audited consolidated financial statement for that year; and (ii) senior management personnel responsible for business operations and management are mostly PRC citizens or are ordinarily resident in the PRC, or the principal place of business is in the PRC or carried out in the PRC. In all such cases, the issuer or its designated principal operating PRC entity, as the case may be, shall file with the CSRC for its initial public offering, follow-on offering and other equivalent offering activities. Particularly, the issuer shall submit a filing with respect to its initial public offering and listing within three business days after its initial filing of the listing application, and submit a filing with respect to its follow-on offering within three business days after the completion of the follow-on offering. The issuer shall also submit a report with respect to the following material events within three business days after the occurrence and announcement of such event: (i) change of control rights; (ii) being investigated or punished by overseas securities regulatory authorities or relevant competent authorities; (iii) change of listing status or listing board; and (iv) voluntary or mandatory termination of the listing. The Guidance Rules specify that "control relationship" or "control right" under the Trial Measures refer to the actual control of the company by means of equity, voting rights, trusts, agreements and other arrangements, either individually or jointly, directly or indirectly. Given this scope, the Trial Measures are intended to apply to PRC companies that use a variable interest entity structure. The Trial Measures also identify certain circumstances that will preclude issuers from pursuing overseas offerings and listings, including (i) explicit prohibition from financing through listing by laws, administrative regulations, or relevant national provisions; (ii) recognition by the relevant competent department of the State Council that the issuer's overseas offering and listing may harm national security; (iii) commission of criminal offenses, such as embezzlement, bribery, misappropriation of property, or disruption of market orders by the domestic companies, its controlling shareholder, or the actual controller within the past three years; (iv) ongoing investigation by law enforcement agencies for suspected criminal or significant illegal and irregular activities without any clear conclusion yet; and (v) material ownership disputes over shares held by the controlling shareholder or by other shareholders that are controlled by controlling shareholder and/or actual controller. Additionally, the Trial Measures include certain compliance requirements for issuers, such as compliance with national security laws, regulations and provisions on foreign investment, cyber security and data security, and address that security review procedures, if involved, shall be carried out in accordance with relevant laws prior to submitting the application for overseas offering and listing. Failure to comply with the filing requirements under the Trial Measures may result in warnings, rectification, and fines of not less than RMB1 million and not more than RMB10 million for the relevant PRC companies. The responsible persons may face a warning and fines of not less than RMB0.5 million and not more than RMB5 million. Additionally, fines of not less than RMB1 million and not more than RMB10 million may be imposed on the PRC company's controlling shareholder and actual controller who organizes or instructs the violation. The Trial Measures have no retroactive effect.

On February 24, 2023, the CSRC together with other PRC governmental authorities issued the *Provisions on Strengthening the Management of Confidentiality and Archives regarding Overseas Securities Offerings and Listings by Domestic Companies*, or the Confidentiality and Archives Management Provisions, with effect from March 31, 2023, pursuant to which, domestic companies, securities companies and securities service institutions involved in the overseas offerings and listings by PRC domestic companies, either in direct or indirect form, must establish a system of confidentiality and archival management to prevent disclosure of state secrets or harm to the state and public interests. The Confidentiality and Archives Management Provisions require, among others, domestic companies involved in overseas offerings and listings to obtain approval from the competent authority and file with the secrecy administrative department at the same level before providing or publicly disclosing any document or material that involves state secrets or working secrets of state organizations. They must strictly follow relevant procedures in accordance with regulations to provide any document or material, the leakage of which may have adverse effects on national security or public interests. Domestic companies must provide a statement to securities companies and securities service institutions indicating that they have followed these requirements. Additionally, domestic companies must enter into a confidentiality agreement with securities companies and securities service institutions to specify their confidentiality obligations and liabilities in accordance with laws and regulations, including the *PRC Laws on Protecting State Secrets and the Confidentiality and Archives Management Provisions*. Working papers produced by securities companies and securities service institutions within the PRC for overseas offerings and listings shall also be stored within the PRC. The Confidentiality and Archives Management Provisions also require domestic companies to complete relevant procedures before providing accounting archives to entities, including securities companies, securities service institutions, overseas regulators, and individuals. Domestic companies, securities companies and securities service institutions must obtain relevant approval before providing documents and information in response to inspections and investigations by overseas regulators. These inspections and investigations should be conducted via the cross-border supervision mechanism whereby the PRC regulators will provide necessary assistance.

PRC regulation on initial coin offerings

On September 4, 2017, the People's Bank of China, the Office of the Central Leading Group for Cyberspace Affairs, the MIIT, the State Administration for Industry and Commerce, the China Banking Regulatory Commission, the China Securities Regulatory Commission, and the China Insurance Regulatory Commission jointly promulgated the *Announcement on Prevention of Token Fundraising Risks* to strengthen the administration of the initial coin offerings activities. Pursuant to the announcement, "fundraising through token offerings" is referred to as a type of fundraising activities where an issuer raises "virtual currencies" such as Bitcoin or Ether from investors through the illegal issuance and subsequent circulation of tokens. Pursuant to the announcement, token fundraising activity is essentially an illegal public fundraising activity without obtaining government approval. It is a suspected illegal offering of tokens, illegal offering of securities, illegal fundraising, financial fraud, or pyramid scheme, which are criminal offenses under the PRC law. The announcement prohibits fundraising activities through token issuance. In addition, the announcement also provides that token trading platform should not be engaged in (i) the exchange between any statutory currency with tokens and "virtual currencies," (ii) the trading, either as a central counterparty or not, of the tokens or "virtual currencies," and (iii) token or "virtual currency" pricing, information intermediary services or other services for tokens or "virtual currencies."

On September 15, 2021, the People's Bank of China, the Office of the Central Cyberspace Affairs Commission, the Supreme People's Court, the Supreme People's Procuratorate, the MIIT, the Ministry of Public Security, the State Administration for Market Regulation, the China Banking and Insurance Regulatory Commission, the China Securities Regulatory Commission, and the State Administration of Foreign Exchange jointly promulgated the *Circular on Further Preventing and Disposing of Risks in Virtual Currency Trading and Speculation* to further strengthen the administration of the virtual currency trading. Pursuit to the Circular, virtual currencies do not have the same legal status as legal currencies and it is strictly prohibited and banned that virtual currency-related business activities are illegal financial activities, including carrying out exchange services between legal currencies and virtual currencies or between virtual currencies, buying and selling virtual currencies as a central counterparty, providing information intermediary and pricing services for virtual currency transactions, token issuance financing, virtual currency derivative transactions and other virtual currency-related business activities are suspected of illegal sale of tokens, unauthorized public issuance of securities, illegal operation of futures business, illegal fundraising and other illegal financial activities. Pursuant to the Circular, if related illegal financial activities constitute a crime, criminal liability shall be investigated in accordance with the law.

On September 2, 2022, the SCNPC issued the *Anti-Telecom and Online Fraud Law*, pursuant to which, entities or individuals shall not help others commit money laundering through virtual currency trading for carrying out telecom and online fraud activities.

We launched the LinkToken business in 2017 and disposed of such business to an independent third party in April 2019. We do not believe that we engaged in token fundraising activities by virtue of carrying out LinkToken operations prior to our disposal of such operations, nor do we believe that we would have been deemed to be a token trading platform, which is operated under a completely different business model. To date, no governmental financial regulators have imposed any administrative penalties against us relating to LinkTokens on the basis that we engaged in token fundraising activities. In April 2020, we launched our own reward program, which allows users to contribute their idle bandwidth capacity in exchange for a small amount of cash rewards. See “Item 4. Information on the Company—B. Business Overview—Our Platform—Cloud Computing” for more information on LinkToken and “Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—Regulatory uncertainties exist with respect to our historical LinkToken operations, which may have a material adverse effect on our business and results of operations” for regulatory uncertainties and risks relating to our previous LinkToken operations.

PRC regulation on blockchain information services

On January 10, 2019, the Cyberspace Administration of China, or CAC, issued *the Provisions on the Administration of Blockchain Information Services*, or the Blockchain Provisions, which came into effect on February 15, 2019. Pursuant to the Blockchain Provisions, a blockchain information service provider is required to file particulars of such service provider including its name, service category, service form, application field, and server address with the blockchain information service filing management system managed by the CAC and go through filing procedures within ten business days after it starts to provide services. After completing the filing procedure, the blockchain information service provider should display the filing number in a conspicuous position on the service provider’s websites and applications through which it provides services. Service providers that had already started to provide blockchain information services before the Blockchain Provisions became effective are required to do make-up filings within 20 business days after the Blockchain Provisions became effective. As of the date of this annual report, we had obtained the initial record-filing number.

In addition, the Blockchain Provisions also imposed an array of obligations to the providers of blockchain information services. For example, blockchain information service providers are required to set up various rules and procedures in terms of user registration, information verification, emergency response, and safeguard measures. Blockchain information service providers are also required to formulate and publish blockchain platform management rules and enter into a service agreement with users of blockchain information services. In addition, blockchain information service providers are obligated to verify the real name of the users of blockchain information services and are prohibited to offer services to users who fail to provide information relating to their real identity. Failure to comply with relevant requirements in the Blockchain Provisions may subject blockchain information service providers to administrative penalties such as warning, being ordered to temporarily suspend relevant business operations to rectify within prescribed time period, or fines, or criminal liabilities, depending on which provisions are violated.

On October 24, 2019, the Political Bureau of the CPC Central Committee carried out the 18th collective learning on the current situation and trend of blockchain technology development, and President Xi Jinping emphasized that the integrated application of blockchain technology played an important role in new technological innovation and industrial transformation in China. On March 12, 2021, the National People’s Congress (NPC) of the People’s Republic of China published *Outline of the People’s Republic of China 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035*, which states that PRC will accelerate the promotion of digital industrialization including blockchain and will promote the innovation of blockchain technology such as smart contracts, consensus algorithms, encryption algorithms, and distributed systems, focus on alliance chains to develop blockchain service platforms and application solutions in the fields of fintech, supply chain management, and government services, and improve supervision mechanisms.

On May 27, 2021, the MIIT and the CAC jointly issued *Guiding Opinions on Accelerating the Application of Blockchain Technology and the Development of the Industry*, which states, among others, that the management of blockchain-related intellectual property rights shall be strengthened and risk control mechanisms and technical prevention measures shall be improved. For example, it encourages enterprises to explore and establish a common intellectual property rights protection mechanism through blockchain patent pools, intellectual property rights alliances and other modes. The opinions also emphasize the importance of accelerate the application of blockchain technology and the overall development of the industry.

On April 13, 2022, the National Internet Finance Association of China, the China Banking Association and the Securities Association of China jointly issued *the Proposals on Preventing NFT-related Financial Risks*, which prominently includes a commitment by members of these three associations not to financialize or securitize NFTs, and to not provide trading services or related financial services for NFTs in any form. Accordingly, we do not allow our users to trade any digital collectibles to minimize the risks associated with trading digital collectibles on our platform. However, our users are able to re-gift their digital collectibles 180 days after obtaining the ownership.

PRC regulation on anti-money laundering

On October 31, 2006, the SCNPC issued *the Anti-Money Laundering Law of the PRC*, pursuant to which special non-financial institutions that are required by relevant regulations to perform the obligation of anti-money laundering shall, in accordance with law, perform their anti-money laundering obligation by adopting preventive and monitoring measures and establishing sound systems for distinguishing clients' identities, and preserving the data for clients' identities and records of transactions, and a report system for transactions involving large sums of money and for dubious transactions. The client ID data and transaction information acquired through performing the functions and duties of anti-money laundering according to law shall be kept confidential, and shall not be provided to any unit or individual unless otherwise prescribed by law. Any unit or individual that finds money laundering activities is entitled to report the same to the competent administrative authority of anti-money laundering or judicial organ, and the organs that accept the report shall keep confidential the reporter and the content reported. Advertising in the internet finance area and other publicity behaviors shall be carried out in a lawful, compliant, authentic, and accurate manner. No improper publicity of financial products or business may be carried out.

On June 1, 2021, the People's Bank of China published the *Circular of the People's Bank of China on Seeking Public Comments on the Anti-Money Laundering Law of the People's Republic of China (Revised Draft for Comment)*. Under this draft, enterprises and other market entities shall submit information on beneficial owners through the relevant information system of the market supervision and regulation department. Any enterprises, institutions, or individual that, for the purpose of providing commodities or services, receives and pays in cash instead of through financial institutions and the amount exceeds the prescribed amount shall report to China Anti-Money Laundering Monitoring and Analysis Center. The specific measures for the declaration of large cash receipts and payments shall be formulated by The State Council's anti-money laundering administrative department authorized by the State Council jointly with relevant departments. No enterprise, institution or individual may evade the obligation of reporting large cash receipts and payments by means of splitting cash transactions.

On April 12, 2016, General Office of the State Council issued a *Circular of the General Office of the State Council on Issuing the Implementing Proposals for the Special Rectification of Internet Financial Risks*, pursuant to which online P2P lending platforms or equity-based crowdfunding platforms shall not engage in asset management, claims or equity transfer, capital allocation in the high-risk securities market, or other financial business without approval. Internet enterprises that have not obtained the relevant financial business qualifications may not carry out the corresponding business by relying on the internet, and the nature of the business they carry out shall comply with the business qualifications obtained. Without approval of the relevant departments, no financial products of different categories that are privately placed may be offered to the public by packaging, splitting, or otherwise.

Furthermore, the People's Bank of China, China Banking and Insurance Regulatory Commission and China Securities Regulatory Commission jointly published *the Administrative Measures for Anti-money Laundering and Counter-terrorism Financing by Internet Finance Service Agencies (for Trial Implementation)*, which became effective on January 1, 2019. Under these measures the specific scope of work on anti-money laundering and counter-terrorism financing in the internet finance industry shall be determined, adjusted and released by the People's Bank of China ("PBC") in concert with relevant financial regulators of the State Council in accordance with laws, regulations and regulatory rules, including but not limited to the online payment, peer-to-peer lending, peer-to-peer lending information intermediary services, equity crowdfunding financing, internet fund sale, internet insurance, internet trust and internet consumption finance. The PBC will develop an online monitoring platform for anti-money laundering and counter-terrorism financing in the internet finance industry (hereinafter referred to as the "online monitoring platform"), and this online monitoring platform will be used to improve the online regulatory mechanism for anti-money laundering and strengthen information sharing. Service agencies other than financial institutions and non-banking payment institutions shall register the fulfillment of duties in anti-money laundering and counter-terrorism financing on the online monitoring platform. Where a single cash receipt or payment, or the aggregate cash receipts and payments, of a client on a single day, amount(s) to RMB50,000 or more or the equivalent value of US\$10,000 or more, a service agency that is neither a financial institution nor a non-banking payment institution shall report the large-amount transaction within five working days of the occurrence of the transaction.

In addition, we may also be subject to certain Singaporean rules and regulations due to certain of our business operations in Singapore. We set forth below a summary of the most significant rules and regulations that affect our business activities in Singapore.

Singaporean regulation on online live streaming

The Broadcasting Act 1994 (“Broadcasting Act”) of Singapore regulates the dealing in, the operation of and the ownership in broadcasting services and broadcasting apparatus, and online communication services, which are accessible to Singapore-end users, and for matters connected therewith.

Pursuant to Section 2A read with Schedule 4 of the Broadcasting Act, an online communication service refers to an electronic service which has the characteristics of a social media service. This electronic service means a service which (a) enables end-users to access or communicate content on the Internet using that service (including a point-to-multipoint service), or deliver content on the Internet to persons having the appropriate equipment to receive that content, (b) between a point in Singapore and one or more points in Singapore, or between a point or one or more points, where the first-mentioned point is outside Singapore and at least one of the other points is inside Singapore, and (c) is not an excluded electronic service.

To the extent that we provide an online communication service that is not exempted under the Broadcasting Act, the Infocomm Media Development Authority (the “IMDA”), namely the regulator of the information, communications and media sectors in Singapore, the IMDA may designate our online communication service as a regulated online communication service pursuant to Section 45K of the Broadcasting Act. The IMDA may designate an online communication service as a regulated online communication service provider after taking into account the range of all online communication services provided to Singapore end users, and the extent and nature of the effect that the different types of online communication services have on the people of Singapore and her different communities. According to Section 45L and Section 45M of the Broadcasting Act, such regulated online communication service providers are mandated to comply with the online Code of Practice and the other regulations prescribed by the IMDA.

We have not been designated by the IMDA as a regulated online communication service and are not subject to compliance with any online Codes of Practice that IMDA may issue to providers of such regulated online communication service.

We believe that Part 10A of the Broadcasting Act on online communication service regulation does not apply to any of our content provided or communicated on the Internet before the date of commencement of Section 5 of the Online Safety (Miscellaneous Amendments) Act 2022, namely, February 1, 2023. For our content provided or communicated on the Internet after February 1, 2023, to which Part 10A of the Broadcasting Act applies, we note our ongoing obligation under Section 45A of the Broadcasting Act to ensure that we (a) provide a safe online environment for Singapore end-users that promotes responsible online behaviour, (b) deter objectionable online activity and prevent access to harmful content, (c) place adequate priority on the protection of Singapore end-users who are children of different age groups from exposure to content which may be harmful to them, and (d) be regulated in a manner that enables public interest considerations to be addressed. In connection therewith, we have in place internal procedures to stop egregious content from being communicated or provided on our online communication service, to compliance with the Broadcasting Act. But we cannot ensure that our internal procedures will always be effective and successful, Our failure to comply may result in administrative sanctions such as fines imposed by the IMDA.

The Broadcasting Act also prohibits the provision of certain broadcasting services, including internet content, in or from Singapore without a license issued by the IMDA. The Broadcasting Act sets out an automatic class licensing scheme for computer online services provided by internet content providers. Under the Broadcasting (Class Licence) Notification, an internet content provider, which includes a corporation which provides any program for business purposes on the Internet, is automatically class-licensed without any need to make a specific application for licensing to the IMDA and are automatically subject to comply with the conditions of the class license set out under the Schedule of the Broadcasting (Class Licence) Notification and the Internet Code of Practice.

As an internet content provider, we are automatically class-licensed by the IMDA pursuant to the Broadcasting (Class Licence) Notification and are obliged to comply with the class licence conditions and the Internet Code of Practice. Our compliance includes, among others, using our best efforts to ensure that prohibited material, namely any material that is objectionable on the grounds of public interest, public morality, public security, national harmony, offends good taste or decency, or is otherwise prohibited by applicable Singapore laws (including, explicitly, the propagation, promotion or discussion of any political or religious issues relating to Singapore), is not broadcast via the Internet to Singapore end-users. We are also required to deny access to any prohibited material if directed to do so by the IMDA. In this regard, we have in place internal procedures to ensure that prohibited materials are not broadcasted to Singapore-end users, to compliance with the class licence conditions and Internet Code of Practice. But we cannot ensure that our internal procedures will always be effective and successful. If we contravene the class licence conditions or the Internet Code of Practice, we may face administrative sanctions such as suspension or cancelation of our licence, or fines imposed by the IMDA.

To the extent that our platform or service enables our users to transmit online content to one other or access third party online content, we would be classified as an internet intermediary under the Protection from Online Falsehoods and Manipulation Act 2019 of Singapore ("POFMA"). POFMA empowers any Singapore government minister to direct the POFMA Office to issue certain directions to internet intermediaries whose internet intermediary service had been used to communicate a false statement of fact in Singapore, if the minister is of the opinion that it would be in the public interest to do so. Such directions would include: (a) targeted correction directions, which would require the internet intermediary to communicate a correction notice on its service to all Singapore end-users who accessed the offending false statement of fact after a specified time, and (b) disabling directions, which would require the internet intermediary to disable access by Singapore end-users to the offending false statement of fact being communicated on or through its service. Companies may be fined if they fail to comply with directions issued under POFMA without reasonable excuse.

Singaporean regulation on online game virtual currency

The Monetary Authority of Singapore ("MAS") regulates payment service providers and payment systems in Singapore under the Payment Services Act 2019 of Singapore ("PSA") which came into effect 28 January 2020. Under Section 5 of the PSA, a licence from the MAS is required for the provision of the following types of payment service in Singapore, namely account issuance service, domestic money transfer service, cross-border money transfer service, merchant acquisition service, e-money issuance service, digital payment token service and "money changing service, unless such service is exempted under the law. Where a person provides any type of payment service regulated under the PSA while such person carries on any business (referred to as the primary business under the PSA), such person is presumed to carry on a secondary business of providing that type of payment service, regardless of whether the provision of that type of payment service is related or incidental to the primary business.

There are classes of licences under the PSA, whose regulatory requirements differ according to the risks posed by the scope and scale of services which the licensee provides, namely the money-changing licence, standard payment institution licence and major payment institution licence.

Our existing activities are undertaken in relation only to limited purpose digital payment tokens. Under Part 3 of the First Schedule to the PSA, a limited purpose digital payment token includes any (a) non-monetary customer loyalty or reward point, (b) any in-game asset or (c) any similar digital representation of value that, cannot be returned to its issuer, transferred or sold in exchange for money and may only be used, and in the case of a non-monetary customer loyalty or reward point, for the payment or part payment of, or in exchange for, goods or services, or both, provided by its issuer or any merchant specified by its user, or in the case of an in-game asset, for the payment of, or in exchange for, virtual objects or virtual services within an online game, or any similar thing within, that is part of, or in relation to, an online game.

Activities undertaken in relation to limited purpose digital payment tokens are not classified as a type of payment service for the purposes of the PSA. Accordingly, our activities in relation to limited purpose digital payment tokens do not fall within the ambit of the PSA, and we believe that we do not need to obtain a licence under the PSA to undertake such activities. In connection therewith, we have not applied for a licence under the PSA for our activities. However, we cannot ensure that the Singapore regulator is in line with our views.

In the event that we undertake further activities that constitute a type of payment service that falls within the ambit of the Payment Services Act, we will need to apply for a license under the PSA.

Singaporean regulation on data protection, information security and cross border data transfer

The Personal Data Protection Act 2012 of Singapore (“PDPA”) governs the collection, use and disclosure of the personal data of individuals by organisations in Singapore, including data that is transferred outside of Singapore. It requires organisations to obtain consent from individuals before transferring their personal data outside of Singapore unless certain exceptions apply. The PDPA is administered and enforced by the regulator, the Personal Data Protection Commission. It sets out data protection obligations which all organisations are required to comply with in undertaking activities relating to the collection, use or disclosure of personal data. A failure to comply with any of the above can subject an organisation to a fine per breach of up to S\$1 million (US\$739,645) or 10% of the organisation’s annual turnover in Singapore, whichever is higher.

As an online streaming operator, we are required to comply with the PDPA. Among other things, we are required to obtain consent from our customers and inform them of the applicable purposes before collecting, using or disclosing their personal data. We are also required to put in place sufficient measures to protect the personal data in our possession or control from unauthorised access, loss or damage.

Pursuant to the Personal Data Protection Commission’s Advisory Guidelines on the PDPA for National Registration Identity Card numbers and other national identification numbers that were issued in August 2018, we are not permitted to collect, use or disclose an individual’s identification number unless certain exceptions apply. The Personal Data Protection Commission has commenced enforcement of these Guidelines from September 2019.

In the event of a data breach involving any personal data in an organisation’s possession or control, we are required to reasonably and expeditiously assess the data breach, and notify the Personal Data Protection Commission of the data breach if the data breach is assessed to be one that: (a) is likely to result in significant harm or impact to the individuals to whom the information relates, or (b) involves personal data of 500 or more individuals. In addition to notifying the Personal Data Protection Commission, we also required to notify the affected individuals if the data breach is one that is likely to result in significant harm or impact to the affected individuals.

We have in place internal procedures to monitor the collection, use and disclosure of our users’ personal data to ensure that we are in compliance with PDPA. But we cannot ensure that our internal procedures will always be effective and successful. Our failure to comply may result in administrative sanctions such as fines.

Singaporean regulation on online games

Video game classification

Pursuant to the Film Act 1981 of Singapore (“Film Act”), the Board of Film Censors of the IMDA is responsible for classifying films, videos and video games distributed in Singapore. In particular, it administers the video game classification system under the Film Act, which requires businesses importing or distributing physical copies of video games in Singapore to submit the video games to the IMDA for rating and classification. However, the video game classification system does not apply to games which are only available via internet download. Since the online games that we offer are available only through our online platform, we believe that we are not subject to the video game classification system. However, we cannot ensure that the views of the Singapore regulatory authorities are consistent with our views.

Remote Gambling Act

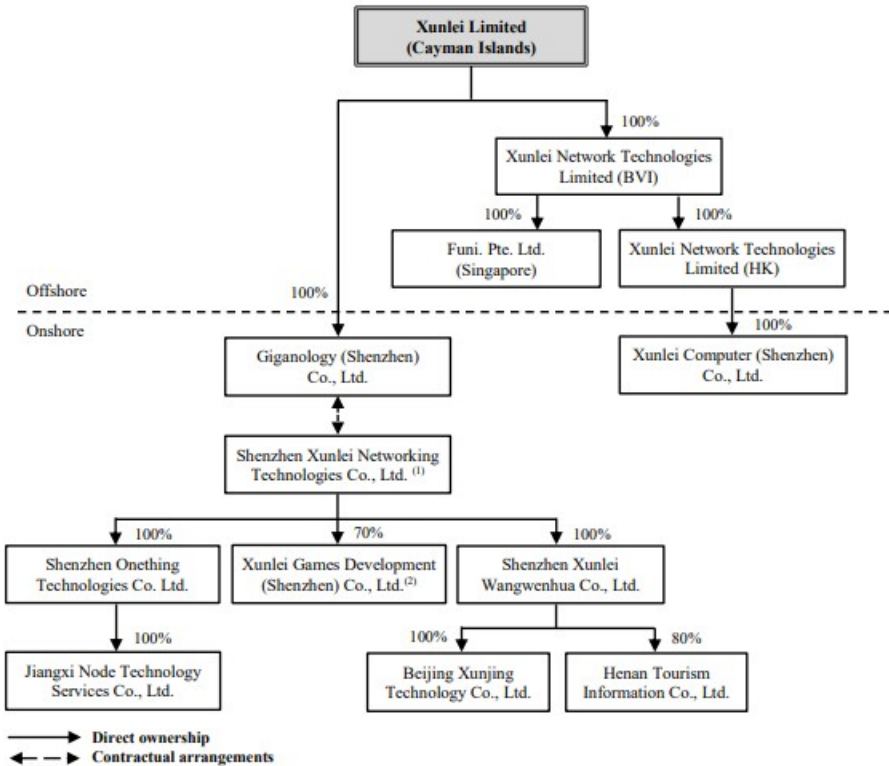
Currently, the Remote Gambling Act 2014 of Singapore (“RGA”) prohibits the offering of online games where (i) players play to win money, or (ii) players play to win virtual currency/tokens/credits/items that can be exchanged via in-game facilities for real-world money or merchandise. Online games do not fall within the ambit of the RGA if the virtual rewards cannot be exchanged via in-game facilities for real-world money or merchandise. The Gambling Control Bill, which was passed by the Singapore Parliament on March 11, 2022 and will replace the RGA once it formally comes into effect, adopts a similar treatment of such online games. Accordingly, we do not offer any online games which have an in-game facility to convert game credits, tokens or virtual gifts to real-world money or merchandise.

Singaporean regulation on labor

The Employment Act 1968 of Singapore (“EA”) generally extends to all employees, with the exception of certain groups of employees. It provides employees falling within its ambit protections such as minimum notice periods, maximum working hours, maximum amount of deductions from wages, minimum holidays and rest days, maternity/paternity leave, paid childcare leave, sick leave, etc. The EA also applies to employees who are foreigners so long as they fall within the definition of “employee” under the EA. In addition, the employment of foreign manpower in Singapore is also governed by the Employment of Foreign Manpower Act 1990 of Singapore. Aside from minimum benefits in respect of the aforesaid terms of employment in the EA, employees in Singapore are entitled to contributions to the central provident fund by the employer as prescribed under the Central Provident Fund Act 1953 of Singapore. The specific contribution rate to be made by employers varies depending on whether the employee is a Singapore citizen or permanent resident in the private or public sector and the age group and wage band of the employee. Generally, for employees who are Singapore citizens in the private sector or non-pensionable employees in the public sector, 55 years old or below and that earn more than S\$750 (approximately US\$561) a month, the employer’s contribution rate is 17% of the employee’s wages. If we contravene the EA, we may face administrative sanctions such as fines.

C. Organizational Structure

The following diagram illustrates our corporate structure, including the variable interest entity and our principal subsidiaries and principal subsidiaries of the variable interest entity, as of the date of this annual report on Form 20-F:



Notes:

(1) Shenzhen Xunlei is the variable interest entity. Mr. Sean Shenglong Zou, our co-founder and director, Mr. Hao Cheng, our co-founder, Mr. Jianming Shi, Guangzhou Shulian Information Investment Co., Ltd. and Ms. Fang Wang own 76.0%, 8.3%, 8.3%, 6.7% and 0.7% of Shenzhen Xunlei's equity interests, respectively.

(2) The remaining 30% of the equity interest is owned by Mr. Hao Cheng.

Contractual arrangements with Shenzhen Xunlei

Agreements that provide us effective control over Shenzhen Xunlei

Business operation agreement

Pursuant to the business operation agreement among Giganology Shenzhen, Shenzhen Xunlei and the shareholders of Shenzhen Xunlei, as amended, Shenzhen Xunlei's shareholders must appoint the candidates nominated by Giganology Shenzhen to be the directors on its board of directors in accordance with applicable laws and the articles of association of Shenzhen Xunlei, and must cause the persons recommended by Giganology Shenzhen to be appointed as its general manager, chief financial officer and other senior executives. Shenzhen Xunlei and its shareholders also agree to accept and strictly follow the guidance provided by Giganology Shenzhen from time to time relating to employment, termination of employment, daily operations and financial management. Moreover, Shenzhen Xunlei and its shareholders agree that Shenzhen Xunlei will not engage in any transactions that could materially affect its assets, business, personnel, liabilities, rights or operations, including but not limited to the amendment of Shenzhen Xunlei's articles of association, without the prior consent of Giganology Shenzhen and Xunlei Limited or their respective designees. This agreement will expire in 2026.

Equity pledge agreement

Pursuant to the equity pledge agreement between Giganology Shenzhen and the shareholders of Shenzhen Xunlei, as amended, the shareholders of Shenzhen Xunlei have pledged all of their equity interests in Shenzhen Xunlei to Giganology Shenzhen to guarantee Shenzhen Xunlei and its shareholders' performance of their respective obligations and any ensuing liabilities under the exclusive technology support and service agreement, as amended, the exclusive technology consulting and training agreement, as amended, the proprietary technology license agreement, the business operation agreement, as amended, the equity interests disposal agreement, as amended, the loan agreements, as amended, and the intellectual properties purchase option agreement, as amended. In addition, the shareholders of Shenzhen Xunlei have completed the registration of equity pledge under the equity pledge agreement with the competent governmental authority. If Shenzhen Xunlei and/or its shareholders breach their contractual obligations under those agreements, Giganology Shenzhen, as pledgee, will be entitled to certain rights, including the right to sell the pledged equity interests.

Powers of attorney

Pursuant to the irrevocable powers of attorney executed by each shareholder of Shenzhen Xunlei, each such shareholder appointed Giganology Shenzhen as its attorney-in-fact to exercise such shareholders' rights in Shenzhen Xunlei, including, without limitation, the power to vote on its behalf on all matters of Shenzhen Xunlei requiring shareholder approval in accordance with PRC laws and regulations and the articles of association of Shenzhen Xunlei. Each power of attorney will remain in force for ten years from the date of execution unless the business operation agreement, as amended, among Giganology Shenzhen, Shenzhen Xunlei and the shareholders of Shenzhen Xunlei is terminated at an earlier date. The term may be extended at Giganology Shenzhen's discretion.

Agreements that transfer economic benefits to us

Exclusive technology support and services agreement

Pursuant to the exclusive technology support and services agreement between Giganology Shenzhen and Shenzhen Xunlei, as amended, Giganology Shenzhen has the exclusive right to provide to Shenzhen Xunlei technology support and technology services related to all technologies needed for its business. Giganology Shenzhen exclusively owns any intellectual property rights resulting from the performance of this agreement. The service fee payable by Shenzhen Xunlei to Giganology Shenzhen is a certain percentage of its earnings. This agreement will expire in 2025 and may be extended with Giganology Shenzhen's written confirmation prior to the expiration date. Giganology Shenzhen is entitled to terminate the agreement at any time by providing 30 days' prior written notice to Shenzhen Xunlei.

Exclusive technology consulting and training agreement

Pursuant to the exclusive technology consulting and training agreement between Giganology Shenzhen and Shenzhen Xunlei, as amended, Giganology Shenzhen has the exclusive right to provide to Shenzhen Xunlei technology consulting and training services related to its business. Giganology Shenzhen exclusively owns any intellectual property rights resulting from the performance of this agreement. The service fee payable by Shenzhen Xunlei to Giganology Shenzhen is a certain percentage of its earnings. This agreement will expire in 2025 and may be extended with Giganology Shenzhen's written confirmation prior to the expiration date. Giganology Shenzhen is entitled to terminate the agreement at any time by providing 30 days' prior written notice to Shenzhen Xunlei.

Proprietary technology license contract

Pursuant to the proprietary technology license contract between Giganology Shenzhen and Shenzhen Xunlei, Giganology Shenzhen grants Shenzhen Xunlei a non-exclusive and non-transferable right to use Giganology Shenzhen's proprietary technology. Shenzhen Xunlei can only use the proprietary technology to conduct its business within China. Giganology Shenzhen or its designated representative(s) owns the rights to any improvements developed based on the proprietary technology licensed pursuant to this contract. This agreement expired in March 2022 and was extended for an additional ten years by Giganology Shenzhen and Shenzhen Xunlei on March 1, 2022.

Intellectual properties purchase option agreement

Pursuant to the intellectual properties purchase option agreement between Giganology Shenzhen and Shenzhen Xunlei, as amended, Shenzhen Xunlei irrevocably grants Giganology Shenzhen (or its designated representative(s)) an exclusive option to purchase certain specified intellectual properties that it owns for RMB1.0 or the minimum amount of consideration permitted under the PRC law. This agreement expired in March 2022 and was automatically extended for an additional ten years, and will be extended automatically for an additional ten years at each expiration date as long as these intellectual properties have not been transferred to Giganology Shenzhen and/or its designee and Shenzhen Xunlei then still exist.

Agreements that provide us the option to purchase the equity interest in Shenzhen Xunlei

Equity interests disposal agreement

Pursuant to the equity interests disposal agreement among Giganology Shenzhen, Shenzhen Xunlei and the shareholders of Shenzhen Xunlei, as amended, Shenzhen Xunlei's shareholders irrevocably grant Giganology Shenzhen (or its designated representative(s)) an exclusive option to purchase all or part of their equity interests in Shenzhen Xunlei for RMB1.0 or the minimum amount of consideration permitted under PRC law. This agreement will expire in 2026.

Loan agreements

Under the loan agreement between Giganology Shenzhen and Guangzhou Shulian Information Investment Co., Ltd., Sean Shenglong Zou, Hao Cheng, Fang Wang and Jianming Shi, as amended, Giganology Shenzhen made interest-free loans of approximately RMB1.8 million, RMB2.5 million, RMB2.3 million, RMB0.2 million and RMB2.3 million, respectively, to each of the above shareholders of Shenzhen Xunlei and all of these shareholders have used the full amount of loans to make capital contribution to Shenzhen Xunlei. The term of this agreement is two years from the date it was signed, and will be automatically extended afterwards on a yearly basis until each shareholder of Shenzhen Xunlei has repaid the loan in its entirety in accordance with the loan agreement. The loan for each shareholder will be deemed to be repaid under this agreement only when all equity interest held by the relevant shareholder in Shenzhen Xunlei has been transferred to Giganology Shenzhen or its designated parties. As of the date of this annual report, all the loans under the loan agreements remain outstanding. At any time during the term of the loan agreement, Giganology Shenzhen may, at its sole discretion, require any of the shareholders of Shenzhen Xunlei to repay all or any portion of his outstanding loan under the agreement.

In addition, following the loan agreement mentioned above, under a separate loan agreement between Giganology Shenzhen and Mr. Sean Shenglong Zou as a shareholder of Shenzhen Xunlei, as amended, Giganology Shenzhen made an additional interest-free loan of RMB20 million to Mr. Zou, the entire amount of which was used to contribute to the registered capital of Shenzhen Xunlei, increasing the registered capital of Shenzhen Xunlei to RMB30 million. The term of this agreement is two years from the date it was signed, and will be automatically extended afterwards on a yearly basis until Mr. Zou has repaid the loan in its entirety in accordance with the loan agreement. This loan will be deemed to be repaid under this agreement only when all equity interest held by the relevant shareholder in Shenzhen Xunlei has been transferred to Giganology Shenzhen or its designated parties. At any time during the term of the loan agreement, Giganology Shenzhen may, at its sole discretion, require all or any portion of the outstanding loan under the agreement to be repaid.

In the opinion of TransAsia Lawyers, our PRC legal counsel:

- the ownership structures of the variable interest entity and our subsidiaries in China comply all applicable PRC Laws and regulations currently in effect; and
- the contractual arrangements among Giganology Shenzhen, our PRC subsidiary, Shenzhen Xunlei and its shareholders governed by PRC law are valid, binding and enforceable in accordance with the contractual arrangements' terms, and will not result in any violation of PRC laws or regulations currently in effect.

We have been advised by TransAsia Lawyers, our PRC legal counsel, however, that there are substantial uncertainties regarding the interpretation and application of current and future PRC laws, regulations and rules. Accordingly, the PRC regulatory authorities may take a view that is contrary to the above opinion of our PRC legal counsel. We have been further advised by our PRC legal counsel that if the PRC government finds that the agreements that establish the structure for operating our business to provide digital media data transmission and streaming services, online games and other value-added telecommunication services do not comply with PRC government restrictions on foreign investment in the aforesaid business we engage in, we could be subject to severe penalties including being prohibited from continuing operations. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—If the PRC government finds that the agreements that establish the structure for operating our businesses in China do not comply with PRC governmental restrictions on foreign investment in internet-related business and foreign investors' mergers and acquisition activities in China, or if these regulations or the interpretation of existing regulations change in the future, we could be subject to severe penalties or be forced to relinquish our interests in those operations."

D. Property, Plant and Equipment

Our principal executive offices are located at 3709 Baishi Road, Nanshan District, Shenzhen, 518000, the People's Republic of China, which comprises approximately 65,000 square meters of construction space. Other than our proprietary offices in Shenzhen, we also have leased offices in Beijing. All offices have a total floor area of approximately 10,602 square meters. We completed the construction of our headquarters building and relocated our principal executive offices to the new headquarters building at the address mentioned above in December 2022. As of the date of this annual report, we are still in the process of obtaining ownership certificate of the new headquarters building. Our leased premises are leased from unrelated third parties who have valid title to the relevant properties. Our leases typically have terms of one to three years. Our servers are primarily hosted at internet data centers owned by major domestic internet data center providers. The hosting services agreements typically have one-year terms and are renewed upon expiration. We believe that we will be able to obtain adequate facilities to accommodate our future expansion plans.

Item 4A. Unresolved Staff Comments

None.

Item 5. Operating and Financial Review and Prospects

The following discussion of our financial condition and results of operations is based upon, and should be read in conjunction with, our audited consolidated financial statements and the related notes included in this annual report on Form 20-F. This report contains forward-looking statements. See "Forward-looking Information." In evaluating our business, you should carefully consider the information provided under the caption "Item 3. Key Information—D. Risk Factors" in this annual report on Form 20-F. We caution you that our businesses and financial performance are subject to substantial risks and uncertainties.

A. Operating Results

Overview

We operate a powerful internet platform in China based on cloud technology to enable our users to quickly access, store, manage and consume digital media content on the internet. In recent years, we have expanded our products and services from PC-based devices to mobile devices in part through pre-installed acceleration plug-ins on mobile phones to further enlarge our user base and offer our users a wider range of access points. In addition, we provide a portfolio of synergic products and services across cloud acceleration, shared cloud computing, blockchain and digital entertainment to enrich the lives of our internet users.

We provide users with quick and easy access to digital media content on the internet through our core product and services, available to users for free and for a subscription fee, respectively. Our acceleration product and services include Xunlei Accelerator and our subscription services (delivered through our product). Benefitting from the large user base accumulated by our core product, Xunlei Accelerator, we have further provided and developed live streaming services and various other internet value-added services to meet a fuller spectrum of our users' digital media content access and consumption needs. These value-added products and services primarily include online game services.

We generate revenues primarily through the following services:

- *Subscription services.* We provide subscription services for subscribers to enable faster and more reliable access to digital media content. Revenues from subscription services contributed to 29.4% of our revenue in 2022. Subscription fees are time-based and are primarily collected up-front from subscribers on a monthly, quarterly or yearly basis.
- *Cloud computing services and products.* We provide cloud computing services to our customers, such as internet content providers, through our cost-efficient CDN services by crowdsourcing idle bandwidth from our users. In addition to the sales of our cloud computing services, we sell hardware devices that provide our users with easy access to our cloud computing services. Revenues from Cloud computing services and products contributed 34.9 % of our revenue in 2022.
- *Live streaming and other internet value-added services.* Other internet value-added services primarily include online advertising, online game and other technical services. Revenues from live streaming and other internet value-added services accounted for 35.7% of our total revenue in 2022.

Our total revenues increased from US\$186.7 million in 2020 to US\$239.6 million in 2021, and further increased to US\$342.6 million in 2022. We had a net loss attributable to Xunlei Limited of US\$13.8 million in 2020 and a net income of US\$1.2 million and US\$21.5 million in 2021 and 2022, respectively.

Major factors affecting our results of operations

Our business and operating results are subject to general factors affecting the internet industry in China, including overall economic growth, which has resulted in increases in disposable income and consumer spending, government and industry initiatives accelerating the technological advancement and growth of internet industry, the growth of internet usage and penetration rate in China, strong preference of Chinese consumers for accessing digital media content through the internet, the greater availability of digital media content on the internet, the increasing acceptance of online advertising as part of advertisers' overall marketing strategy and spending, as well as the rules and regulations of the Chinese government. Our results of operations will continue to be affected by such general factors.

Our results of operations are also directly affected by a number of company-specific factors, including:

Our ability to continue to enhance and innovate our service offerings, including our mobile products and our cloud computing services.

As our industry evolves rapidly and user preference for our services may change quickly, our revenues and results of operations significantly depend on our ability to continue enhancing and expanding our service offerings to meet evolving user preference and market demand, and to broaden our user base. We have a proven track record of developing our service offerings to successfully address the preferences of China's internet users. To address deficiencies of digital media content transmission over the internet in China, we provide users with quick and easy access to digital media content on the internet through our core product and services, Xunlei Accelerator and our subscription services, available to users for free and for a subscription fee, respectively. To meet our users' digital media content access and consumption needs, we have further developed live streaming services and various value-added services, including online game services. Furthermore, we focus more on user behaviors and study users' life cycles on our platform, so that we can offer relevant services at the right time and encourage users to continue using our services.

An important part of our business plan is to continue transitioning to mobile internet. As an increasing number of users are accessing online services through mobile devices, we are increasingly expanding our services to mobile devices, particularly through cooperation with smartphone makers, including Xiaomi, which currently offers our mobile acceleration plug-in pre-installed on its new phones and as updates on its existing phones. We intend to further work with more smartphone makers in China so that a larger number of mobile users can benefit from our mobile products, including acceleration and higher downloading success rates.

We have also launched our cloud computing project to allocate idle uplink capacity to internet content providers and other internet users in need. We gather idle uplink capacity from internet users who have bought and connected our proprietary ZQB and OneThing Cloud devices to their network router. ZQB and OneThing Cloud devices can allocate those users' idle computing resources to us for our further allocation to internet content providers and other internet users. We pay users of our ZQB device for the use of their idle computing resources. Users of our OneThing Cloud can also receive a small amount of cash by participating in our own cash reward program, which allows us to crowdsource their idle computing resources. The computing resources gathered from ZQB and OneThing Cloud devices are valuable resources that we target to commercialize with potential customers such as streaming websites and app stores. Depending on our own needs, we also utilize those crowdsourced capacities for our own business from time to time, reducing our purchase of bandwidth from traditional third-party carriers.

Our ability to further monetize our user base.

Our revenues and results of operations depend on our ability to further monetize our user base, to convert more users to subscribers and to increase the spending of our subscribers. With enhanced knowledge of user behavior and preferences, we offer a diverse range of premium services tailored to their individual needs. For example, our subscription services offer users value-added services for speed. We intend to further monetize our user base and aim to convert users to subscribers by expanding our offering of value-added services, such as cloud-based storage and mobile access. We plan to provide one-stop services for our users, in terms of accessing content and storage and synchronization of content across devices, including mobile devices and PC.

Our ability to maintain our technology leadership and cost-efficient infrastructure.

Our results of operations depend on our ability to maintain our technology leadership, with innovations such as our mobile technology, our uplink capacity crowdsourcing technology and our cloud acceleration technology. Our mobile technology allows users to access content from anywhere, our uplink capacity crowdsourcing technology enables us to utilize the idle capacity available from our large user base, and our cloud acceleration technology enables users to access content in an efficient manner. Our proprietary technology and highly scalable massive distributed computing network form our core competitive advantage, enabling us to deliver superior transmission acceleration services and enhanced user experience anywhere and with an efficient sort of acceleration. Our resource discovery network leverages our distributed computing power, computing and storage capacity and significantly reduces our reliance on servers operated by us. As part of our expansion strategy, we plan to devote substantial resources to research and development in order to better serve our users, particularly to our cloud computing services and mobile products and services. Therefore, the expenses associated with our research and development are expected to increase in the near future. However, we plan to continue to increase the uplink capacity we crowdsource through our cloud computing services, which is expected to reduce our bandwidth cost incurred in our purchase from traditional suppliers, contribute to the cost efficiency of our overall infrastructure and generate additional revenue when we sell those capacity to our customers.

Our ability to control our costs and operating expenses.

Our results of operations depend on our ability to control our costs and operating expenses. We expect our bandwidth costs to increase as we grow our business, in particular CDN business, although we expect such costs to be partly offset by the fact that we expect to source an increasing amount of bandwidth from our cloud computing services. In addition, our operating expenses are expected to increase in the future, since we expect an increase in marketing expense in a competitive environment and an increase in employee compensation to attract talents. We plan to continue to invest in research and development to maintain our technology leadership, especially to increase our research and development expenses and sales and marketing expenses in relation to our cloud computing, subscription and live streaming businesses.

Description of certain statement of operations items

Revenues

We derive our revenues primarily from cloud computing services and products, subscription services, and live streaming and other internet value-added services, which consist primarily of live streaming services, online advertising services, online games and other technical services. With a view to better presenting our revenues, we reclassified our revenues for the purpose of analysis at the beginning of 2022 by re-grouping previous four types, i.e. subscriptions, online advertising, product revenue, and cloud computing and other internet value-added services, into three types, i.e. cloud computing, subscriptions, and live streaming and other internet value-added services. Revenues in each of 2021 and 2020 have been retrospectively reclassified so that the numbers can be compared and analyzed. The following table sets forth the principal components of our total revenues by amounts and percentages of our revenues for the periods presented.

	For the Year Ended December 31,					
	2020		2021		2022	
	US\$	%	US\$	%	US\$	%
	(in thousands, except for percentages)					
Cloud computing services and products	64,345	34.5	94,813	39.6	119,635	34.9
Subscriptions	84,299	45.1	91,174	38.0	100,557	29.4
Live streaming and other internet value-added services	38,039	20.4	53,614	22.4	122,372	35.7
Total	186,683	100.0	239,601	100.0	342,564	100.0

Cloud computing services and products. Revenues from cloud computing services and products increased from US\$64.3 million in 2020 to US\$94.8 million in 2021 and further to US\$119.6 million in 2022. For cloud computing services, we recognize revenue when we provide bandwidth to our customers. We started to generate revenue from cloud computing services and products in 2015 and the revenue from cloud computing services and products in 2022 accounted for 34.9% of our total revenues, representing an increase of 26.2% on a year-over-year basis, primarily due to our expanded service capacity and increased demand from our major customers.

Subscriptions. We introduced our subscription services in March 2009. We generate revenues from providing our users with exclusive services, such as access to high-speed online transmission, premium acceleration or access privileges, for a time-based subscription fee. The standard subscription fee is RMB10 (US\$1.5) per month or RMB99 (US\$14.6) per year, and we also offer premium subscription packages with prices at RMB15 (US\$2.2) per month or RMB149 (US\$22.0) per year or RMB30 (US\$4.4) per month or RMB288 (US\$41.4) per year to cater to subscribers' different demand for acceleration speed and user experience, which are becoming increasingly popular among our subscribers. Our subscription revenues, as a percentage of our revenues, decreased from 45.1% in 2020 to 38.0% in 2021 and further to 29.4% in 2022.

The most significant factor that directly affects our subscription revenues is the number of subscribers. We may maintain our subscriber base in the future by expanding our offering of fee-based services, but important factors outside of our control, such as the PRC government's regulation and censorship of information disseminated over the internet, may have a material adverse impact on our cloud acceleration services, which in turn may have an adverse effect on the number of our subscribers and on our revenues and results of operations. We regularly conducted internal compliance investigation to ensure that the content transmitted by our products is in compliance with the strict standards set out by the authorities. We deleted millions of cached files and added thousands of keywords to our automatic keyword filtration system. See "Item 3. Key Information—D. Risk Factors—Risks Related to Doing Business in China—Regulation and censorship of information disseminated over the internet in China have adversely affected our business and may continue to adversely affect our business, and we may be liable for the digital media content on our platform." In the future, there may be other laws and regulations that lead to further voluntary or forced removal of content or other measures to ensure compliance with standards set out by relevant regulatory authorities, which may further reduce our subscriber base. To date, we have not been able to quantify the magnitude and extent of such impact.

Live streaming and other internet value-added services. We actively seek new business opportunities that complement our existing core acceleration business to further improve our users' overall experience. Revenues from live streaming and other internet value-added services increased from US\$38.0 million in 2020 to US\$53.6 million in 2021 and further to US\$122.4 million in 2022.

Revenues from live streaming and other internet value-added services were generated primarily from our live streaming services, online advertising services, online games and other technical services. For live streaming services, users purchase virtual gifts from us and send the gifts they purchase to broadcasters while enjoying broadcasters' performance. Revenue from live streaming services accounted for 35.7% of our total revenues in 2022, representing an increase of 128.2% on a year-over-year basis, primarily driven by increased demand for new live streaming products we launched in 2021 and our enhanced monetization capacity. Our online advertising revenues are derived from various forms of advertisements that were placed on our mobile platform. In 2020, we entered into an advertising revenue sharing agreement with Itui, our largest shareholder, and outsourced our advertising business to Itui. Our online games business consists of web games, mobile games and PC-based MMOGs, which generated approximately 1.3% of our total revenues in 2022.

Cost of revenues

Our cost of revenues consists primarily of (i) bandwidth costs, (ii) cost of inventories sold, (iii) cost of live streaming services, (iv) depreciation of servers and other equipment, (v) payment handling charges, and (vi) other costs, including write-down of inventory. The following table sets forth the components of our cost of revenues by amounts and percentages of our revenues for the periods presented:

	For the Year Ended December 31,					
	2020		2021		2022	
	US\$	%	US\$	%	US\$	%
(in thousands, except for percentages)						
Bandwidth costs	62,384	33.4	80,720	33.7	104,580	30.5
Cost of live streaming services or revenue-sharing of the live streaming	15,640	8.4	26,506	11.1	78,636	23.0
Cost of inventories sold	1,660	0.9	1,516	0.6	2,228	0.7
Depreciation of servers and other equipment	6,247	3.3	4,805	2.0	1,363	0.4
Payment handling charges	1,459	0.8	3,066	1.3	6,500	1.9
Other costs	5,247	2.8	1,990	0.8	6,747	1.9
Total	92,637	49.6	118,603	49.5	200,054	58.4

Bandwidth costs. Bandwidth costs consist of the fees we pay to telecommunications carriers and other service providers for telecommunications services and for hosting our servers at their internet data centers and the fees we compensate users of our ZQB and OneThing Cloud devices for the use of their idle uplink capacity. Bandwidth is a significant component of our cost of our total revenues. We expect our bandwidth costs to increase, but we anticipate the costs as a percentage of revenues would decline as we plan to rely more on crowdsourced bandwidth and further diversify our procurement sources.

For details on our cloud computing services and products, see "Item 4. Information on the Company—B. Business Overview."

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Cost of live streaming services. Cost of live streaming services mainly represents the fees we pay to broadcasters and talent agencies. We expect such cost to increase in the near future.

Cost of inventories sold. Cost of inventories sold mainly consists of the cost associated with the sale of hardware devices in connection with our cloud computing services such as OneThing Cloud and OneThing Edge Station, a product similar to OneThing Cloud but with higher computing power.

Depreciation of servers and other equipment. Depreciation expenses for servers and other equipment that are directly related to our business operations and technical support are included in our cost of revenues. We expect our depreciation expenses as a percentage of revenues to decrease as our total revenues are expected to increase, which is also consistent with the industry trend.

Payment handling charges. Payment handling charges are the fees we pay to payment channels for subscription services, online games and other paid services. Users can make payments for such services through third-party online, and mobile phone payment channels. These third-party payment channels typically charge a handling fee for their services. Our subscribers used to make subscription payments through mobile phones. However, as mobile carriers generally charge higher handling fees than other channels, we have modified our subscription fee structure to encourage our subscribers to use other available payment channels. We expect such payment handling charges as a percentage of revenues to increase as we cooperated with more third-party payment service providers to collect our live streaming service fees.

Other costs. Other costs mainly include fast bird service cost, which we pay to telecommunication service providers for accelerating service we provide for our subscribers' internet access, content review costs and impairment cost, which arises from our write-down of inventories based on our assessment.

Operating expenses

Our operating expenses consist of (i) research and development expenses, (ii) sales and marketing expenses, (iii) general and administrative expenses, and (iv) credit loss expenses/(write-back), net. The following table sets forth the components of our operating expenses by amounts and percentages of our revenues for the periods presented:

	For the Year Ended December 31,					
	2020		2021		2022	
	US\$	%	US\$	%	US\$	%
	(in thousands, except for percentages)					
Research and development expenses	55,463	29.7	61,859	25.8	67,680	19.8
Sales and marketing expenses	18,064	9.7	24,569	10.3	24,841	7.3
General and administrative expenses	33,910	18.2	36,868	15.4	39,701	11.6
Credit loss expenses/(write-back), net	5,090	2.7	1,206	0.5	(844)	(0.3)
Total	112,527	60.3	124,502	52.0	131,378	38.4

Research and development expenses. Research and development expenses consist primarily of salaries and benefits for our research and development personnel. Expenditures incurred during the research phase are expensed as incurred. Expenditures incurred for the development of the acceleration products prior to the establishment of technological feasibility are expensed when incurred. We expect our research and development expenses to increase in the future as we need to recruit and retain talents to develop new products and improve existing products, particularly our cloud computing technology, blockchain technology, and our mobile products.

Sales and marketing expenses. Sales and marketing expenses consist primarily of salaries, sales commissions and benefits for our sales and marketing personnel and marketing and promotional expenses. We expect our sales and marketing expenses to increase in the future as we expect to invest in brand enhancement efforts and the promotion of our products and services, particularly as we plan to increase our efforts in promoting our Mobile Xunlei, live streaming and other mobile products.

General and administrative expenses. General and administrative expenses consist primarily of salaries and benefits, professional service fees and other administrative expenses. We expect our general and administrative expenses to increase in the future as we expect our business to continue to grow and as a result of general inflation.

Credit loss expenses/(write-back), net. Credit loss expenses/(write-back), net, primarily consist of credit losses allowances for accounts receivable, due from related parties and other receivables. The credit loss write-back in 2022 mainly represents reversal of credit losses allowance for certain receivables based on our assessment.

Taxation

Cayman Islands

We are incorporated in the Cayman Islands. The Cayman Islands currently levies no taxes on individuals or corporations based upon profits, income, gains or appreciation 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. In addition, the Cayman Islands does not impose withholding tax on dividend payments.

China

Pursuant to the PRC EIT Law, which became effective on January 1, 2008 and last revised in December 2018, a 25% enterprise income tax rate is generally applicable to both foreign-invested enterprises and domestic enterprises, except where a special preferential rate applies. In addition, the PRC EIT Law and its implementation rules permit qualified high and new technology enterprises, or HNTEs, to enjoy a reduced enterprise income tax rate of 15%.

In January 2016, relevant PRC government authorities further issued qualification criteria, application procedures and assessment processes for the qualification of HNTE. Each of Shenzhen Xunlei, Shenzhen Onething, Xunlei Computer and Shenzhen Wangwenhua currently possesses such HNTE certificate. As a result, these four entities are qualified to enjoy a preferential tax rate of 15% for the year ended December 31, 2022. The HNTE certificates possessed by Shenzhen Xunlei and Shenzhen Wangwenhua will expire in December 2023, and the HNTE certificates possessed by Shenzhen Onething and Xunlei Computer will expire in December 2024.

In July 2020, Jiangxi Node was qualified for a preferential tax rate of 15% and started to apply this rate from then on. The 15% preferential tax rate is awarded to companies that are located in the western and certain other regions of China, including Ganzhou of Jiangxi Province, and operate in certain encouraged industries. Jiangxi Node is qualified for such preferential tax rate for both 2021 and 2022.

Certain of our subsidiaries in China have been granted certain tax concessions to small scale entities by tax authorities in China whereby the subsidiaries operating in the respective region are entitled to tax concessions, the remaining PRC subsidiaries and the VIE's subsidiaries are subject to a 25% EIT rate.

According to the EIT Law and its implementation rules, foreign enterprises, which have no commercial presence in the PRC but derive dividends, interest, rents, royalties and other income (including capital gains) from sources in the PRC, are subject to a 10% PRC withholding tax, or WHT (a further reduced WHT rate may be available according to the applicable double tax treaty or arrangement). The 10% WHT is generally applicable to any dividends to be distributed from Giganology Shenzhen and Xunlei Computer to us out of any profits of Giganology Shenzhen and Xunlei Computer derived after January 1, 2008. Although Xunlei Computer and Giganology Shenzhen had retained earnings as of December 31, 2021 and December 31, 2022, the directors of the company decided to reinvest the retained earnings permanently in China and therefore no such WHT is required.

In addition, the current EIT Law treats enterprises established outside the PRC with "effective management and control" located in the PRC as PRC resident enterprises for tax purposes. The term "effective management and control" is generally defined as exercising overall management and control over the business, personnel, accounting, properties, etc. of an enterprise. If a company is considered as a PRC resident enterprise for tax purposes, it would be subject to the PRC Enterprise Income Tax at the rate of 25% on its worldwide income after January 1, 2008. As of December 31, 2022, our company has not accrued for PRC tax on such basis. Our company will continue to monitor its tax status.

Hong Kong

Our subsidiaries in Hong Kong are subject to 16.5% income tax on their taxable income generated from operations in Hong Kong.

Singapore

Our subsidiaries incorporated in Singapore were subject to 17% of their taxable income.

Results of operations

The following table sets forth a summary of our consolidated results of operations by amounts and percentages of our revenues for the years indicated. This information should be read together with our consolidated financial statements and related notes included elsewhere in this annual report. The results of operations in any period are not necessarily indicative of the results that may be expected for any future period.

	For the Year Ended December 31,					
	2020		2021		2022	
	US\$	%	US\$	%	US\$	%
	(in thousands, except for percentages)					
Total revenue, net of rebates and discounts	186,683	100.0	239,601	100.0	342,564	100.0
Business taxes and surcharge	(312)	(0.2)	(819)	(0.3)	(1,067)	(0.3)
Total net revenues	186,371	99.8	238,782	99.7	341,497	99.7
Cost of revenues	(92,637)	(49.6)	(118,603)	(49.5)	(200,054)	(58.4)
Gross profit	93,734	50.2	120,179	50.2	141,443	41.3
Research and development expenses	(55,463)	(29.7)	(61,859)	(25.8)	(67,680)	(19.8)
Sales and marketing expenses	(18,064)	(9.7)	(24,569)	(10.3)	(24,841)	(7.3)
General and administrative expenses	(33,910)	(18.2)	(36,868)	(15.4)	(39,701)	(11.6)
Credit loss (expenses)/write-back, net	(5,090)	(2.7)	(1,206)	(0.5)	844	0.3
Total operating expenses	(112,527)	(60.3)	(124,502)	(52.0)	(131,378)	(38.4)
Operating (loss)/income	(18,793)	(10.1)	(4,323)	(1.8)	10,065	2.9
Interest income	1,471	0.8	723	0.3	1,898	0.6
Interest expense	(406)	(0.2)	(95)	—	(93)	—
Other income, net	4,737	2.5	4,678	2.0	13,545	4.0
(Loss)/income before income tax	(12,991)	(7.0)	983	0.4	25,415	7.4
Income tax (expenses)/benefits	(1,149)	(0.6)	125	0.1	(4,068)	(1.2)
Net (loss)/income for the year	(14,140)	(7.6)	1,108	0.5	21,347	6.2
Less: Net loss attributable to the non-controlling interest	(300)	(0.2)	(83)	—	(116)	(0.1)
Net (loss)/income attributable to Xunlei Limited	(13,840)	(7.4)	1,191	0.5	21,463	6.3

Year ended December 31, 2022 compared with year ended December 31, 2021.

Revenues. Our total revenues increased by 43.0% from US\$239.6 million in 2021 to US\$342.6 million in 2022, primarily due to an increase in revenue from our live streaming services, cloud computing services and subscription services.

- Revenue from subscription services increased by 10.3% from US\$91.2 million in 2021 to US\$100.6 million in 2022, primarily due to an increase in the number of subscribers from 4.39 million as of December 31, 2021 to 4.99 million as of December 31, 2022.
- Revenue from cloud computing services and products increased by 26.2% from US\$94.8 million in 2021 to US\$119.6 million in 2022, primarily due to the increased sales of cloud computing services as a result of our expanded service capabilities and increased demand from our major customers.



- Revenues from live streaming and other internet value-added services increased by 128.2% from US\$53.6 million in 2021 to US\$122.4 million in 2022, primarily due to increased demand for our live streaming services and enhanced monetization capabilities.

Cost of revenues. Our cost of revenues increased by 68.7% from US\$118.6 million in 2021 to US\$200.1 million in 2022, primarily attributable to the significant increase in revenues of our major business lines.

Bandwidth costs. Our bandwidth costs increased by 29.6% from US\$80.7 million in 2021 to US\$104.6 million in 2022, primarily due to increased demand for our cloud computing services, which was consistent with the growth in our cloud computing services.

Cost of inventories sold. Our cost of inventories sold increased by 47.0% from US\$1.5 million in 2021 to US\$2.2 million in 2022, primarily due to the increased sales of our cloud computing products.

Cost of revenue sharing of live streaming. Our cost of revenue sharing of live streaming services increased by 196.7% from US\$26.5 million in 2021 to US\$78.6 million in 2022, primarily due to the increased fees we pay to broadcasters and talent agencies. Such increase is consistent with the growth in our live streaming revenue.

Depreciation of servers and other equipment. Depreciation of servers and other equipment decreased by 71.6% from US\$4.8 million in 2021 to US\$1.4 million in 2022, primarily due to our disposals of obsolete servers and shifting to cloud from physical servers.

Payment handling charges. Our payment handling charges increased by 112.0% from US\$3.1 million in 2021 to US\$6.5 million in 2022, primarily due to an increase in the number of third-party payment service providers we cooperate with to collect fees for rendering live streaming services, the revenue of which increased by 200.4% as compared to that in 2021.

Other costs. These costs increased by 238.9% from US\$2.0 million in 2021 to US\$6.7 million in 2022, primarily due to an increase in the costs of content censorship and block chain business.

Gross profit. As a result of the above, our gross profit increased by 17.7% from US\$120.2 million in 2021 to US\$141.4 million in 2022.

Gross profit margin decreased by 8.9 percentage points from approximately 50.2% in 2021 to approximately 41.3% in 2022.

Operating expenses. Our operating expenses increased by 5.5% from US\$124.5 million in 2021 to US\$131.4 million in 2022, primarily due to an increase in research and development expenses and general and administrative expense, partly offset by a recovery of certain receivables according to our current expected credit loss assessment.

Research and development expenses. Our research and development expenses increased by 9.4% from US\$61.9 million in 2021 to US\$67.7 million in 2022, primarily due to the increased headcounts which resulted in the increased labor costs.

Sales and marketing expenses. Our sales and marketing expenses increased by 1.1% from US\$24.6 million in 2021 to US\$24.8 million in 2022.

General and administrative expenses. Our general and administrative expenses increased by 7.7% from US\$36.9 million in 2021 to US\$39.7 million in 2022, primarily due to increased share-based compensation expenses from awarded restricted share, partly offset by a decrease in professional consulting expenses.

Credit loss expenses/(write-back), net. We recorded a credit amount of US\$0.8 million in 2022, compared to a debit amount of US\$1.2 million in 2021. The decrease was primarily due to the recovery of certain receivables according to our current expected credit loss assessment.

Interest income. Our interest income increased by 162.5% from US\$0.7 million in 2021 to US\$1.9 million in 2022, primarily due to the increase in our bank deposits.

Interest expense. Our interest expense remained stable at US\$0.1 million in 2021 and 2022.

Other income, net. Our other income, net increased by 189.5% from US\$4.7 million in 2021 to US\$13.5 million in 2022, primarily due to an increase in foreign exchange gains and reversal of certain outstanding payables that were past due for a long period of time and with a low probability of payment during the year.

Income tax (expenses)/benefits. We recorded income tax expenses of US\$4.1 million in 2022, compared with income tax benefits of US\$0.1 million in 2021. We recorded income tax expenses in 2022 primarily due to an increase in taxable profit.

Net (loss)/income. As a result of the above, there was a net income of US\$21.3 million in 2022, as compared with a net income of US\$1.1 million in 2021. The change was primarily due to the increases in gross profit and other income.

Net (loss)/income attributable to Xunlei Limited. As a result of the above, we generated a net income attributable to Xunlei Limited of US\$1.2 million in 2021 and a net income attributable to Xunlei Limited of US\$21.5 million in 2022.

Year ended December 31, 2021 compared with year ended December 31, 2020.

Revenues. Our total revenues increased by 28.3% from US\$186.7 million in 2020 to US\$239.6 million in 2021, primarily due to the increases in revenues from cloud computing services and live streaming services.

- Revenue from cloud computing services and products increased by 47.4% from US\$64.3 million in 2020 to US\$94.8 million in 2021, primarily due to the increased demand for our cloud computing services.
- Revenue from subscription services increased by 8.2% from US\$84.3 million in 2020 to US\$91.2 million in 2021, primarily due to an increase in the number of paying subscribers.
- Revenues from live streaming and other internet value-added services increased by 40.9% from US\$38.0 million in 2020 to US\$53.6 million in 2021, primarily due to an increased demand for our live streaming services.

Cost of revenues. Our cost of revenues increased by 28.0% from US\$92.6 million in 2020 to US\$118.6 million in 2021, primarily attributable to an increase in sales of our cloud computing services and revenue-sharing costs for our live streaming products.

Bandwidth costs. Our bandwidth costs increased by 29.4% from US\$62.4 million in 2020 to US\$80.7 million in 2021, primarily due to the increased sales of our cloud computing services.

Cost of inventories sold. Our cost of inventories sold decreased by 8.7% from US\$1.7 million in 2020 to US\$1.5 million in 2021, primarily due to a decrease in unit cost of OneThing Cloud hardware as it has been write-down to a lower net realizable value.

Cost of live streaming. Our cost of live streaming services increased by 69.5% from US\$15.6 million in 2020 to US\$26.5 million in 2021, primarily due to an increase in revenue-sharing costs along with the growth of our live-streaming services.

Depreciation of servers and other equipment. Depreciation of servers and other equipment decreased by 23.1% from US\$6.2 million in 2020 to US\$4.8 million in 2021, primarily due to our disposal of servers, which we no longer use due to product upgrade.

Payment handling charges. Our payment handling charges increased by 110.1% from US\$1.5 million in 2020 to US\$3.1 million in 2021, primarily because we cooperated with more third-party payment service providers to collect fees for rendering live streaming service, the revenue of which increased by 68.2% as compared to that of the previous year.

Other costs. These costs decreased by 62.1% from US\$5.2 million in 2020 to US\$2.0 million in 2021, primarily due to less write-down of our inventory for OneThing Cloud hardware device compared with that of 2020.

Gross profit. As a result of the above, our gross profit increased by 28.2% from US\$93.7 million in 2020 to US\$120.2 million in 2021.

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Gross profit margin remained stable at approximately 50.2% in both 2020 and 2021.

Operating expenses. Our operating expenses increased by 10.6% from US\$112.5 million in 2020 to US\$124.5 million in 2021, primarily due to (i) increased labor cost as a result of increased headcounts; (ii) an increase in marketing and promotional activities for Mobile Xunlei and our new live streaming products, which we launched in 2021, and (iii) increased amortization expense regarding newly awarded restricted share units during 2021.

Research and development expenses. Our research and development expenses increased by 11.5% from US\$55.5 million in 2020 to US\$61.9 million in 2021, primarily due to increased employee related cost as a result of an increase in headcounts.

Sales and marketing expenses. Our sales and marketing expenses increased by 35.9% from US\$18.1 million in 2020 to US\$24.6 million in 2021, primarily due to more marketing and promotional activities conducted in 2021 for Mobile Xunlei and our new live streaming products in 2021.

General and administrative expenses. Our general and administrative expenses increased by 8.7% from US\$33.9 million in 2020 to US\$36.9 million in 2021, primarily due to increased amortization expense related to newly awarded restricted share units.

Credit loss expenses. We recorded a debit amount of US\$1.2 million in 2021, compared to a debit amount of US\$5.1 million in 2020. The decrease was primarily due to write-off of certain receivables in relation to our cloud computing business in 2020.

Interest income. Our interest income decreased by 50.9% from US\$1.5 million in 2020 to US\$0.7 million in 2021, primarily due to a decrease of time deposits in our bank account.

Interest expense. Our interest expense decreased from US\$0.4 million in 2020 to US\$0.1 million in 2021, primarily because less interest was accrued for the long-term payables to certain shareholders arising from the repurchase of shares in 2014.

Other income, net. Our other income, net was US\$4.7 million in 2021, same as the amount in the previous year.

Income tax (expenses)/benefits. We had income tax benefits of US\$0.1 million in 2021, compared with an income tax expenses of US\$1.1 million in 2020. We had income tax expenses in 2020 primarily due to the decrease of deferred tax assets.

Net (loss)/income. As a result of the above, there was a net income of US\$1.1 million in 2021, as compared with a net loss of US\$14.1 million in 2020. The change was primarily due to an increase in gross profit in 2021.

Net (loss)/income attributable to Xunlei Limited. As a result of the above, we generated a net loss attributable to Xunlei Limited of US\$13.8 million in 2020 and a net income attributable to Xunlei Limited of US\$1.2 million in 2021.

Inflation

To date, inflation in China has not materially affected our results of operations in recent years. According to the National Bureau of Statistics of China, the year-over-year percent changes in the consumer price index for December 2020, 2021 and 2022 were increases of 2.5%, 1.5% and 1.8%, respectively. Although we have not been materially affected by inflation in the past, we can provide no assurance that we will not be affected if China experiences higher rates of inflation in the future.

Critical accounting policies

We prepare our financial statements in conformity with U.S. GAAP, which requires us to make estimates and assumptions that affect the amounts reported in the accompanying consolidated financial statements and related disclosures. We regularly evaluate these estimates based on historical experiences and on various other assumptions that we believe to be reasonable, the result of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results could differ from what we expect. 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

Revenue is recognized when or as the control of the services or goods is transferred to the customer. Depending on the terms of the contract and the laws that apply to the contract, control of the services and goods may be transferred over time or at a point in time.

A contract liability is our obligation to transfer goods or services to a customer for which we have received consideration (or an amount of consideration is due) from the customer. Contract costs include incremental costs of obtaining a contract and costs to fulfil a contract.

We generate revenues from various streams. Net revenues presented in the consolidated statements of comprehensive (loss)/income represent revenues from service and product sales net off sales discount, value-added tax and related surcharges.

Subscription revenues

We operate a VIP membership program where VIP members can have access to high speed online acceleration services, online streaming and other access privileges. The subscription fee is time-based and is collected up-front from subscribers. The terms of time-based subscriptions range from one month to twelve months, with the subscribers having the option to renew the contracts. The receipt of subscription fee is initially recorded as contract liabilities. We satisfy our various performance obligations by providing services throughout the subscription period and revenue is recognized ratably over the period of subscription as services are rendered. Unrecognized portion beyond 12 months from balance sheet date is classified as a long-term liability. We evaluated the principal versus agent criteria and determined that we are the principal in the transaction and accordingly record revenue on a gross basis. In determining whether to report revenues gross for the amount of subscription revenue, we assess whether we maintain the principal relationship with the VIP members, whether it bears the credit risk and whether it establishes prices for the end users. Service fees levied by online system, and mobile payment channels (“payment handling charges”) are recorded as the cost of revenues in the same period as the revenue for the subscription fee is recognized.

Live streaming revenues

We operate certain live streaming platforms where users can access the platform, view the live streaming content provided by performers or broadcasters, and purchase virtual gifts which they can grant to performers or broadcasters in the live streaming platforms to show support for their favorite performers or broadcasters. We are the principal in the provision of the live streaming content and experience, which is considered as the performance obligation of us. We recognize revenue from sales of virtual gifts to the viewers when the relevant virtual gifts are presented to the performers or broadcasters or over the duration of stated period of the time-based item. We do not have further obligations to the viewers after the virtual gifts are consumed immediately or after the stated period for time-based items although we will continue to provide the live streaming content to the viewers in order to continue to generate sales of virtual gifts.

Cloud computing revenues

On a monthly basis, we record the bandwidth we deliver and recognize revenue from customers under contractual rates applied (price per GB of bandwidth multiplies total GBs of bandwidth per month).

Other internet value-added services revenues

Revenues from advertising revenues. We entered into a user traffic monetization agreement with Beijing Itui Online Network Technology Co., Ltd., or Itui Online, a company controlled by Itui International Inc., a principal shareholder of our company, in May 2020. Itui Online has been handling substantially all of our advertising resources, including negotiation and entering into contracts with advertisers, matching the requirements of advertisers and dispatching the advertising content to our platforms, and accordingly advertisers or advertising agencies are considered as customers of Itui Online and Itui Online is viewed as the customer of our company. Revenue arising from such transaction is recognized monthly based on the data publicized on the platforms and pre-agreed sharing portion.

Prior to the above arrangement, we cooperated with third-party advertising platforms for placing advertising content to our advertising resources. As these third-party advertising platforms were viewed as customers in these transactions, revenue was recognized monthly based on the data publicized on the platforms and pre-agreed sharing portion.

Revenues from online game revenues. We enter into a series of technical cooperation agreements with third-party online game operators. Users can access our platform and purchase in-game virtual items which can then be used in games provided by the third-party online game operators. We provide the third-party online game operators with a portal which the online game operators can host the online games. We charge the online game operators based on a pre-determined portion of proceeds earned from paying users pursuant to the revenue sharing arrangements for the provision of portal and payment collection service to the online game operators. The third-party online game operators are the principal in the provision of games to users and we provide the relevant platform to the game operators. Therefore, the game operators are viewed as the customers in these transactions.

The service fees receivable from the third-party online game operators are variable, which are contingent upon future events (future cash proceeds paid by game players), and are recognized when the contingency is met provided that collectability is reasonably assured.

Share-based Compensation

We awarded a number of restricted shares to our employees, officers and directors. The details of these share-based awards and the respective terms and conditions are described in “Share-based compensation” in Note 18 to our audited consolidated financial statements for the years ended December 31, 2020, 2021 and 2022.

We measure share-based compensation based on the stock price at the grant date. As we have granted restricted shares with service-only condition, we elected to recognize compensation costs net of estimated forfeitures on a straight-line basis over the requisite service period, which is generally the same as the vesting period. The amount of compensation cost recognized at any date is at least equal to the portion of the grant-date value of the award that is vested at that date.

Impairment of Long-lived Assets

For other long-lived assets, we evaluate our long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may no longer be recoverable. We assess the recoverability of the long-lived assets by comparing the carrying value of the long-lived assets to the estimated undiscounted future cash flows we expect to receive from use of the assets and their eventual disposition at the lowest level of identifiable cash flows. 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. If we identify an impairment, the carrying value of the asset will be reduced to its estimated fair value based on a discounted cash flow approach or, when available and appropriate, to comparable market values.

Impairment of Goodwill

Goodwill represents the excess of the purchase consideration over the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed from the acquired entity as a result of our company’s acquisitions of interests in its subsidiaries, the VIE and the subsidiaries of the VIE. Goodwill is not amortized but is tested for impairment on an annual basis, or more frequently if events or changes in circumstances indicate that it might be impaired.

On January 1, 2020, we adopted the FASB issued ASU 2017-04: Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. After adopting this guidance, we perform the quantitative impairment test by comparing the fair value of each reporting unit to its carrying amount, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, goodwill is not considered to be impaired. If the carrying amount of a reporting unit exceeds its fair value, the amount by which the carrying amount exceeds the reporting unit’s fair value is recognized as impairment.

Our goodwill was attributable to our company as a whole. We apply the quantitative assessment for the impairment test of goodwill as of December 31, 2021 and 2022. The impairment test for goodwill that determines the fair value of the reporting unit, and compares it to the carrying value of the assets and liabilities, including goodwill, of the reporting unit. The fair value of our company was estimated by us using the discounted cash flow model derived from the long-term (five-year) cash flow projections, which included significant judgements and assumptions relating to revenue forecast and operating margins, discount rate that reflects market assessments of the time value and the specific risks relating to our company, and cash flows beyond the five-year period are extrapolated using a terminal growth rate.

No goodwill impairment losses were recognized in 2020, 2021 and 2022 based on the impairment test performed by us.

Consolidation

The consolidated financial statements include the financial statements of Xunlei Limited, our subsidiaries, the VIE for which Xunlei Limited is the primary beneficiary and the subsidiaries of the VIE. All significant transactions and balances among our subsidiaries, the variable interest entity and us have been eliminated upon consolidation.

A subsidiary is an entity in which we, directly or indirectly, control more than one-half of the voting power, or has the power to appoint or remove the majority of the members of the board of directors to cast a majority of the votes at meetings of the board of directors or to govern the financial and operating policies of the investee under a statute or agreement among the shareholders or equity holders.

An entity is considered to be a variable interest entity if the entity's equity holders do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties.

We consolidate entities for which we are the primary beneficiary if the entity's equity holders do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties.

In determining whether Xunlei Limited or its subsidiary is the primary beneficiary of a VIE, we considered whether we have the power to direct activities that are significant to the VIE's economic performance, including the power to appoint senior management, right to direct company strategy, power to approve capital expenditure budgets, and power to establish and manage ordinary business operation procedures and internal regulations and systems.

Management has evaluated the contractual arrangements among Giganology Shenzhen, Shenzhen Xunlei and its shareholders and concluded that Giganology Shenzhen receives all of the economic benefits and absorbs all of the expected losses from Shenzhen Xunlei and has the power to direct the aforementioned activities that are significant to Shenzhen Xunlei's economic performance, and is the primary beneficiary of Shenzhen Xunlei. Therefore, Shenzhen Xunlei and its subsidiaries' results of operation, assets and liabilities have been included in our consolidated financial statements. We monitor the regulatory risk associated with these contractual arrangements. The details of how we manage the regulatory risk are described in "Certain risk and concentration" in Note 26 to our audited consolidated financial statements for the years ended December 31, 2020, 2021 and 2022.

Non-controlling interests represent the portion of the net assets of a subsidiary attributable to interests that are not owned by our company. The non-controlling interests are presented in the consolidated balance sheets, separately from equity attributable to the shareholders of our company. Non-controlling interests in the results of our company is presented on the face of the consolidated statements of comprehensive (loss)/income as an allocation of the total income or loss for the year between non-controlling shareholders and the shareholders of our company.

Allowance for expected credit losses

Effective on January 1, 2020, we adopted Accounting Standards Update (ASU) 2016-13, Financial Instruments - Credit Losses (Topic 326) under a modified retrospective transition, which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost with the cumulative-effect adjustment recognized to the opening balance of accumulated deficit of the Group as of January 1, 2020. ASU 2016-13 replaces the existing incurred loss impairment model with an expected loss methodology, referred to as a current expected credit losses (“CECL”) methodology, which will result in more timely recognition of credit losses. The CECL methodology requires that the full amount of expected credit losses for the lifetime of the financial instrument be recorded at the time it is originated or acquired, considering relevant historical experience, current conditions and reasonable and supportable macroeconomic forecasts that affect the collectability of financial assets, and adjusted for changes in expected lifetime credit losses subsequently, which may require earlier recognition of credit losses. Our accounts receivable, due from related parties, other current assets (including other receivables) and other long-term non-current assets (including other long-term receivables) are within the scope of ASC Topic 326.

We assessed the credit loss for accounts receivable with similar risk characteristics on a pool basis. The credit loss assessment for each pool was mainly based on past collection experience, consideration of current and future economic conditions and changes in our collection trends.

Taxation and Uncertain Tax Positions

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and tax loss carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which the difference is expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the consolidated statement of operations in the period that includes the enactment date. A valuation allowance is provided to reduce the carrying amount of deferred tax assets if it is considered more likely than not that some portion, or all, of the deferred tax assets will not be realized. The estimation of future taxable income involves significant judgments and estimates. Based on management’s estimated future taxable income management concluded that it is more likely than not that the net operating losses carried forward cannot be utilized prior to their respective expiration dates.

We adopted the ASC 740 “Income Taxes” regarding uncertain tax positions and evaluated our open tax positions that exist in each jurisdiction for each reporting period. If an uncertain tax position is taken or expected to be taken in a tax return, the tax benefit from that uncertain position is recognized in our consolidated financial statements if it is more likely than not that the position is sustainable upon examination by the relevant taxing authority.

We did not have any significant uncertain tax position and there was no effect on our financial position or results of operations as a result of implementing the ASC 740 “Income Taxes”. We recognize interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense, if any.

PRC value-added tax

VAT payable on goods sold or taxable labor services provided by a general VAT taxpayer for a taxable period is the net balance of the output VAT for the period after crediting the input VAT for the period. In addition to the product revenues currently subject to VAT at a rate of 13% (17% before May 1, 2018 and 16% before April 1, 2019), our subscription revenue, live streaming revenue, cloud computing service revenue, and online games revenue are now subject to VAT at a rate of 6%.

According to the policy of the State Taxation Administration of the PRC, starting from April 1, 2019 to December 31, 2021, enterprises that engage in postal services, telecommunication services and consumer services are entitled to claim 110% of the input tax incurred as tax credit in determining VAT payable. The policy has been extended to December 31, 2022 by the State Taxation Administration of the PRC on February 18, 2022. Starting from January 1, 2023 to December 31, 2023, enterprises that engage in previously mentioned services are entitled to claiming 105% of the input tax incurred as tax credit in determining VAT payable according to the policy of the PRC State Tax Bureau on January 9, 2023.

Commitments and Contingencies

In the normal course of business, we are subject to contingencies, such as legal proceedings and claims arising out of our business that cover a wide range of matters. Liabilities for such contingencies are recorded when it is probable that a liability has been incurred and the amount of the assessment can be reasonably estimated. In regard to legal cost, we recorded such costs as incurred.

Certain conditions may exist as of the date of the financial statements are issued, which may result in a loss to us, but which will only be resolved when one or more future events occur or fail to occur. Our management and legal counsel assess such contingent liabilities, and such assessment inherently involve an exercise of judgment. In assessing loss contingencies related to legal proceedings that are pending against us or unasserted claims that may result in such proceedings, we in consultation with our legal counsel and evaluate the perceived merits of any legal proceedings or unasserted claims as well as the perceived merits of the amount of relief sought or expected to be sought therein.

If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in our financial statements. If the assessment indicates that a potentially material loss contingency is not probable, but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability, together with an estimate of the range of possible loss, if determinable and material, would be disclosed.

We are involved in a number of cases pending in various courts. These cases are substantially related to alleged copyright infringement and routine and incidental matters to its business, among others. Adverse results in these lawsuits may include awards of damages and may also result in, or even compel, a change in our business practices, which could impact our future financial results. We have incurred US\$1.0 million and US\$0.2 million legal and litigation-related expenses for 2021 and 2022, respectively, while we reversed US\$1.2 million legal and litigation related expense for 2020.

As of the date of this annual report, we have five lawsuits pending against us relating to the alleged copyright infringement and claims for other damages, with an aggregate amount of claimed damages of approximately RMB5.6 million (US\$0.8 million) which occurred before December 31, 2022. We have accrued for US\$0.6 million litigation-related expenses in “Accrued expenses and other liabilities” in the consolidated balance sheet as of December 31, 2022, which is the most probable and reasonably estimable outcome. In addition, there has been a dispute relating to a construction contract, which is currently under arbitration procedure, and we had recognized related payable in “Accrued liabilities and other payables” in the consolidated financial balance sheet as of December 31, 2022 based on the reasonably estimable outcome.

We estimated the litigation compensation based on judgments handed down by the court, out-of-court settlements of similar cases as well as advices from our legal counsel. We are in the process of appealing certain judgments for which the losses had been accrued. Although the results of unsettled litigation and claims cannot be predicted with certainty, we do not expect that the outcome of these lawsuits will result in the amounts accrued materially different from the range of reasonably possible losses. In the opinion of management, there was not at least a reasonable possibility we may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to loss contingencies for asserted legal and other claims. However, the outcome of litigation is inherently uncertain. Therefore, although management considers the likelihood of such an outcome to be remote, if one or more of these legal matters were resolved against us in a reporting period for amounts in excess of management’s expectations, our consolidated financial statements for that reporting period could be materially adversely affected.

Recent Accounting Pronouncements

See Item 18 of Part III, “Financial Statements—Note 2—Summary of significant accounting policies—Recent accounting pronouncements.”

B. Liquidity and Capital Resources

We have financed our operations primarily by using our existing internal cash reserves and borrowing bank loans. As of December 31, 2022, we had US\$260.8 million in cash and cash equivalents and short-term investments. As of the same date, we also had US\$7.7 million restricted cash, which represents cash deposited in a bank account due to legal or contractual restrictions, and US\$31.8 million outstanding bank loans for the construction of our headquarters building.

We have incurred accounts receivable from the sales of CDN and advertising revenue sharing with Itui. Thus, the financials of our customers purchasing CDN from us including Itui may affect our collection of accounts receivable. Any inability of CDN purchasers and Itui, especially those that accounted for a significant percentage of our accounts receivables in the past, to pay us in a timely manner may adversely affect our liquidity and cash flows.

In the future, we may rely on dividends and other distributions on equity paid by our wholly owned PRC subsidiaries for our cash and financing requirements. There may be potential restrictions on the dividends and other distributions by our PRC subsidiaries. For instance, if Giganology Shenzhen, our PRC subsidiary, incurs debt on its own behalf in the future, the instruments governing the debt may restrict its ability to pay dividends or make other distributions to us. The PRC tax authorities may require us to adjust our taxable income under the contractual arrangements Giganology Shenzhen currently has in place with Shenzhen Xunlei in a way that would materially and adversely affect the latter's ability to pay dividends and other distributions to us. In addition, under PRC laws and regulations, Giganology Shenzhen, as a wholly foreign-owned enterprises in China, may pay dividends only out of its accumulated profits as determined in accordance with PRC accounting standards and regulations. Wholly foreign-owned enterprises such as Giganology Shenzhen are required to set aside at least 10% of their accumulated after-tax profits each year, if any, to fund a statutory reserve fund, until the aggregate amount of such fund reaches 50% of their respective registered capital. At their discretion, wholly foreign-owned enterprises may allocate a portion of their after-tax profits based on PRC accounting standards to staff welfare and bonus funds. These reserve funds and staff welfare and bonus funds are not distributable as cash dividends. See "Item 3. Key Information—D. Risk Factors—Risk Related to Our Corporate Structure—We may rely principally on dividends and other distributions on equity paid by our PRC subsidiaries to fund any cash and financing requirements we may have. Any limitation on the ability of Giganology Shenzhen and Xunlei Computer to pay dividends to us could have a material adverse effect on our ability to conduct our business." In addition, our investment made as registered capital and additional paid in capital of our subsidiaries, the variable interest entity and its subsidiaries are also subject to restrictions in their distribution and transfer according to the laws and regulations in China. Owing to the above, our subsidiaries, variable interest entity and its subsidiaries in China are restricted in their ability to transfer their net assets to us in terms of cash dividends, loans or advances. As of December 31, 2022, the amount of the restricted net assets, which represents registered capital and additional paid-in capital cumulative appropriations made to statutory reserves, was US\$172.1 million.

As an offshore holding company, we are permitted, under PRC laws and regulations, to provide funding from the proceeds of our offshore fund raising activities to our PRC subsidiaries only through loans or capital contributions, and to the variable interest entity only through loans, subject to the satisfaction of the applicable government registration and approval requirements. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Corporate Structure—PRC regulation of loans to, and direct investment in, PRC entities by offshore holding companies and governmental control of currency conversion may restrict or prevent us from making loans to our PRC subsidiaries and variable interest entity and its subsidiaries or making additional capital contributions to our PRC subsidiaries, which may materially and adversely affect our liquidity and our ability to fund and expand our business." As a result, uncertainties exist as to our ability to provide prompt financial support to our PRC subsidiaries or variable interest entity when needed. Notwithstanding the forgoing, Giganology Shenzhen may use its own retained earnings (as opposed to Renminbi converted from foreign currency denominated capital) to provide financial support to Shenzhen Xunlei either through extended payment terms on amounts due to Giganology Shenzhen from Shenzhen Xunlei, or via entrusted loans from Giganology Shenzhen to Shenzhen Xunlei, or direct loans to its nominee shareholders, which would be contributed to the variable interest entity as capital injection. Such direct loans to the nominee shareholders would be eliminated in the consolidated financial statements against the VIE's share capital.

We believe that our current cash and cash equivalents and anticipated cash flow from operations will be sufficient to meet our anticipated cash needs for at least the next 12 months. We may, however, need additional cash resources in the future if we experience changes in business conditions or other developments. We may also need additional cash resources in the future if we find and wish to pursue opportunities for investment, acquisition, capital expenditure or similar actions. If we determine that our cash requirements exceed the amount of cash and cash equivalents we have on hand, we may seek to issue debt or equity securities or obtain additional credit facilities.

Cash Flows

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

	For the Year Ended December 31,		
	2020	2021	2022
	(in thousands of US\$)		
Net cash (used in)/generated from operating activities	(13,911)	19,480	51,109
Net cash (used in)/generated from investing activities	(20,756)	(32,619)	11,758
Net cash generated from/(used in) financing activities	2,679	(223)	6,641
Net (decrease)/increase in cash, cash equivalents and restricted cash	(31,988)	(13,362)	69,508
Cash, cash equivalents and restricted cash at the beginning of year	165,448	138,789	127,436
Effect of exchange rates on cash, cash equivalents, and restricted cash	5,329	2,009	(12,136)
Cash, cash equivalents and restricted cash at end of year	138,789	127,436	184,808

As of December 31, 2022, we had cash or cash equivalents, including restricted cash, of US\$184.8 million in total, including RMB752.7 million (US\$108.1 million) and US\$31.2 million located within the PRC, of which RMB465.0 million (US\$66.8 million) and US\$0.6 million was held by the VIE, Shenzhen Xunlei, and its subsidiaries. We also had cash or cash equivalents of RMB0.2 million (US\$33.5 thousand), US\$42.3 million, HK\$1.2 million (US\$0.2 million), EUR\$0.5 million (US\$0.5 million), SGD\$2.4 million (US\$1.8 million), INR\$10.7 million (US\$0.2 million), GBP\$0.1 million (US\$0.2 million), SAR\$1.1 million (US\$0.3 million), PHP\$1.8 thousand (US\$0.03 thousand), EGP\$1.4 million (US\$0.08 million), PKR\$2.0 million (US\$9.6 thousand), VND\$0.3 million (US\$0.01 thousand), BHD\$9.1 thousand (US\$24.0 thousand) and GBP\$98.1 million (US\$0.07 million) located outside of the PRC as of December 31, 2022. We reclassified an immaterial amount of US\$1.5 million from our cash and cash equivalents to accounts receivable as of December 31, 2022 since the publication of our earning release on March 15, 2023 due to finalization of financial closing process.

Operating activities

Net cash generated from operating activities amounted to US\$51.1 million in 2022, which was primarily attributable to a net income of US\$21.3 million, adjusted for certain non-cash expenses consisting principally of the depreciation of property and equipment of US\$2.7 million, share-based compensation expenses of US\$8.2 million, amortization of intangible assets of US\$1.1 million, and a net change in working capital. The net change in working capital was primarily due to (i) an increase in accounts receivable of US\$6.0 million, which was in line with the increase of cloud computing service revenues, (ii) an increase in contract liabilities of US\$5.7 million, which was mainly due to the contribution from our subscription business, (iii) an increase in accrued liabilities and other payable of US\$8.6 million, which was mainly due to an increase in employee bonus accrual, and (iv) an increase in income tax payable of US\$3.4 million, which was due to the increase in taxable profit.

Net cash generated from operating activities amounted to US\$19.5 million in 2021, which was primarily attributable to a net income of US\$1.1 million, adjusted for certain non-cash expenses consisting principally of the depreciation of property and equipment of US\$6.3 million, share-based compensation amortization expenses of US\$6.2 million, amortization of US\$1.9 million right-of-use assets, and a net change in working capital. The net change in working capital was primarily due to (i) an increase in accounts receivable of US\$2.2 million, which was in line with the increase of cloud computing service revenues, (ii) an increase in due from related parties of US\$8.5 million, mainly due to the increase of transaction amount with related parties, and (iii) an increase in accounts payable of US\$5.2 million, which was in line with the increased of bandwidth cost.

Net cash used in operating activities amounted to US\$13.9 million in 2020, which was primarily attributable to a net loss of US\$14.1 million, adjusted for certain non-cash expenses consisting principally of the depreciation of property and equipment of US\$9.3 million, allowance for doubtful accounts of US\$5.3 million, impairment of inventories of US\$3.3 million, and a net change in working capital. The net change in working capital was primarily due to (i) a decrease in accounts receivable of US\$5.0 million, which was the settlement from customers before the year ended December 31, 2019, (ii) an increase in due from related parties of US\$8.6 million, which was in line with the increase of advertising services revenues, and (iii) a decrease in accounts payable of US\$4.9 million, which was due to shorter payment term we made for our bandwidth purchases.

Investing activities

Net cash used in investing activities largely reflects purchases of property and equipment in connection with the expansion and upgrade of our technology infrastructure, purchases of intangibles assets, acquisition of long-term investments, payments to purchase short-term investments such as treasury products, and acquisition of constructions in progress, which represents the construction cost in connection with our construction of Xunlei headquarters building.

Net cash generated from investing activities amounted to US\$11.8 million in 2022, primarily attributable to proceeds from collection upon maturities of short-term investments of US\$545.1 million, which was partially offset by our purchase of short-term investments of US\$517.4 million and payment on the construction of the headquarters building of US\$11.7 million.

Net cash used in investing activities amounted to US\$32.6 million in 2021, primarily attributable to proceeds from collection upon maturities of short-term investments of US\$342.0 million, which was partially offset by our purchase of short-term investments of US\$337.7 million and loan to related party of US\$20.0 million.

Net cash used in investing activities amounted to US\$20.8 million in 2020, primarily attributable proceeds from collection upon maturities of short-term investments of US\$167.4 million, which was partially offset by our purchase of short-term investments of US\$177.1 million.

Financing activities

Net cash generated from financing activities amounted to US\$6.6 million in 2022, primarily attributable to proceeds from bank borrowings of US\$16.7 million, repayment of bank borrowings of US\$3.3 million and repurchase of shares of US\$6.7 million.

Net cash used in financing activities amounted to US\$0.2 million in 2021, primarily attributable to proceeds from bank borrowings of US\$2.2 million and repayment of bank borrowings of US\$2.4 million.

Net cash generated from financing activities amounted to US\$2.7 million in 2020, primarily attributable to proceeds from bank borrowings of US\$7.8 million and repurchase of shares of US\$4.5 million.

Material Cash Requirements

Our material cash requirements mainly include capital expenditures, contractual obligations and long-term debt obligations.

Capital expenditures

Our capital expenditures primarily consist of purchasing servers or other equipment for our business operations and payment for facility construction in progress. We made capital expenditures of US\$13.6 million in 2020, US\$13.2 million in 2021 and US\$15.0 million in 2022. We will continue to make capital expenditures to meet the expected growth of our business.

Contractual obligations

Our contractual obligations mainly include bandwidth lease obligations and capital obligations. The following table sets forth our contractual obligations as of December 31, 2022.

	<u>Total</u>	<u>Less than 1 year</u>	<u>1-3 years</u>	<u>3-5 years</u>	<u>Over 5 years</u>
		(in thousands of US\$)			
Bandwidth lease obligations	1,925	1,925	—	—	—
Capital obligations	8,401	7,311	1,090	—	—
Total	10,326	9,236	1,090	—	—

As of December 31, 2022, we had unconditional purchase obligations for bandwidth, office building and office equipment that had not been recognized in the amount of US\$10.3 million.

Long term debt obligations

Our long term debt obligations primarily consist of bank borrowings and estimated interest payments. Our long term loan is bank borrowing for the construction of our headquarters building, and the interest rate is calculated based on the Loan Prime Rate plus 15 basis points. The bank borrowings will be due according to the following schedule:

	<u>Total</u>	<u>Less than 1 year</u>	<u>1-3 years</u>	<u>3-5 years</u>	<u>Over 5 years</u>
		(in thousands of US\$)			
Bank borrowings obligations	31,774	7,024	14,048	10,702	—
Estimated interest payment obligations	4,204	1,624	2,073	507	—
Total	35,978	8,648	16,121	11,209	—

We intend to fund our existing and future material cash requirements primarily with anticipated cash flows from operations, our existing cash balance and other financing alternatives. We will continue to make cash commitments, including capital expenditures, to support the growth of our business.

We have not entered into any financial guarantees or other commitments to guarantee the payment obligations of any third parties. We do not have retained or contingent interests in assets transferred. We have not entered into contractual arrangements that support the credit, liquidity or market risk for transferred assets. We do not have obligations that arise or could arise from variable interests held in an unconsolidated entity, or obligations related to derivative instruments that are both indexed to and classified in our own equity, or not reflected in the statement of financial position.

Other than as discussed above, we did not have any significant capital and other commitments, long-term obligations or guarantees as of December 31, 2022.

Off-balance sheet arrangements

We do not have any commitments or obligations, including contingent obligations, arising from arrangements with unconsolidated entities or persons that have or are reasonably likely to have a material current or future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, cash requirements or capital resources. In addition, we have not entered into any derivative contracts that are indexed to our shares and classified as shareholders' equity or that are not reflected in our consolidated financial statements. Furthermore, we do not have any guarantees, retained or contingent interest in assets transferred to an unconsolidated entity, contractual arrangements that support the credit, liquidity or market risk for transferred assets; obligations that arise or could arise from variable interests held in an unconsolidated entity.

C. Research and Development

We believe that our commitment to research and development is an important contributing factor in our success. As of December 31, 2022, we had a team of 552 engineers. We provide our engineers with various continuing training programs and opportunities. To maintain and enhance our leadership position in the market, we will continue to compete for engineering talent and invest in research and development in order to provide better services to our users, subscribers and advertisers.

D. Trend Information

Other than as disclosed elsewhere in this annual report, we are not aware of any trends, uncertainties, demand, commitments or events for the year ended December 31, 2022 that are reasonably likely to have a material and adverse effect on our net revenues, income, profitability, liquidity or capital resources, or that would cause the disclosed financial information to be not necessarily indicative of future results of operations or financial condition.

E. Critical Accounting Estimates

We prepare our consolidated financial statements in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"), which requires our management to make estimates that affect the reported amounts of assets, liabilities and disclosures of contingent assets and liabilities at the balance sheet dates, as well as the reported amounts of revenues and expenses during the reporting periods. To the extent that there are material differences between these estimates and actual results, our financial condition or results of operations would be affected. We base our estimates on our own historical experience and other assumptions that we believe are reasonable after taking account of our circumstances and expectations for the future based on available information. We evaluate these estimates on an ongoing basis.

We consider an accounting estimate to be critical if: (i) the accounting estimate requires us to make assumptions about matters that were highly uncertain at the time the accounting estimate was made, and (ii) changes in the estimate that are reasonably likely to occur from period to period or use of different estimates that we reasonably could have used in the current period, would have a material impact on our financial condition or results of operations. There are other items within our financial statements that require estimation but are not deemed critical, as defined above. Changes in estimates used in these and other items could have a material impact on our financial statements. See Item 18 of Part III, "Financial Statements—Note 2—Summary of significant accounting policies."

Allowance for expected credit losses

For receivable with similar risk characteristics, we make estimates of expected credit losses on a pool based upon assessment of various factors, including historical experience, the age of the accounts receivable balances, credit-worthiness of the customers, consideration of current and future economic conditions and changes in our collection trends and other factors that may affect its ability to collect from the customers. We also provide specific provisions for allowance when facts and circumstances indicate that the receivable is unlikely to be collected. Expected credit losses are recorded as assets impairment loss on the consolidated statements of comprehensive (loss)/income. Changes in these estimates and assumptions could materially affect the credit losses.

For loans to and trade receivables due from Itui, our largest shareholder and its subsidiaries, we adopted a CECL model based on probability-of-default method. Our management estimates the allowance for credit losses on loans and interest receivable not sharing similar risk characteristic on an individual basis. The key factors considered when determining the above allowances for credit losses include the age of the receivable balances, estimated collection schedule, discount rate, financial condition and performance data of Itui and its business development considering current and future economic conditions.

Valuation allowance of deferred tax assets

We make estimates and apply judgment in determining the provision for income taxes for financial reporting purposes. We make these estimates and judgments primarily in the following areas: (i) the calculation of tax credits, (ii) the calculation of differences in the timing of recognition of revenue and expense for tax reporting and financial statement purposes, as well as (iii) the calculation of interest and penalties related to uncertain tax positions. Changes in these estimates and judgments may result in a material increase or decrease to our tax provision, which would be recorded in the period in which the change occurs. Deferred tax assets and liabilities are recognized for expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, and for operating losses and tax credit carry forwards. We record a valuation allowance to reduce deferred tax assets to an amount for which realization is more likely than not. To assess uncertain tax positions, we apply a more likely than not threshold and a two-step approach for the tax position measurement and financial statement recognition. Under the two-step approach, the first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the position will be sustained, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit as the largest amount that is more than 50% likely of being realized upon settlement. This process is inherently subjective since it requires our assessment of the probability of future outcomes. We evaluate these uncertain tax positions on a quarterly basis, including consideration of changes in facts and circumstances, such as new regulations or recent judicial opinions, as well as the status of audit activities by taxing authorities. Changes in these estimates and assumptions could materially affect the tax position measurement and financial statement recognition. See Note 21 to the Consolidated Financial Statements for information regarding taxation.

Impairment of goodwill

Under U.S. GAAP, goodwill is not amortized but is tested for impairment on an annual basis, or more frequently if events or changes in circumstances indicate that it might be impaired. Application of a goodwill impairment test requires significant management judgment. Our goodwill was attributable to our company as a whole. The impairment test for goodwill determines the fair value of the reporting unit, our company as a whole, and compares it to the carrying value of the assets and liabilities, including goodwill, of the reporting unit.

For fair value of the company, we use a discounted cash flow model derived from the long-term (five-year) cash flow projections to estimate the fair value, which requires the use of inputs such as the forecasted future revenues, costs and operating expenses attributable to the company, terminal growth rate and the discount rate. Our estimates of these inputs require subjective management judgment and are inherently uncertain. Changes in our estimates of these inputs may cause us to record impairment in the future.

No goodwill impairment losses were recognized for the years ended December 31, 2020, 2021 and 2022 based on the impairment test performed by us. See Note 12 to the consolidated financial statements for information regarding goodwill.

Impairment of long-lived assets

We evaluate our long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may no longer be recoverable. Events that trigger a test for recoverability include material adverse changes in projected revenues or expenses, present cash flow losses combined with a history of cash flow losses and a forecast that demonstrates significant continuing and significant negative expectation of economic growth. When a triggering event occurs, a test for recoverability is performed. We assess the recoverability of the long-lived assets by comparing the carrying value of the long-lived assets to the estimated undiscounted future cash flows we expect to receive from the use of the assets and their eventual disposition at the lowest level of identifiable cash flows. An impairment charge is recognized for the amount by which the carrying value of the asset group exceeds its estimated fair value.

Inherent in the undiscounted future cash flows are assumptions and estimates derived from a review of business plan forecasts, expected growth rates, and market economy. Changes in assumptions or estimates can materially affect the fair value measurement.

Item 6. Directors, Senior Management and Employees

A. Directors and Senior Management

The following table sets forth information regarding our executive officers and directors as of the date of this annual report.

Directors and Executive Officers	Age	Position/Title
Jinbo Li	47	Chairman and Chief Executive Officer
Sean Shenglong Zou	51	Co-Founder and Director
Yubo Zhang	46	Director and President
Peng Shi	35	Director
Hui Duan	43	Director
Jenny Wenjie Wu	48	Independent Director
Ya Li	53	Independent Director
Naijiang (Eric) Zhou	60	Chief Financial Officer

Mr. Jinbo Li has been our chairman and chief executive officer since April 2020. Mr. Li is a successful serial entrepreneur with more than 20 years' experience in China's internet and technology industry. Mr. Li was part of Xunlei's founding team and contributed to establishing and leading the core R&D team during the crucial early stage of Xunlei from 2004 to 2009. Mr. Li left Xunlei in January 2010 and acted as the chief executive officers of two internet ventures from 2010 to 2014. Mr. Li founded Itui International Inc., a company focusing on developing mobile applications for social networking services, in 2014 and acted as its chairman and chief executive officer since then. Mr. Li received his bachelor's degree in 1998 from Shandong University in China and master's degree in 2001 from Peking University in China.

Mr. Sean Shenglong Zou is one of our co-founders and served as our chief executive officer from our inception in February 2005 to July 2017 and chairman of the board from our inception in February 2005 to December 2017. Mr. Zou currently serves as a director of our company. Mr. Zou is an expert in distributed computing. Mr. Zou pioneered the theory of content-based multimedia indexing technology and resource discovery network that provides time-saving online experience for internet users and has led our company to revolutionize traditional internet acceleration by the technology and network. Mr. Zou received a master's degree in computer science from Duke University in the United States in 1998 and a bachelor's degree in computer science from University of Wisconsin-Madison in 1997.

Mr. Yubo Zhang has been serving as our president since April 2020. Prior to rejoining us in April 2020, Mr. Zhang served as the chief executive officer of Beijing Nesound International Media Corp, Ltd., or Nesound, from April 2015 to April 2020. During his tenure at Nesound, Mr. Zhang combined the respective advantages of live broadcasting and traditional film & television businesses and built a multifaceted platform incorporating self-produced exclusive contents, star development plans and Internet services. Mr. Zhang joined our company for the first time in August 2005 and was one of the core founding members of our company. During his ten years with us, Mr. Zhang served various management positions including a senior vice president of our company and the president of a major subsidiary of our company from August 2005 to March 2015. Mr. Zhang received his bachelor's degree in mechanical design and manufacturing from Jilin University of Technology in China in 1999.

Mr. Peng Shi has been serving as a director of our company since April 2020. Mr. Shi has also been serving as the president of product at Beijing Itui Technology Co., Ltd since March 2018. Prior to joining Beijing Itui, Mr. Shi served as the general manager at Qutoutiao Inc. Beijing branch from January 2018 to March 2018, the product director of Toutiao.com, a Chinese news and information content platform operated by Beijing Bytedance Technology Co., Ltd, from 2016 to 2017, the product vice president of Quanmin.tv, a live streaming platform operated by Shanghai Maimiao Information Technology Co., Ltd. from 2015 to 2016, the senior product officer of UCWeb Inc from May 2014 to June 2015, a senior product manager at Baidu, Inc. from April 2013 to May 2014, and a product manager at Qihoo 360 Technology Co., Ltd. from March 2010 to April 2013. Mr. Shi received his bachelor's degree in software engineering from Beihai College of Beihang University in China in 2011.

Mr. Hui Duan has been serving as a director of our company since April 2020. Mr. Duan currently also serves as the chief technology officer of Beijing Itui Technology Co., Ltd. Prior to that, Mr. Duan founded his own company that provided HR SaaS products and services from October 2015 to 2017. From April 2008 to April 2015, Mr. Duan served various management positions at Xunlei including vice president and the chief executive officer of a major subsidiary of Xunlei. Mr. Duan received his bachelor's degree in computer science from Peking University in 2001 and EMBA degree from China Europe International Business School in 2015.

Ms. Jenny Wenjie Wu has been serving as our independent director since June 2014 and is currently an independent non-executive director of Kingsoft Corporation Limited (3888.HK). Ms. Wu served as an independent director of BlueCity Holdings Limited from July 2020 to August 2022. Ms. Wu served as the chief investment officer of New Hope Group from November 2018 to February 2020. Prior to joining New Hope Group, Ms. Wu was a founding and managing partner of Baidu Capital from November 2016 to November 2018. Ms. Wu successively served as the deputy chief financial officer, the chief financial officer, and the chief strategy officer at Trip.com Group Limited (NASDAQ: TCOM) from December 2011 to November 2016. Ms. Wu was an equity research analyst covering China Internet and Media industries in Morgan Stanley Asia Limited and in Citigroup Global Markets Asia Limited from 2005 to 2011. Prior to that, Ms. Wu worked in China Merchants Holdings (International) Company Limited (0144.HK), a company listed on the Hong Kong Stock Exchange, for three years. Ms. Wu has a Ph.D. degree in Finance from the University of Hong Kong, a master's degree in Finance from the Hong Kong University of Science and Technology, and both a master's degree and a bachelor's degree in Economics from Nankai University, China. Ms. Wu has been a Chartered Financial Analyst (CFA) since 2004.

Mr. Ya Li has been serving as our independent director since March 2017. Mr. Li founded Beijing Humanistic Intelligence Inc. in 2019 and currently serves as the chief executive officer of this company. Mr. Li currently is also a visiting research fellow and master's supervisor at Beijing University. From February 2015 to January 2019, Mr. Li served as the chief executive officer of Yidian Zixun. From May 2006 to September 2017, Mr. Li served successively as the chief operating officer, the chief financial officer, the president, and a director of Phoenix New Media (NYSE: FENG). From 2004 to 2006, Mr. Li served as the chief operating officer and the chief financial officer of Techedge Inc. From 2002 to 2006, Mr. Li served as the president of China Quantum Communications Inc. Mr. Li also served as directors for U.S. China Chamber of Commerce, Chinese Finance Society, National Council of Chinese Americans, and Council on U.S.-China Affairs from 1996 to 2005. Mr. Li holds an Executive MBA degree from the Wharton School at the University of Pennsylvania, a master degree in Computer Science from Temple University, and a bachelor degree in Control Systems Engineering from the University of Science & Technology of China.

Mr. Naijiang (Eric) Zhou has been serving as our chief financial officer since September 2017. Mr. Zhou has extensive professional experience covering corporate finance, financial planning and analysis, domestic and international investment project due diligence, and mutual fund and private equity investment research and management in the U.S. and in China. Most recently, Mr. Zhou was an interim chief financial officer at ChinaCache International Holdings Limited. Mr. Zhou served as a senior vice president of ChinaCache from September 2015 to June 2016. From February 2010 to December 2014, he served as the vice president of finance and the chief financial officer at Sutor Technology Group Limited. Prior to that, Mr. Zhou served in various roles, including an executive vice president and the chief financial officer at Richfield Investment Ltd., an equity research analyst at Roth Capital Partners, a principal financial planner at American Electric Power and a senior research analyst at U.S. Global Investors. Mr. Zhou obtained a bachelor's degree with honors in Petroleum Management Engineering from China Petroleum University, and both MBA in Finance and Ph.D. in Interdisciplinary Energy and Mineral Resources from the University of Texas at Austin. Mr. Zhou is a CFA charter holder.

B. Compensation

For the fiscal year ended December 31, 2022, we paid an aggregate of approximately US\$1.0 million in cash to our executive officers, and we paid approximately US\$0.2 million in cash compensation to our non-executive directors. In addition, we paid approximately US\$0.5 million in pension, housing funds, transportation subsidies and commercial insurance to our executive officers, and we did not set aside or accrued any amount to provide such benefits to our non-executive directors. For share incentive grants to our officers and directors under our share incentive plan and restricted share grants outside the share incentive plan, see “—Share Incentive Plan.”

Share Incentive Plan

Our board of directors approved the termination of the 2010 share incentive plan, 2013 share incentive plan and 2014 share incentive plan (the “Existing Plans”), and adopted a 2020 share incentive plan, or the 2020 Plan, on June 30, 2020. Upon the termination of the Existing Plans, the awards that are granted and outstanding under the Existing Plans and the evidencing original award agreements shall survive the termination of the Existing Plans and remain effective and binding under the 2020 Plan, subject to any amendment and modification to the original award agreements that our company shall determine. The restricted shares granted and outstanding under our 2013 share incentive plan and 2014 share incentive plan and held by Leading Advice Holding Limited on behalf of relevant grantees as of the termination of the Existing Plans shall still be by Leading Advice Holding Limited on behalf of those grantees under the 2020 Plan. Upon the termination of the Existing Plans and the adoption of the 2020 Plan, Leading Advice Holding Limited shall act as the holding platform of certain share incentive awards under the 2020 Plan and continue to hold 10,889,429 common shares of our company under the 2020 Plan. Under the 2020 Plan, the maximum aggregate number of common shares available for grant of awards was 31,000,000.

On March 13, 2023, our board of directors amended and restated the 2020 Plan, or the Amended and Restated 2020 Plan, to expand the existing award pool of 31,000,000 shares by authorizing the issuance of additional 15,561,200 shares. The additional shares that will be issued pursuant to awards to be granted from the expanded portion of the enlarged pool will be issued from 15,561,200 common shares underlying 3,112,240 American depositary shares repurchased by the Company under the share repurchase program adopted by the Company in March 2022. After the award pool expansion, the maximum aggregate number of shares available for grant of awards was increased from 31,000,000 under the original 2020 Plan to 46,561,200 under the Amended and Restated 2020 Plan, consisting of (i) 25,228,430 common shares of our company underlying the 5,045,686 American depositary shares our company repurchased pursuant to the repurchase programs authorized by our company in December 2014, January 2016 and March 2022, (ii) 10,150,313 common shares of our company previously reserved for issuance under the Amended and Restated 2020 Plan, representing 10,150,313 common shares of the company that were previously reserved under the company’s 2010 share incentive plan but the corresponding share incentive awards had not been granted as of the termination of our company’s 2010 share incentive plan, (iii) 10,889,429 common shares of our company currently held by Leading Advice Holding Limited, our company’s share incentive awards holding platform under our company’s 2013 share incentive plan and 2014 share incentive plan, representing the amount of common shares of which the corresponding awards under our company’s 2013 share incentive plan and 2014 share incentive plan had not been granted as of the termination of our company’s 2013 share incentive plan and 2014 share incentive plan, and (iv) 293,028 common shares of our company reserved for issuance under the Amended and Restated 2020 Plan.

As of March 31, 2023, 25,092,130 restricted share units had been granted and outstanding under the Amended and Restated 2020 Plan. As of March 31, 2023, there were also 160,000 unvested restricted shares that survived the termination of our previous share incentive plans and remained outstanding under the Amended and Restated 2020 Plan. The following paragraphs summarize the terms of the Amended and Restated 2020 Plan.

Types of awards. The Amended and Restated 2020 Plan permits the awards of option, restricted share, restricted share unit or other types of award approved by the committee or the board.

Plan administration. The Amended and Restated 2020 Plan shall be administered by the board or the compensation committee of the board to whom the board shall delegate the authority to grant or amend awards to participants other than any of the compensation committee members and independent directors.

Award agreement. Options, restricted shares, or restricted share units granted under the Amended and Restated 2020 Plan are evidenced by an award agreement that sets forth the terms, conditions, and limitations for each grant.

Option exercise price. The exercise price per share subject to an option shall be determined by the compensation committee and set forth in the award agreement. The exercise price may be amended or adjusted in the absolute discretion of the compensation committee, the determination of which shall be final, binding and conclusive.

Eligibility. We may grant awards to our employees, consultants and all members of our board of directors, as determined by the board of directors.

Vesting schedule. In general, the plan administrator determines the vesting schedule, which is set forth in the award agreement.

Transfer restrictions. Except as otherwise provided by the committee or pursuant to the Amended and Restated 2020 Plan, no awards shall be assigned, transferred, or otherwise disposed of other than by will or the laws of descent and distribution.

Termination. Unless terminated earlier, the 2020 Plan will expire automatically in June 2030. At any time and from time to time, our board of directors may terminate, amend or modify the 2020 Plan; provided, however, that (a) to the extent necessary and desirable to comply with applicable laws or stock exchange rules, shareholder approval is required for any amendment in such a manner and to such a degree as required, unless we decide to follow home country practice, and (b) unless we decide to follow home country practice, shareholder approval is required for any amendment to the Amended and Restated 2020 Plan that (i) increases the number of shares available under the Amended and Restated 2020 Plan, or (ii) permits the committee to extend the term of the Amended and Restated 2020 Plan or the exercise period for an option beyond ten years from the date of grant.

The following table summarizes, as of March 31, 2023, the outstanding awards granted to our executive officers and directors under the Amended and Restated 2020 plan.

Name	Number of restricted shares awarded ⁽¹⁾	Exercise price (US\$/share)	Date of grant	Date of expiration
Jinbo Li	6,693,040	—	May 25, 2021	—
Yubo Zhang	6,693,040	—	May 25, 2021	—
	9,725,750	—	March 13, 2023	—
Naijiang (Eric) Zhou	*	—	March 1, 2018	—
Jenny Wenjie Wu,	*	—	June 23, 2014	—
	*	—	April 13, 2018	—
	*	—	April 29, 2021	—
Ya Li	*	—	March 7, 2017	—
	*	—	April 13, 2018	—
	*	—	April 29, 2021	—

(1) The number in this column does not include the common shares issued to the grantee upon vesting of restricted shares.

* Less than one percent of our total outstanding share capital.

As of March 31, 2023, our employees other than directors and executive officers as a group held 8,803,340 outstanding restricted shares and restricted share units that remain unvested. These restricted shares and restricted share units were granted on various dates from January 1, 2021 through September 1, 2022.

Employment Agreements

We have entered into employment agreements with each of our senior executive officers. We may terminate a senior executive officer's employment for cause at any time by giving written notice for certain acts of the officer, including: (i) conviction of a felony or act of fraud, misappropriation or embezzlement; (ii) gross negligence or dishonesty to the detriment of our company; and (iii) material breach of the employment agreement. We may also terminate a senior executive officer's employment upon at least two months' prior written notice. A senior executive officer may terminate his or her employment by giving two-month or three-month prior notice.

Each senior executive officer has agreed that he or she shall not, at any time during the period of employment or after the termination of the period of employment, except for the benefit of our company, use or disclose any confidential information to any person, corporation or other entity without our written consent. Upon termination of the employment or at any other time when requested by us, the officer should promptly deliver to our company all documents and materials of any nature pertaining to his or her work with us and should provide written certification of his or her compliance with the employment agreement. Under no circumstances can the officer, following his or her termination, in his or her possession any property of our company, or any documents or materials containing any confidential information. The officer should not, during the employment term, (i) improperly use or disclose any proprietary information or trade secrets of any former employer or other person or entity with which the officer has a duty to keep in confidence information acquired by such officer, if any, or (ii) bring into the premises of our company any document or confidential or proprietary information belonging to the former employer unless consented to in writing by such employer. The officer will indemnify us and hold us harmless from and against all claims, liabilities, damages and expenses.

Each officer also agrees that during the term of employment and within one year of termination of employment, he or she will not approach clients, customers or contacts of our company or other persons or entities introduced to such officer in the his/her capacity as a representative of our company for the purposes of doing business with such persons or entities which will harm the business relationship between our company and such persons or entities. Unless consented to by us, the officer should not assume employment with or provide services as a director or otherwise for any of our competitors, or engage in any competitor as a principal, partner, licensor or otherwise. The officer will not seek, directly or indirectly, by the offer of alternative employment or other inducement whatsoever, to solicit the services of any of our employees as at or after the date of the termination of such officer's employment, or in the year preceding such termination.

C. Board Practices

Board of Directors

Our board of directors consists of seven directors. A director is not required to hold any shares in our company to qualify to serve as a director. All the powers of our company to borrow money and to mortgage or charge its undertaking, property and uncalled capital, or any part thereof and to issue debentures, debenture stock and other securities whenever money is borrowed or as a security for any debt, liability or obligation of our company or any third party, may only be carried out jointly by our chief executive officer and chief financial officer.

Board Diversity Matrix

Subject to the Nasdaq Stock Market rules, the below table sets forth our board diversity matrix as of the date of this annual report.

Board Diversity Matrix				
Country of Principal Executive Offices	People's Republic of China			
Foreign Private Issuer	Yes			
Disclosure Prohibited Under Home Country Law	No			
Total Number of Directors	7			
	Female	Male	Non-Binary	Did Not Disclose Gender
Part I: Gender Identity				
Directors	1	6	0	0
Part II: Demographic Background				
Underrepresented Individual in Home Country Jurisdiction			0	
LGBTQ			0	
Did Not Disclose Demographic Background			1	

Committees of the Board of Directors

We have established an audit committee, a compensation committee and a nominating and corporate governance committee under the board of directors. We have adopted a charter for each of the three committees. Each committee's members and functions are described below.

Audit committee

Our audit committee consists of Ms. Jenny Wenjie Wu and Mr. Ya Li, and is chaired by Ms. Jenny Wenjie Wu. Our board of directors has determined that each of Ms. Jenny Wenjie Wu and Mr. Ya Li satisfies the "independence" requirements of Rule 10A-3 under the Securities Exchange Act of 1934, as amended, and Rule 5605(a)(2) of the NASDAQ Listing Rules. 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 significant matters or difficulties encountered by the external auditors during the course of their audits 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 significant matters as to the adequacy of our internal controls and any special procedures adopted by the external auditors in light of material control deficiencies;
- annually reviewing and reassessing the adequacy of our audit committee charter; and
- meeting separately and periodically with management and the independent registered public accounting firm.

Compensation committee

Our compensation committee consists of Ms. Jenny Wenjie Wu, Mr. Ya Li and Mr. Jinbo Li, and is chaired by Mr. Jinbo Li. Our board of directors has determined that each of Ms. Jenny Wenjie Wu and Mr. Ya Li satisfies the "independence" requirements of Rule 5605(a)(2) of the NASDAQ Listing Rules. 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 chief executive officer may not be present at any committee meeting during which his compensation is deliberated upon. The compensation committee is responsible for, among other things:

- reporting regularly to the board;
- reviewing the total compensation package for our two most senior executives and making recommendations to the board with respect to it;
- approving and overseeing the total compensation package for our executives other than the two most senior executives;
- reviewing the compensation of our directors and making recommendations to the board with respect to it; and
- 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.

Corporate governance and nominating committee

Our corporate governance and nominating committee consists of Ms. Jenny Wenjie Wu, Mr. Ya Li and Mr. Yubo Zhang, and is chaired by Mr. Yubo Zhang. Our board of directors has determined that each of Ms. Jenny Wenjie Wu and Mr. Ya Li satisfies the “independence” requirements of Rule 5605(a)(2) of the NASDAQ Listing Rules. The corporate governance and 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 corporate governance and 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 corporate governance and nominating committee itself;
- advising the board periodically with regards to significant developments in the law and practice of corporate governance as well as our compliance with applicable laws and regulations, and making recommendations to the board on all matters of corporate governance and on any remedial action to be taken; and
- monitoring compliance with our code of business conduct and ethics, including reviewing the adequacy and effectiveness of our procedures to ensure proper compliance.

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 must also exercise their powers only for a proper purpose. Our directors also have a duty to exercise the skill they actually possess and such care and diligence that a reasonably prudent person would exercise in comparable circumstances. It was previously considered that a director need not exhibit in the performance of his duties a greater degree of skill than what 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, as amended from time to time. Our company may have the right to seek damages if a duty owed by our directors is breached. A shareholder may in certain circumstances have rights to damages if a duty owed by the directors is breached.

Terms of Directors and Executive Officers

Our directors may be elected by an ordinary resolution of our shareholders, or by the affirmative vote of a simple majority of our directors (which should include one non-independent director) present and voting at a meeting of our board of directors, and shall hold office until the expiration of his term and until his successor has been elected and qualified, or until such time as they are removed from office by ordinary resolution or the unanimous written resolution of all shareholders. A director will be removed from office automatically (i) if a simple majority of all directors determine at a duly called and constituted board meeting that such director has been guilty of actual fraud or willful neglect in performing his duties as a director, or (ii) if a director is notified of, and fails to attend, an aggregate of three duly called and constituted board meetings within any 365-day period. In addition, the office of a director will be vacated if such director (a) dies, becomes bankrupt or makes any arrangement or composition with his creditors, (b) is found to be or becomes of unsound mind, or (c) resigns his office by notice in writing to us.

D. Employees

As of December 31, 2022, we had 1,097 employees, including 143 in general administration, 786 in research and development and 168 in sales and marketing. We group our employees into three categories: research and development, sales and marketing and general administration. As required by PRC regulations, we participate in employee benefit plans organized by government authorities, including pensions, work-related injury benefits, medical benefits, maternity benefits, unemployment benefit and housing fund plans. We have granted stock options and restricted shares to management and key employees in order to reward their services and provide them with equity incentives. We maintain good employee relations and have not experienced any material labor disputes since our inception.

E. Share Ownership

For information regarding the share ownership of our directors and officers, see “Item 7. Major Shareholders and Related Party Transactions—A. Major Shareholders.” For information as to stock options granted to our directors, executive officers and other employees, see “Item 6. Directors, Senior Management and Employees—B. Compensation—Share Incentive Plan.”

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

Except as specifically noted, the following table sets forth information with respect to the beneficial ownership of our shares as of March 31, 2023 held by:

- each of our current directors and executive officers; and
- each person known to us to beneficially own more than 5% of our common shares.

Percentage of beneficial ownership is based on 323,775,666 total outstanding common shares as of March 31, 2023, excluding (i) 1,370,285 common shares representing 274,057 ADSs and 9,519,144 common shares held by Leading Advice Holdings Limited, a share incentive awards holding platform, and (ii) 40,336,845 common shares, consisting of shares issued to our depositary bank for bulk issuance of ADSs reserved for future issuances upon the exercise or vesting of awards granted under our share incentive plans and shares repurchased by us but not yet cancelled.

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Beneficial ownership is determined in accordance with the rules and regulations of the SEC. These rules generally provide that a person is the beneficial owner of securities if such person has or shares the power to vote or direct the voting of securities, or to dispose or direct the disposition of securities or has the right to acquire such powers within 60 days. 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 within 60 days of March 31, 2023, including through the exercise of any option, warrant or other right or the conversion of any other security, in both the numerator and the denominator. These shares, however, are not included in the computation of the percentage ownership of any other person.

	Common Shares Beneficially Owned	
	Number	%†
Directors and executive officers**:		
Jinbo Li ⁽¹⁾	139,711,519	42.7 %
Sean Shenglong Zou ⁽²⁾	22,931,611	7.1 %
Yubo Zhang ⁽³⁾	6,780,710	2.1 %
Peng Shi	*	*
Hui Duan	—	—
Jenny Wenjie Wu	*	*
Ya Li	*	*
Naijiang (Eric) Zhou	*	*
All directors and executive officers as group	170,358,310	51.6 %
Principal shareholders:		
Itui International Inc. ⁽⁴⁾	133,018,479	41.1 %
Sean Shenglong Zou ⁽²⁾	22,931,611	7.1 %

Notes:

* Less than 1% of the total outstanding common shares.

** The business address of Messrs Jinbo Li, Sean Shenglong Zou, Yubo Zhang, Naijiang (Eric) Zhou, Peng Shi and Ms. Jenny Wenjie Wu is 3709 Baishi Road, Nanshan District, Shenzhen, 518000, the People's Republic of China. The business address of Mr. Hui Duan is Room 407, Taixing Building, No. 11 Huayuan East Road, Haidian District, Beijing 100089, China. The business address of Mr. Ya Li is Room 1B-2901 Park 1872, 217 Ba Li Zhuang Bei Li, Chaoyang District, Beijing, China.

† For each person and group included in this column, percentage ownership is calculated by dividing the number of 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) the total number of outstanding common shares as of March 31, 2023, 323,775,666, and (ii) the number of common shares underlying share options, restricted shares, restricted share units and warrants held by such person or group that are exercisable within 60 days of March 31, 2023.

(1) Mr. Jinbo Li, through his holding vehicle, owns 19.4% of the total outstanding shares (equal to 54.5% of the total voting power of all outstanding shares) of Itui International Inc., which in turn owns 101,820,239 common shares and 6,239,648 ADSs of our company. In addition, there are 3,346,520 common shares beneficially owned by Mr. Li and another 3,346,520 common shares issuable to Mr. Li upon the vesting of restricted share units within 60 days after March 31, 2023. By virtue of his controlling interest in Itui International Inc. and upon the vesting of granted restricted share units, Mr. Jinbo Li is deemed to be a beneficial owner of 139,711,519 common shares of our company.

(2) Represents (i) 2,186,322 ADSs and one common share directly held by Vantage Point Global Limited, a British Virgin Islands company which is 100% beneficially owned by Mr. Zou through a family trust, and (ii) 2,400,000 ADSs held by Eagle Spirit LLC, a Delaware limited liability company, which is wholly owned by a Choice & Chance Limited, a wholly owned subsidiary of Mr. Zou, and Mr. Zou is the sole director of Eagle Spirit LLC.

(3) Represents (i) 3,434,190 common shares in the form of 686,838 ADSs directly held by Mr. Yubo Zhang, and (ii) 3,346,520 common shares which Mr. Yubo Zhang has the right to acquire within 60 days of March 31, 2023.



- (4) Represents 101,820,239 common shares and 6,239,648 ADSs held by Itui International Inc., a limited liability company incorporated under the laws of the Cayman Islands. Mr. Jinbo Li, our chairman and chief executive officer, through his holding vehicle, owns 19.4% of the total outstanding shares (equal to 54.5% of the total voting power of all outstanding shares) of Itui International Inc. Best Ventures Limited, formerly known as Xiaomi Ventures Limited, owns 16.3% of the total outstanding shares of Itui International Inc. and has a veto right in determining how the voting power of Itui International Inc. should be exercised when Itui International Inc. votes as a shareholder of our company on certain matters in relation to our company. As a result, Mr. Jinbo Li and Best Ventures Limited are deemed to be beneficial owners of, and share voting and dispositive power over, 101,820,239 common shares and 6,239,648 ADSs held by Itui International Inc. Best Ventures Limited is wholly owned by Xiaomi Corporation, a limited liability company organized under the laws of the Cayman Islands and listed on the Hong Kong Stock Exchange (Stock Code: 1810). The business address of Best Ventures Limited is Start Chambers, Wickham's Cay II, P. O. Box 2221, Road Town, Tortola, British Virgin Islands. The business address of Itui International Inc. is Room 407, 4/F, Taixing Building, 11 Huayuan East Road, Haidian District, Beijing, the People's Republic of China.

To our knowledge, as of March 31, 2023, 263,662,524 of our outstanding common shares were held by two record holders in the United States including 263,662,520 common shares held by The Bank of New York Mellon, the depository of our ADS program. The number of our common shares held by The Bank of New York Mellon include 1,370,285 common shares representing 274,057 ADSs held by Leading Advice Holdings Limited and 40,336,845 common shares (i) issued to the depository bank for bulk issuance of ADSs reserved for future issuances upon the exercise or vesting of awards granted under our share incentive plans, and (ii) repurchased by our company but not yet cancelled. None of our shareholders has informed us that he or she is affiliated with a registered broker-dealer or is in the business of underwriting securities. We are not aware of any arrangement that may, at a subsequent date, result in a change of control of our company.

B. Related Party Transactions

Contractual arrangements with our PRC variable interest entity and its shareholders

Due to current legal restrictions on foreign ownership and investment in value-added telecommunications services in China, we conduct our operations in China principally through a series of contractual arrangements with the variable interest entity and its shareholders in China. For a description of these contractual arrangements, see "Item 4. Information on the Company—C. Organizational Structure."

Shareholders agreement

In connection with the issuance of our series E preferred shares, we entered into a seventh amended and restated shareholders agreement in April 2014 with our shareholders and relevant parties therein. Except for the registration rights, all preferred shareholders' rights automatically terminated upon the completion of our initial public offering. Additionally, the co-founders have agreed to the transfer restrictions imposed on an aggregate number of 39,934,162 common shares beneficially owned by the co-founders. Accordingly, the co-founders are unable to transfer the relevant shares to any third party until April 24, 2019 or April 24, 2018, as the case may be. The registration rights we granted to certain of our shareholders expired on the fifth anniversary of the completion of our initial public offering in June 2014.

Employment agreements

See "Item 6. Directors, Senior Management and Employees—B. Compensation—Employment agreements."

Share incentives

See "Item 6. Directors, Senior Management and Employees—B. Compensation—Share incentive plan."

In relation to our 2013 share incentive plan and 2014 share incentive plan, we have appointed Leading Advice Holdings Limited, or Leading Advice, as the administrator of both plans. On behalf of us, Leading Advice executes actions based on our instruction to select the eligible grantees, to determine the number of awards and the conditions and provision of such awards, including but not limited to the vesting schedule and acceleration of the awards.

Leading Advice is not entitled to the following rights in relation to the shares registered under its name: (i) dividends, (ii) voting powers prior to vesting of relevant shares and (ii) transfer of the unvested portion of the awards or awards that have not been granted. In addition, upon the liquidation or the dissolution of Leading Advice or the expiration of the relevant plan, common shares not granted as awards shall be transferred back to us at no consideration.

For the awards that have been granted and become vested, Leading Advice will solicit voting instructions from each grantee, and vote in accordance with such instructions. The grantees will be entitled to dividends and have the right to request Leading Advice to transfer vested awards to a transferee designated by the grantees.

Advance extended to a director

We extended an advance amounting to RMB60,000 to Mr. Shenglong Zou in 2014 for business purposes of setting up certain companies in China to operate a part of our business and consolidate the financial results of such business into the financial statements of our company. As of the December 31, 2022, the advance to Mr. Shenglong Zou remained outstanding.

Intellectual property framework agreement between Shenzhen Xunlei and Xunlei Computer

On December 24, 2013, Shenzhen Xunlei and Xunlei Computer entered into a technology development and software license framework agreement. The term of the agreement is two years from the date of its execution.

Under this framework agreement, Xunlei Computer provides Shenzhen Xunlei with technology development services according to Shenzhen Xunlei's business needs. Any new intellectual property resulting from the technology development services is owned by Xunlei Computer, and cannot be substituted or sub-licensed to any third party by Shenzhen Xunlei without the prior written consent of Xunlei Computer. During the term of the framework agreement, with respect to each technology development project, Shenzhen Xunlei and Xunlei Computer will separately sign technology development (services) agreements, which set out the specific terms and amount of consideration, all subject to the terms of the framework agreement.

In addition, under the framework agreement, Xunlei Computer grants Shenzhen Xunlei a non-exclusive and limited right to use certain specified proprietary software that Xunlei Computer owns. With respect to the licensing of each software, Shenzhen Xunlei and Xunlei Computer will separately sign software licensing agreements, which will set out the specific terms and the amount of licensing fee, all subject to the terms of the framework agreement.

In relation to cooperation under the framework agreement, Xunlei Computer and Shenzhen Xunlei entered into four agreements in 2013 for Xunlei Computer's technology development services and its software license and Giganology Shenzhen has agreed to the execution of these agreements and the relevant services and licenses between Xunlei Computer and Shenzhen Xunlei.

For the years ended December 31, 2020, 2021 and 2022, the aggregate amount of the fees that have been incurred by Shenzhen Xunlei for the technology development services and the software license provided by Xunlei Computer under the framework agreement was US\$6.4 million, US\$7.2 million and US\$4.0 million, respectively.

Transactions with Xiaomi

In December 2013, we entered into a Cooperation Framework Agreement with Millet Communication Technology Co., Ltd., or Millet Communication, a company controlled by one of our shareholders, Best Ventures Limited (formerly known as Xiaomi Ventures Limited). Parties would enter into separate agreements to carry out detailed cooperation.

Xunlei Accelerator Mobile Pre-installing Services Agreement. In 2014, we entered into a Xunlei Accelerator Mobile Pre-installing Services Agreement, or the Pre-installing Services Agreement, with Beijing Xiaomi Mobile Software Co., Ltd., or Beijing Xiaomi, a company controlled by one of our shareholders, Best Ventures Limited. Through such cooperation, Xiaomi phones would be pre-installed with our mobile acceleration applications and Xiaomi phone users would have access to our acceleration services. We provided such pre-installing service at no charge which was consistent with our pre-installing agreements with other unrelated parties. The Pre-installing Services Agreement had a term of one year, which is renewed on a yearly basis. Parties renewed such agreement in 2015 and 2016. In 2017, we entered into a supplemental agreement of the Pre-installing Services Agreement, or the Supplemental Agreement, with another Xiaomi group company, Guangzhou Millet Information Service Co., Ltd., or Guangzhou Millet. Pursuant to the Supplemental Agreement, Guangzhou Millet replaced Beijing Xiaomi under the Pre-installing Services Agreement. Parties further agreed in the Supplemental Agreement that Guangzhou Millet will share with us a portion of the revenue generated from the advertising services offered by Guangzhou Millet through Xunlei Accelerator that we pre-installed in Xiaomi's mobile phones as compensation for technology solution services we provided to Guangzhou Millet. The Supplemental Agreement had a term of two years from mid-June 2017 to mid-June 2019 and was automatically extended for another two years from mid-June 2019 to mid-June 2021. In 2021, we renewed the supplemental agreement of the pre-installing services agreement, with another Xiaomi group company, Shenzhen Xiaomi Information Service Co.Ltd., or Shenzhen Xiaomi. Pursuant to the renewed supplemental agreement, Shenzhen Xiaomi replaced Guangzhou Millet under the pre-services agreement. The renewed supplemental agreement has a term of two years from mid-June 2021 to mid-June 2023. In 2022, we recognized a revenue of US\$2.5 million from Shenzhen Xiaomi. As of December 31, 2022, the amount of outstanding revenue from Shenzhen Xiaomi was US\$1.4 million.

Cloud Computing Service Agreement. We entered into an agreement with Xiaomi Technology in April 2019 and renewed every year to provide cloud computing services at market prices based on the actual usage. Beijing Xiaomi and Xiaomi Technology are companies controlled by one of our shareholders, Best Ventures Limited. In 2022, our total cloud computing service revenue was US\$5.0 million from Xiaomi Technology. As of December 31, 2022, the amount of outstanding cloud computing service revenue was US\$1.9 million from Xiaomi Technology.

Advertising Services Agreement. We entered into an agreement with Shenzhen Xiaomi to provide advertising service on its advertising platform. We are entitled to receive a mutually agreed sharing of net advertising revenue. In 2022, our total advertising revenue from Shenzhen Xiaomi was US\$0.1 million and the amounts of outstanding advertising revenue was US\$4.3 thousand.

Transactions with Itui International Inc.

Advertising Services Agreement. In May 2020, we entered into a user traffic monetization agreement with Itui. Pursuant to the agreement, Itui will be responsible for operating our advertising services and share a portion of revenue generated from placing advertisements on our PC websites and mobile platform. The agreement has a term of one year and is renewable on a yearly basis. In 2022, we recognized a net revenue of US\$7.8 million from placing advertisements on our PC websites and mobile platform from Itui. As of December 31, 2022, the amount of outstanding advertising services revenue from Itui was US\$7.9 million.

Cloud Computing Service Agreement. We entered into an agreement with Itui in July 2019 to provide cloud computing services at market prices. The agreement is renewed every year and the price may be adjusted semi-annually. In 2022, we generated cloud computing services revenue of US\$0.6 million from Itui. As of December 31, 2022, the amount of outstanding cloud computing service revenue from Itui was US\$0.5 million.

Term Loan Agreement. In September 2021, we approved to provide a term loan in the amount of US\$20 million to Chizz (HK) Limited, a company controlled by Itui, our largest shareholder. The loan has a term of two years and the interest of the loan is 3% per annum. Our audit committee had also approved the transaction. As of December 31, 2022, the term loan remained unpaid.

Joint Operation Agreements. We entered into an agreement and a supplemental agreement with Beijing Xiaobu Co. Ltd., or Beijing Xiaobu, a company controlled by Itui, in January and December 2022, respectively, to jointly operate our live audio streaming product, Hiya Voice, on Beijing Xiaobu's platform. Pursuant to the agreements, we agree to share the profits generated from the joint operation of Hiya Voice. The agreement and the supplemental agreement both have a term ranging from January 1, 2022 to December 31, 2023. In 2022, we paid revenue sharing of US\$0.01 million to Beijing Xiaobu. As of December 31, 2022, the amount of outstanding live streaming revenues due from Beijing Xiaobu was US\$1.4 million.

C. Interests of Experts and Counsel

Not applicable.

Item 8. Financial Information

A. Consolidated Statements and Other Financial Information

We have appended consolidated financial statements filed as part of this annual report.

Legal Proceedings

We have been involved in legal proceedings related to our business from time to time and expect to continue to be involved in such proceedings in the future. Internet services and content providers such as ours are frequently involved in litigation based on intellectual property-related claims. See "Item 3. Key Information—D. Risk Factors—Risks Related to Our Business—The intellectual property protection mechanism we have implemented may not always be effective or sufficient. The premium acceleration services, Xunlei Cloud Drive and other value-added services we provide to our users have exposed us to and may continue to expose us to copyright infringement claims and other related claims, which could be time-consuming and costly. Any damage awards, injunctive relief and/or court orders could materially and adversely affect our existing business model, divert our management's attention and adversely impact our business and reputation."

We were subject to a number of lawsuits in China for alleged copyright infringements over the years, a number of which are still outstanding as of the date of this annual report. In addition, two putative shareholder class action lawsuits were filed in the United States District Court for the Southern District of New York against our company and certain current and former officers and directors of our company: *Dookeran v. Xunlei Limited, et al.* (filed on January 18, 2018, Case No. 18-cv-467 (S.D.N.Y.)), and *Peng Li v. Xunlei Limited, et al.* (filed on January 24, 2018, Case No. 18-cv-646 (S.D.N.Y.)). Purporting to sue on behalf of all investors who purchased or acquired Xunlei stock from October 10, 2017 to January 11, 2018, plaintiffs alleged that certain statements regarding OneCoin in the company's press releases and on a quarterly investor call were false and misleading because, among other things, they failed to disclose that OneCoin was a disguised "initial coin offering" and "initial miner offering" and constituted "unlawful financial activity." Plaintiffs sought to recover under Sections 10(b) and 20(a) of the U.S. Securities Exchange Act of 1934 and Rule 10b-5 thereunder. On April 12, 2018, the court consolidated the actions under the caption *In re Xunlei Limited Securities Litigation*, No. 18-cv-467 (PAC) and appointed lead plaintiffs who filed a consolidated amended complaint on June 4, 2018. We filed a motion to dismiss the amended complaint on August 3, 2018. In September 2019, the U.S. District Judge for the Southern District of New York, Paul A. Crotty, dismissed the two consolidated federal securities class action with prejudice because Xunlei's use of blockchain technology to reward OneCoin (later named as LinkToken) to customers for sharing excess storage and bandwidth did not amount to an initial coin offering and thus did not violate Chinese law. As our OneCoin rewarding program was not illegal, the court concluded we did not make a misrepresentation or omit material facts in failing to describe the Rewards Program as an illegal initial coin offering. The court also ruled that the complaint failed to plead facts giving rise to a strong inference of an intent to deceive, manipulate, or defraud.

Although legal proceedings are inherently uncertain and their results cannot be predicted, we have not been, nor are we currently a party to or aware of, any legal proceeding, investigation or claim that, in the view of our management, is likely to materially and adversely affect our business, financial position or results of operations.

Dividend Policy

We have not previously declared or paid cash dividends. Subject to our ongoing financial performance, cash position, budget and business plan and market conditions, we may consider paying special dividends. However, we do not plan to pay dividends in the foreseeable future. We currently intend to retain most, if not all, of our available funds and any future earnings to operate and expand our business.

We are a holding company incorporated in the Cayman Islands. We rely principally on dividends from our subsidiaries in China for our cash requirements, including any payment of dividends to our shareholders. PRC regulations may restrict the ability of our PRC subsidiaries to pay dividends to us. See “Item 4. Information on the Company—B. Business Overview—Regulation—PRC regulation on dividend distributions.”

Our board of directors has discretion as to whether to distribute dividends, subject to applicable laws. In addition, our shareholders may by ordinary resolution declare dividends, but no dividend may exceed the amount recommended by our board of directors. 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. Under Cayman Islands law, we may declare and pay dividends on our shares only out of our profit or our share premium account, provided always that even if our company has sufficient profit or share premium, we may not pay a dividend if this would result in our company being unable to pay our debts as they fall due in the ordinary course of business. If we pay any dividends on our common shares, we will pay those dividends which are payable in respect of the underlying common shares represented by our ADSs to the depositary, as the registered holder of such common shares, and the depositary then will pay such amounts to our ADS holders in proportion to the common shares underlying the ADSs held by such ADS holders, 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 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

Our ADSs have been listed on The NASDAQ Global Select Market since June 24, 2014. Our ADSs currently trade on The NASDAQ Global Select Market under the symbol “XNET.” One ADS represented five common shares.

B. Plan of Distribution

Not applicable.

C. Markets

Our ADSs have been listed on NASDAQ Global Select Market since June 24, 2014 under the symbol “XNET.”

D. Selling Shareholders

Not applicable.

E. Dilution

Not applicable.



F. Expenses of the Issues

Not applicable.

Item 10. Additional Information

A. Share Capital

Not applicable.

B. Memorandum and Articles of Association

We incorporate by reference into this annual report the description of our eighth amended and restated memorandum and seventh amended and restated articles of association contained in our F-1 registration statement (File No. 333-196221), initially filed with the SEC on June 12, 2014. The eighth amended and restated memorandum and seventh amended and restated articles of association were adopted by our shareholders by special resolutions passed on June 11, 2014, and became effective immediately upon completion of our initial public offering of our common shares represented by ADSs.

C. Material Contracts

We have not entered into any material contracts other than in the ordinary course of business and other than those described in “Item 4. Information on the Company” or elsewhere in this annual report on Form 20-F.

D. Exchange Controls

See “Item 4. Information on the Company—Business Overview—Regulation— PRC regulation on foreign exchange control and administration.”

E. Taxation

Cayman Islands Taxation

According to Maples and Calder (Hong Kong) LLP, our Cayman Islands legal counsel, the Cayman Islands currently levies no taxes on individuals or corporations based upon profits, income, gains or appreciation 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. The Cayman Islands is not party to any double tax treaties that are applicable to any payments made to or by our company. There are no exchange control regulations or currency restrictions in the Cayman Islands.

Payments of dividends and capital in respect of the shares will not be subject to taxation in the Cayman Islands and no withholding will be required on the payment of a dividend or capital to any holder of the Shares, nor will gains derived from the disposal of the shares be subject to Cayman Islands income or corporation tax.

People's Republic of China Taxation

Under the PRC EIT Law, an enterprise established outside the PRC with “de facto management bodies” within the PRC is considered a “resident enterprise” of the PRC. A circular issued by the SAT on April 22, 2009 clarified that dividends and other income paid by such resident enterprises will be considered PRC-source income and subject to PRC withholding tax, currently at a rate of 10%, when paid to non-PRC enterprise shareholders. Under the implementation regulations to the EIT Law, a “de facto management body” is defined as a body that has material and overall management and control over the manufacturing and business operations, personnel and human resources, finances and properties of an enterprise. In addition, the circular mentioned above specifies that certain offshore enterprises controlled by PRC resident enterprises will be classified as PRC resident enterprises if the following are located or resident in the PRC: senior management personnel and departments that are responsible for daily production, operation and management; financial and personnel decision making bodies; key properties, accounting books, the company seal, and minutes of board meetings and shareholders’ meetings; and half or more of the senior management or directors having voting rights. We do not believe we would be treated as a “resident enterprise” for PRC tax purposes even if the criteria for “de facto management body” as set forth in the circular mentioned above were deemed applicable to us. See “Item 3. Key Information —D. Risk Factors—Risks Related to Doing Business in China—Our global income may be subject to PRC taxes under the PRC EIT Law, which may have a material adverse effect on our results of operations.” However, if the PRC tax authorities determine that we are a PRC resident enterprise for enterprise income tax purposes, we may be required to withhold a 10% withholding tax from dividends we pay to our non-resident enterprise shareholders, including the holders of our ADSs and non-resident enterprise holders may be subject to PRC tax on gains realized on the sale or other disposition of ADSs or common shares. It is unclear whether our non-PRC individual shareholders (including our ADS holders) would be subject to any PRC tax on dividends or gains in the event we are determined to be a PRC resident enterprise. If any PRC tax were to apply to such dividends or gains, it would generally apply at a rate of 20% (unless a reduced rate is available under an applicable tax treaty).

If we are deemed to be a PRC resident enterprise and our non-resident enterprise shareholders (including our ADS holders) are subject to PRC tax as described above, the withholding agent will be required to withhold enterprise income tax on payments of dividends to such investors. The withholding agent must obtain a tax withholding registration and withhold the enterprise income tax from each payment made to non-resident enterprise shareholders and file a report to the competent tax authorities. Where the withholding agent fails or is unable to perform its withholding obligation, the non-resident enterprise shareholders must pay the tax due to the applicable tax authorities within seven days after the payment is made or due. We, as the withholding agent, will be required to obtain a tax withholding registration and withhold the applicable enterprise income tax in order to comply with the above requirements. It is not clear who the withholding agent would be if tax is due on capital gains. In the event that we or our non-resident enterprise shareholders (including our ADS holders) fail to comply with the above procedures, we or our non-resident enterprise shareholders (including our ADS holders) may be ordered to rectify the non-compliance or be subject to a fine of no more than RMB10,000. Failure by us to withhold the income tax fully and timely may result in a fine of 50% to three times of the unpaid tax and failure by our ADS holders to pay the tax fully and timely may result in late payment penalties, or a fine of 50% to five times of the unpaid tax.

In addition, if we are treated as a PRC resident enterprise for enterprise income tax purposes, we may be eligible for the benefits of the income tax treaty between the PRC and other jurisdictions in which we may derive income, such as the United States. However, if we are treated as a PRC resident enterprise, we do not expect to withhold at treaty rates if any withholding is required on dividends we pay to our non-resident shareholders (including our ADS holders) notwithstanding such holders may be eligible for the income tax treaty between their resident jurisdictions and the PRC. The United States—PRC tax treaty generally limits PRC withholding on dividends to a rate of 10%. Investors should consult their tax advisors regarding the availability of treaty benefits and the procedure for claiming a refund, if any.

If we are not deemed a PRC resident enterprise, no PRC income tax will be withheld from dividends distributed by us and no PRC income tax will be payable on gains realized from the sale or other disposition of our shares or ADSs by the non-resident holders of our shares or ADSs. SAT Circular 7 further clarifies that, where a non-resident enterprise derives income by acquiring and selling shares in an offshore listed enterprise in the public market, such income shall not be subject to PRC tax. However, given the uncertainty concerning the application of SAT Public Notice 37 and SAT Circular 7, we and our non-PRC resident investors may be at risk of being required to file a return and being taxed under SAT Public Notice 37 and SAT Circular 7, and we may be required to expend valuable resources to comply with SAT Public Notice 37 and SAT Circular 7 or to establish that we should not be taxed under SAT Public Notice 37 and SAT Circular 7 in the future.

United States Federal Income Tax Considerations

The following discussion is a summary of the United States federal income tax considerations relating to the ownership and disposition of our ADSs or common shares by a U.S. Holder (as defined below) that holds our ADSs as “capital assets” (generally, property held for investment) under the United States Internal Revenue Code of 1986, as amended, or the Code. This discussion is based upon existing United States federal income tax law, which is subject to differing interpretations or change, possibly with retroactive effect. There can be no assurance that the Internal Revenue Service (the “IRS”) or a court will not take a contrary position. This discussion does not address all aspects of United States federal income taxation that may be important to particular investors in light of their individual investment circumstances, including investors subject to special tax rules (for example, certain financial institutions, banks, insurance companies, regulated investment companies, real estate investment trusts, broker-dealers, traders in securities that elect mark-to-market treatment, partnerships and their partners, and tax-exempt organizations (including private foundations), holders who are not U.S. Holders, cooperatives, pension plans, U.S. expatriates, persons who acquired ADSs or common shares pursuant to the exercise of any employee share option or otherwise as compensation, holders who own (directly, indirectly or constructively) 10% or more of our stock (by vote or value), holders that hold their ADSs or common shares as part of a straddle, hedge, conversion, constructive sale or other integrated transaction 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 discussion does not discuss any state, local, minimum tax, non-United States tax, non-income tax (such as gift or estate tax), or the Medicare tax considerations. U.S. Holders are urged to consult their tax advisors 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 common shares.

General

For purposes of this discussion, a “U.S. Holder” is a beneficial owner of our ADSs or 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 laws 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 under the Code.

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 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 common shares and partners in such partnerships are urged to consult their tax advisors regarding the ownership and disposition of our ADSs or 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 underlying shares represented by the ADSs. The remainder of this discussion assumes that a holder of ADSs will be treated in this manner. Accordingly, deposits or withdrawals of common shares for ADSs will generally not be subject to United States federal income tax.

Passive Foreign Investment Company Considerations

Based upon the nature and composition of our assets (in particular, the retention of substantial amounts of cash and investments), and the market price of our ADSs, 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 very likely be classified as a PFIC for our current taxable year ending December 31, 2023 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 non-passive income. A non-United States corporation, such as our company, will be classified as PFIC, for United States federal income tax purposes, if, in the case of any particular taxable year, 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 the value of its assets (generally determined on the basis of a quarterly average) during such year is attributable to assets that produce or are held for the production of passive income. For this purpose, cash is categorized as a passive asset and the company’s unbooked intangibles associated with active business activities may generally be classified as non-passive assets. Passive income generally includes, among other things, dividends, interest, rents, royalties, and gains from the disposition of passive assets. We will be treated as owning a proportionate share of the assets and earning a proportionate share of the income of any other corporation in which we own, directly or indirectly, 25% or more (by value) of the stock.

If we are classified as a PFIC for any year during which a U.S. Holder holds our ADSs or 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 common shares, even if we cease to be a PFIC. However, if we cease to be a PFIC, provided that a U.S. Holder has not made a mark-to-market election, as described below, such U.S. Holder may avoid some of the adverse effects of the PFIC regime by making a “deemed sale” election with respect to the ADSs or common shares, as applicable. If such election is made, such U.S. Holder will be deemed to have sold our ADSs or common shares such U.S. Holder holds at their fair market value and any gain from such deemed sale would be subject to the rules described below under “Passive Foreign Investment Company Rules.” After the deemed sale election, so long as we do not become a PFIC in a subsequent taxable year, the ADSs or common shares with respect to which such election was made will not be treated as shares in a PFIC and such U.S. Holder will not be subject to the rules described below with respect to any “excess distribution” such U.S. Holder receives from us or any gain from an actual sale or other disposition of the ADSs or common shares. The rules dealing with deemed sale elections are very complex. Each U.S. Holder should consult its tax advisors regarding the possibility and considerations of making a deemed sale election.

Dividends

Subject to the discussion below under “Passive Foreign Investment Company Rules,” the gross amount of any distributions (including the amount of any PRC tax withheld) paid on our ADSs or 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 depositary, 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 treated as a “dividend” for United States federal income tax purposes. Dividends received on our ADSs or common shares will not be eligible for the dividends received deduction allowed to corporations.

A non-corporate recipient of dividend income will generally be subject to tax on dividend income from a “qualified foreign corporation” at a lower applicable capital gains 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) generally will be considered to be a qualified foreign corporation (i) if it is eligible for the benefits of a comprehensive tax treaty with the United States which the Secretary of Treasury of the United States determines is satisfactory for purposes of this provision and which includes an exchange of information program, or (ii) 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. Our ADSs are currently listed on the NASDAQ Global Select Market. We believe that the ADSs will be readily tradable on an established securities market in the United States for so long as our ADSs continue to be listed on the NASDAQ Global Select Market. Since we do not expect that our common shares will be listed on established securities markets, it is unclear whether dividends that we pay on our common shares that are not backed by ADSs currently meet the conditions required for the reduced tax rate. There can be no assurance that our ADSs will continue to be considered readily tradable on an established securities market in later 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 ending December 31, 2023. In the event that we are deemed to be a PRC resident enterprise under the EIT Law (see “Item 10. Additional Information—E. Taxation—People’s Republic of China Taxation”), we may be eligible for the benefits of the U.S.-PRC income tax treaty (the “Treaty”). If we are eligible for such benefits, dividends we pay on our common shares, regardless of whether such shares are represented by the ADSs, and regardless of whether our ADSs are readily tradable on an established securities market in the United States, would potentially be eligible for the reduced rate of taxation described above in this paragraph.

Dividends will generally be treated as passive income from foreign sources for United States foreign tax credit purposes. In the event that we are deemed to be a PRC resident enterprise under the EIT Law, a U.S. Holder may be subject to PRC withholding taxes on dividends paid on our ADSs or common shares (see “Item 10. Additional Information—E. Taxation—People’s Republic of China Taxation”). 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 our ADSs or 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 withholding, but only for a year in which such holder elects to do so for all creditable foreign income taxes. The rules governing the foreign tax credit are complex. U.S. Holders are urged to consult their tax advisors regarding the availability of the foreign tax credit under their particular circumstances.

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 ending December 31, 2023. U.S. Holders are urged to consult their tax advisors regarding the availability of the reduced rate of taxation on dividends with respect to our ADSs or common shares 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 will generally recognize capital gain or loss upon the sale or other disposition of ADSs or common shares in an amount equal to the difference between the amount realized upon the disposition and the holder’s adjusted tax basis in such ADSs or common shares. Any capital gain or loss will be long-term if the ADSs or 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 gain of non-corporate U.S. Holders is generally eligible for a reduced rate of taxation. The deductibility of a capital loss is subject to limitations.

As described in “Item 10. Additional Information—E. Taxation—People’s Republic of China Taxation,” if we are deemed to be a PRC resident enterprise under the EIT Law, gains from the disposition of the ADSs or common shares may be subject to PRC income tax and will generally be U.S.-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 U.S. 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 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 U.S. 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 ending December 31, 2023. U.S. Holders are urged to consult their tax advisors regarding the tax considerations of the sale or other disposition of our ADSs or 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 very likely be classified as a PFIC for our current taxable year ending December 31, 2023. If we are classified as a PFIC for any taxable year during which a U.S. Holder holds our ADSs or 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 United States federal income 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 percent 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 common shares), and (ii) any gain realized on the sale or other disposition, including, under certain circumstance, a pledge, of ADSs or common shares. Under the PFIC rules:

- the excess distribution and/or gain will be allocated ratably over the U.S. Holder’s holding period for the ADSs or common shares;
- the 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 a pre-PFIC year, will be taxable as ordinary income;
- the 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 common shares and any of our non-United States subsidiaries or variable interest entity 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 for purposes of the application of these rules. U.S. Holders are advised to consult their tax advisors regarding the application of the PFIC rules to any of our subsidiaries or variable interest entity.

As an alternative to the foregoing rules, a U.S. Holder of “marketable stock” in a PFIC may make a mark-to-market election with respect to our ADSs, provided that the ADSs are regularly traded on a national securities exchange that is registered with the SEC, or on a foreign exchange or market that the IRS determines is a qualified exchange that has rules sufficient to ensure that the market price represents a legitimate and sound fair market value. Our ADSs are listed on the NASDAQ Global Select Market, which is an established securities market in the United States. Our ADSs may be regularly traded, but no assurances may be given in this regard. 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 holder will not be required to take into account the gain or loss described above during any period that such corporation is not classified as a PFIC. If a U.S. Holder makes an effective mark-to-market election, in each year that we are a PFIC, any gain recognized upon the sale or other disposition of the ADSs will be treated as ordinary income and any loss will be treated as ordinary loss, but only to the extent of the net amount previously included in income as a result of the mark-to-market election. If a U.S. Holder makes a mark-to-market election it will be effective for the taxable year for which the election is made and all subsequent taxable years unless the ADSs are no longer treated as marketable stock or the IRS consents to the revocation of the election. It is intended that only the ADSs and not the common shares will be listed on the NASDAQ Global Select Market. Consequently, if a U.S. Holder holds common shares that are not represented by ADSs, such holder will generally not be eligible to make a mark-to-market election if we are or were to become a PFIC.

Because a mark-to-market election cannot technically be made for any lower-tier PFICs that we may own, a U.S. Holder that makes a mark-to-market election with respect to our ADSs may continue to be subject to the general PFIC rules with respect to such U.S. Holder’s 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.

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 common shares during any taxable year that we are a PFIC, the holder generally will be required to file annual reports with the IRS. U.S. Holders are advised to consult their tax advisors regarding the reporting requirements that may apply and the United States federal income tax consequences of holding and disposing ADSs or common shares if we are or become classified as a PFIC, including the possibility of making a mark-to-market election and the unavailability of the election to treat us as a qualified electing fund.

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 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. Copies of reports and other information, when so filed, may 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 Commission at 1-800-SEC-0330. The SEC also maintains a website at 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. 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 The Bank of New York Mellon, the depositary 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 depositary 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 depositary from us.

In accordance with NASDAQ Stock Market Rule 5250(d), we will post this annual report on Form 20-F on our website at <http://ir.xunlei.com>. In addition, we will provide hardcopies of our annual report free of charge to shareholders and ADS holders upon request.

I. Subsidiary Information

Not applicable.

J. Annual Report to Security Holders

Not applicable.

Item 11. Quantitative and Qualitative Disclosures about Market Risk

Foreign exchange risk

Our financing activities were denominated mainly in U.S. dollars while interest bearing loan we borrowed for the construction of our headquarters building is denominated in Renminbi. Renminbi is not freely convertible into foreign currencies. Remittances of foreign currencies into the PRC and conversion of foreign currencies into Renminbi 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 Renminbi into other currencies. A majority of our revenues and expenses of our subsidiaries, and the consolidated variable interest entity and its subsidiaries are generally denominated in Renminbi and their assets and liabilities are denominated in Renminbi. We do not believe that we currently have any significant direct foreign exchange risk and have not used any derivative financial instruments to hedge our exposure to such risk. Although in general, our exposure to foreign exchange risks should be limited, the value of your investment in our ADSs will be affected by the exchange rate between the U.S. dollar and the Renminbi because the value of our business is effectively denominated in Renminbi, while the ADSs will be traded in U.S. dollars.

The conversion of Renminbi into foreign currencies, including U.S. dollars, is based on rates set by the People's Bank of China. Since June 2010, the Renminbi has fluctuated against the U.S. dollar, at times significantly and unpredictably. It is difficult to predict how market forces or PRC or U.S. government policy may impact the exchange rate between the Renminbi and the U.S. dollar in the future.

To the extent that we need to convert U.S. dollars into Renminbi for our operations, appreciation of the Renminbi against the U.S. dollar would have an adverse effect on the amount of Renminbi we receive from the conversion. Conversely, if we decide to convert Renminbi into U.S. dollars for the purpose of making payments for dividends on our common shares or ADSs or for other business purposes, appreciation of the U.S. dollar against the Renminbi would have a negative effect on the U.S. dollar amounts available to us.

As of December 31, 2022, we had RMB-denominated cash and cash equivalents and short-term investments of RMB927.2 million, HKD-denominated cash and cash equivalents of HKD1.2 million, EUR-denominated cash and cash equivalents of EUR0.5 million, USD-denominated cash, cash equivalents and short-term investments of US\$124.4 million, SGD-denominated cash and cash equivalents of SGD2.4 million, INR-denominated cash and cash equivalents of INR10.7 million, GBP-denominated cash and cash equivalents of GBP0.1 million and other currency-denominated cash and cash equivalents of US\$0.4 million. We also had RMB-denominated restricted cash of RMB53.3 million. Assuming we had converted RMB927.2 million into U.S. dollars at the exchange rate of RMB6.9646 for US\$1.00 on December 31, 2022 released by the State Administration of Foreign Exchange of the PRC, our U.S. dollar cash balance would have had a US\$133.1 million increase. If the Renminbi had depreciated by 10% against the U.S. dollar, our U.S. dollar cash balance would have had a US\$121.0 million increase instead. Assuming we had converted US\$124.4 million into Renminbi at the exchange rate of RMB6.9646 for US\$1.00 on December 31, 2022 released by the State Administration of Foreign Exchange of the PRC, our Renminbi cash balance would have had a RMB0.9 billion increase. If the Renminbi had depreciated by 10% against the U.S. dollar, our Renminbi cash balance would have had a RMB1.0 billion increase instead.

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. Further, our interest-bearing bank loan for the Xunlei headquarters building is in Renminbi with a flexible interest rate. We have not used derivative financial instruments in our investment portfolio. 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.

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

The Bank of New York Mellon, the depositary of our ADS program, collects its fees for delivery and surrender of ADSs directly from investors depositing shares or surrendering ADSs for the purpose of withdrawal or from intermediaries acting for them. The depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of distributable property to pay the fees. The depositary may collect its annual fee for depositary services by deduction from cash distributions or by directly billing investors or by charging the book-entry system accounts of participants acting for them. The depositary may collect any of its fees by deduction from any cash distribution payable to ADS holders that are obligated to pay those fees. The depositary may generally refuse to provide fee-attracting services until its fees for those services are paid. The depositary's principal executive office is located at 240 Greenwich Street, New York, New York 10286.

Persons depositing or withdrawing shares must pay:	For:
US\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs)	· Issuance of ADSs, including issuances resulting from a distribution of shares or rights or other property Cancellation of ADSs for the purpose of withdrawal, including if the deposit agreement terminates
US\$0.05 (or less) per ADS	· Any cash distribution to ADS holders
A fee equivalent to the fee that would be payable if securities distributed to you had been shares and the shares had been deposited for issuance of ADSs	· Distribution of securities distributed to holders of deposited securities which are distributed by the depositary to ADS holders
US\$0.05 (or less) per ADSs per calendar year	· Depositary services
Registration or transfer fees	· Transfer and registration of shares on our share register to or from the name of the depositary or its agent when you deposit or withdraw shares
Expenses of the depositary	· Cable, telex and facsimile transmissions (when expressly provided in the deposit agreement)
	· converting foreign currency to U.S. dollars
Taxes and other governmental charges the depositary or the custodian has to pay on any ADSs or shares underlying ADSs, such as stock transfer taxes, stamp duty or withholding taxes	· As necessary
Any charges incurred by the depositary or its agents for servicing the deposited securities	· As necessary

Fees and Other Payments Made by the Depositary to Us

The depositary has agreed to reimburse us for our expenses incurred in connection with the establishment of our ADS facility including, investor relations expenses, roadshow expenses, legal fees, stock exchange listing fees or any direct or indirect expenses incurred in connection with the establishment of the facility. The depositary has also agreed to provide additional reimbursements to us based on the applicable performance indicators relating to our ADS facility, including ADS issuance and cancellation fees, cash dividend fees and depositary servicing fees. In addition, the depositary has agreed to waive the issuance fees for ADSs issued (i) in connection with our follow-on equity offerings, (ii) to our founders and senior management, and (iii) in connection with our employee incentive plans.

We did not receive any reimbursements from the depositary in 2022.

PART II

Item 13. Defaults, Dividend Arrearages and Delinquencies

None.

Item 14. Material Modifications to the Rights of Security Holders and Use of Proceeds

None.

Item 15. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer and chief financial officer, has performed an evaluation of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) as of the end of the period covered by this report, as required by Rule 13a-15(b) under the Exchange Act.

Based upon that evaluation, our management, with the participation of our chief executive officer and chief financial officer, has concluded that as of December 31, 2022, our disclosure controls and procedures 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 chief financial officer, as appropriate, 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 such term is defined in Rule 13a-15(f) under the Exchange Act, for our company. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements in accordance with generally accepted accounting principles, including 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 a company's assets, (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of consolidated financial statements in accordance with generally accepted accounting principles, and that a company's receipts and expenditures are being made only in accordance with authorizations of a company's management and directors, and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of a company's assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, a system of internal control over financial reporting can provide only reasonable assurance with respect to consolidated financial statement preparation and presentation and 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.

As required by Section 404 of the Sarbanes-Oxley Act of 2002 and related rules promulgated by the Securities and Exchange Commission, our management, including our chief executive officer and chief financial officer, assessed the effectiveness of internal control over financial reporting as of December 31, 2022 using the criteria set forth in the report "Internal Control—Integrated Framework (2013)" published by the Committee of Sponsoring Organizations of the Treadway Commission (known as COSO). Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2022.

Our independent registered public accounting firm, PricewaterhouseCoopers Zhong Tian LLP, has 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-1 of this annual report on Form 20-F.

Attestation Report of the Registered Public Accounting Firm

Our independent registered public accounting firm, PricewaterhouseCoopers Zhong Tian LLP, has audited the effectiveness of our internal control over financial reporting as of December 31, 2022 as stated in its report, which appears on page F-1 of this annual report on Form 20-F.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting occurred during the period covered by this annual report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 16A. Audit Committee Financial Expert

Our board of directors has determined that each of Ms. Jenny Wenjie Wu and Mr. Ya Li, our independent directors (under the standards set forth in Rule 5605(a)(2) of the NASDAQ Listing Rules and Rule 10A-3 under the Securities Exchange Act of 1934) and chairman of our audit committee, is an audit committee financial expert.

Item 16B. Code of Ethics

Our board of directors has adopted a code of business conduct and ethics that applies to our directors, officers and employees, including certain provisions that specifically apply to our chief executive officer, chief financial officer, other executive officers as defined under Rule 405 under the Securities Act of 1933, as amended, senior finance officer, controller, senior vice presidents and any other persons who perform similar functions for us. We have filed our code of business conduct and ethics as Exhibit 99.1 to our registration statement on Form F-1 (File Number 333-196221), as amended, initially filed with the SEC on May 23, 2014. The code is also available on our official website under the corporate governance section at our investor relations website <http://ir.xunlei.com>. We hereby undertake to provide to any person without charge, a copy of our code of business conduct and ethics within ten working days after we receive such person's written request.

Our chairman and chief executive officer, Mr. Jinbo Li, currently also serves as the chairman and chief executive officer of Itui International Inc., our shareholder holding approximately 42.7% of our outstanding share capital as of March 31, 2023. Mr. Jinbo Li is the founder and a shareholder of Itui International Inc. Section III of our code of business conduct and ethics provides that 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 our company. Employees must obtain prior approval from the board of directors before accepting any such board or committee position. Our 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. Section III also provides that no employee may have any financial interest (ownership or otherwise) in any other business or entity if such interest requires the employee to devote time to it during such employee's working hours at our company. On April 11, 2020, our board of directors granted Mr. Jinbo Li a waiver from compliance with the above provisions of our code of business conduct and ethics so that Mr. Jinbo Li is able to simultaneously serve as the chairman and the chief executive officer at both our company and Itui International Inc.

Item 16C. Principal Accountant Fees and Services

The following table sets forth the aggregate fees by categories specified below in connection with certain professional services rendered by PricewaterhouseCoopers Zhong Tian LLP, our principal external auditors, for the periods indicated.

	2020	2021	2022
Audit fees ⁽¹⁾	US\$ 1,019,720	US\$ 1,019,496	US\$ 1,026,618
Audit-related fees ⁽²⁾	—	—	—
All other fees ⁽³⁾	—	—	—

Notes:

- (1) "Audit fees" represents the aggregate fees billed for each of the fiscal years listed for professional services rendered by our principal accountant for the audit of our annual financial statements or services that are normally provided by the accountant in connection with statutory and regulatory filings or engagements for each of the fiscal years listed.
- (2) "Audit-related fees" represents the aggregate fees billed for each of the fiscal years listed for assurance and related services by our principal accountant that are reasonably related to the performance of the audit or review of our financial statements and are not reported under "audit fees" above.
- (3) "All other fees" represents the aggregate fees billed in each of the fiscal years listed for products and services provided by our principal accountant, other than the services reported in "audit fees" and "audit-related fees" above.

The policy of our audit committee is to pre-approve all audit and non-audit services provided by our independent auditor, including audit services, audit-related services and other services as described above, other than those for de minimis services which are approved by the audit committee prior to the completion of the audit. Our independent auditor only provides us with audit services. Our audit committee has approved all of our 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

On March 31, 2022, our board of directors authorized a share repurchase program, under which we may repurchase up to US\$20 million of our shares over the next 12 months. 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 share repurchase program approved by our board of directors on March 31, 2022.

Period	Total Number of ADSs Purchased	Average Price Paid Per ADS	Total Number of ADSs Purchased as Part of the Publicly Announced Plan	Approximate Dollar Value of ADSs that May Yet Be Purchased Under the Plan
May 2022	259,400	1.28	259,400	19.67 million
June 2022	1,018,952	1.38	1,278,352	18.26 million
July 2022	602,959	1.67	1,881,311	17.25 million
August 2022	552,249	1.59	2,433,560	16.37 million
September 2022	463,278	1.54	2,896,838	15.66 million
October 2022	265,389	1.28	3,162,227	15.32 million
	898,873	1.54	4,061,100	13.93 million
November 2022				
December 2022	348,874	1.95	4,409,974	13.25 million
Total	4,409,974	1.53	4,409,974	13.25 million

Item 16F. Change in Registrant's Certifying Accountant

Not applicable.

Item 16G. Corporate Governance

As a Cayman Islands company listed on the NASDAQ Global Select Market, we are subject to the corporate governance standards under the NASDAQ Stock Market Rules. Under Nasdaq Stock Market Rule 5615(a)(3), a foreign private issuer such as us may follow its home-country corporate governance practices in lieu of certain of the Nasdaq Stock Market Rules corporate governance requirements. We strive to comply with most of the Nasdaq corporate governance practices to ensure a high standard of corporate governance. However, our current corporate governance practices differ from Nasdaq corporate governance requirements for U.S. companies in certain respects, as summarized below:

Nasdaq Marketplace Rule 5620(a) requires each issuer to hold an annual meeting of shareholders no later than one year after the end of the issuer's fiscal year-end. The practices of our home country, the Cayman Islands, do not require us to hold annual shareholders meetings every year. We have elected to adopt this practice and did not hold an annual meeting of shareholders for fiscal year 2019. We may, however, hold annual shareholders meeting in the future.

Nasdaq Stock Market Rule 5605(b)(1) requires a Nasdaq-listed company to have a board of directors composed of at least a majority of independent directors. The practices of our home country, the Cayman Islands, do not require us to have a majority of the board of directors composed of independent directors at this time. We have elected to adopt this practice and do not have a board of directors composed of at least a majority of independent directors.

Nasdaq Stock Market Rule 5605(c)(2) requires a Nasdaq-listed company to have an audit committee composed of at least three independent members. The practices of our home country, the Cayman Islands, do not require us to have a three-member audit committee at this time. We have elected to adopt this practice and have an audit committee composed of two independent members.

Nasdaq Stock Market Rule 5605(e)(1) requires a Nasdaq-listed company to have a nominations committee composed solely of independent directors to select or recommend for selection director nominees. The practices of our home country, the Cayman Islands, do not require that any of the members of a company's nominations committee be independent directors. We have elected to adopt this practice in order to utilize the experience of Mr. Yubo Zhang and our corporate governance and nominating committee is not composed solely of independent directors.

Nasdaq Stock Market Rule 5605(d)(2) requires a Nasdaq-listed company to have a compensation committee composed solely of independent directors. The practices of our home country, the Cayman Islands, do not require that any of the members of a company's compensation committee be independent directors. We have elected to adopt this practice in order to utilize the experience of Mr. Jinbo Li and our compensation committee is not composed solely of independent directors.

Maples and Calder (Hong Kong) LLP, our Cayman Islands counsel, has provided a letter to the NASDAQ Stock Market certifying that under Cayman Islands law, we are not required to follow the above corporate governance standards.

Other than the above, there are no significant differences between our corporate governance practices and those followed by U.S. domestic companies under NASDAQ Stock Market Rules.

Item 16H. Mine Safety Disclosure

Not applicable.

Item 16I. Disclosure Regarding Foreign Jurisdictions 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 auditor was subject to that determination.

In May 2022, Xunlei Limited was conclusively listed by the SEC as a Commission-Identified Issuer under the HFCAA following the filing of our annual report on Form 20-F for the fiscal year ended December 31, 2021.

On December 15, 2022, the PCAOB removed mainland China and Hong Kong from the list of jurisdictions where it is unable to inspect or investigate completely registered public accounting firms. For this reason, we do not expect to be identified as a Commission-Identified Issuer under the HFCAA after we file this annual report.

To the best of our knowledge, no Cayman Islands governmental entities own any shares of Xunlei Limited as of the date of this annual report.

To the best of our knowledge, no mainland China governmental entities own any shares of the VIE or the VIE's subsidiaries as of the date of this annual report.

Governmental entities in mainland China do not have a controlling financial interest in Xunlei Limited or the VIE or the VIE's subsidiaries as of the date of this annual report.

None of the members of the board of directors of Xunlei Limited or our operating entities, including the VIE and the VIE's subsidiaries, is an official of the Chinese Communist Party as of the date of this annual report.

None of the currently effective memorandum and articles of association (or equivalent organizational document) of Xunlei Limited or the VIE or the VIE's subsidiaries contains any charter of the Chinese Communist Party.

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 Xunlei Limited, its subsidiaries and the variable interest entity and its subsidiaries are included at the end of this annual report.

Item 19. Exhibits

Exhibit Number	Description of Document
1.1	Eighth amended and restated memorandum and seventh amended and restated articles of association of the Registrant (incorporated by reference to Exhibit 3.2 of our registration statement on Form F-1, as amended (file no. 333-196221), filed with the SEC on June 12, 2014)
2.1	Registrant's specimen American depositary receipt (included in Exhibit 2.3)
2.2	Registrant's specimen certificate for common shares (incorporated by reference to Exhibit 4.2 of our registration statement on Form F-1, as amended (file no. 333-196221), filed with the SEC on June 12, 2014)
2.3	Deposit agreement among the Registrant, the depositary and holders of American depositary receipts, dated June 23, 2014 (incorporated by reference to Exhibit 2.3 of our annual report on Form 20-F (file no. 001-35224), filed with the SEC on April 26, 2021)
2.4*	Description of securities
4.1	Seventh amended and restated shareholders agreement among the Registrant and its subsidiaries, Shenzhen Xunlei Networking Technologies Co., Ltd. and its subsidiaries, shareholders of the Registrant and other parties thereto, dated April 24, 2014 (incorporated by reference to Exhibit 4.4 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on June 12, 2014)
4.2*	Amended and Restated 2020 Share Incentive Plan
4.3	Form of indemnification agreement with the Registrant's directors and officers (incorporated by reference to Exhibit 10.7 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on June 12, 2014)
4.4	Form of employment agreement between the Registrant and Executive Officers of the Registrant (incorporated by reference to Exhibit 10.8 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on June 12, 2014)
4.5	English translation of business operation agreement among Giganology Shenzhen, Shenzhen Xunlei and the shareholders of Shenzhen Xunlei, dated November 15, 2006, as amended on March 1, 2012 and further amended on September 29, 2016 (incorporated by reference to Exhibit 4.15 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 20, 2017)
4.6	English translation of equity pledge agreement among Giganology Shenzhen and the shareholders of Shenzhen Xunlei dated November 15, 2006, as amended on May 10, 2011, March 1, 2012 and March 10, 2014 (incorporated by reference to Exhibit 10.10 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.7	English translation of power of attorney between Giganology Shenzhen and Shenglong Zou, dated May 10, 2011 (incorporated by reference to Exhibit 10.11 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.8	English translation of power of attorney between Giganology Shenzhen and Hao Cheng, dated May 10, 2011 (incorporated by reference to Exhibit 10.12 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.9	English translation of power of attorney between Giganology Shenzhen and Fang Wang, dated May 10, 2011 (incorporated by reference to Exhibit 10.13 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.10	English translation of power of attorney between Giganology Shenzhen and Jianming Shi, dated May 10, 2011 (incorporated by reference to Exhibit 10.14 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.11	English translation of power of attorney between Giganology Shenzhen and Guangzhou Shulian Information Investment Co., Ltd., dated May 10, 2011 (incorporated by reference to Exhibit 10.15 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.12	English translation of exclusive technical support and services agreement between Giganology Shenzhen and Shenzhen Xunlei, dated September 16, 2005, as amended on November 15, 2006 and March 10, 2014 (incorporated by reference to Exhibit 10.16 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.13	English translation of exclusive technology consulting and training agreement between Giganology Shenzhen and Shenzhen Xunlei, dated September 16, 2005, as amended on November 15, 2006 and March 10, 2014 (incorporated by reference to Exhibit 10.17 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)

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4.14	English translation of proprietary technology license contract between Giganology Shenzhen and Shenzhen Xunlei, dated March 1, 2012 (incorporated by reference to Exhibit 10.18 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.15	English translation of intellectual properties purchase option agreement between Giganology Shenzhen and Shenzhen Xunlei dated March 1, 2012, as amended on March 10, 2014 (incorporated by reference to Exhibit 10.19 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.16	English translation of loan agreement among Giganology Shenzhen, Guangzhou Shulian Information Investment Co., Ltd., Sean Shenglong Zou, Hao Cheng, Fang Wang and Jianming Shi, dated December 22, 2010, as amended on March 1, 2012 and March 10, 2014 (incorporated by reference to Exhibit 10.20 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.17	English translation of loan agreement between Giganology Shenzhen and Sean Shenglong Zou, dated May 10, 2011, as amended on March 1, 2012 (incorporated by reference to Exhibit 10.21 of our registration statement on Form F-1 (file no. 333-196221) filed with the SEC on May 23, 2014)
4.18	English summary of General Contract for the Construction of Xunlei Building dated April 24, 2018 between Shenzhen Xunlei Networking Technologies Co., Ltd. and China Construction Second Engineering Bureau Ltd. (incorporated by reference to Exhibit 4.34 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 29, 2019)
4.19	English translation of the Financing Agreement dated January 2, 2019 between Shenzhen Xunlei Networking Technologies Co., Ltd. and Shanghai Pudong Development Bank Co., Ltd. Shenzhen Branch (incorporated by reference to Exhibit 4.35 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 29, 2019)
4.20	English translation of the Maximum Mortgage Contract dated January 2, 2019 between Shenzhen Xunlei Networking Technologies Co., Ltd. and Shanghai Pudong Development Bank Co., Ltd. Shenzhen Branch (incorporated by reference to Exhibit 4.36 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 29, 2019)
4.21	English translation of the Irrevocable Letter of Guarantee of Maximum Amount dated March 15, 2018 between Shenzhen Xunlei Networking Technologies Co., Ltd. and China Merchants Bank Shenzhen Branch (incorporated by reference to Exhibit 4.37 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 29, 2019)
4.22	English translation of the Credit Agreement dated December 2, 2021 between Shenzhen Xunlei Networking Technologies Co., Ltd. and China Merchants Bank Shenzhen Branch (incorporated by reference to Exhibit 4.41 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)
4.23	English translation of the Agreement on Financing Amount dated November 14, 2021 between Shenzhen Xunlei Networking Technologies Co., Ltd. and Shanghai Pudong Development Bank Co., Ltd., Shenzhen Branch (incorporated by reference to Exhibit 4.42 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)
4.24	English translation of the Maximum Mortgage Contract dated November 14, 2021 between Shenzhen Xunlei Networking Technologies Co., Ltd. and Shanghai Pudong Development Bank Co., Ltd., Shenzhen Branch (incorporated by reference to Exhibit 4.43 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)
4.25	English translation of the Facility Agreement dated September 1, 2021 between Chizz (HK) Limited and Xunlei Network Technologies Limited (incorporated by reference to Exhibit 4.44 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)
4.26	English translation of the Supplementary Agreement to Proprietary Technology License Agreement dated March 1, 2022 between Giganology (Shenzhen) Ltd. and Shenzhen Xunlei Networking Technologies Co., Ltd. (incorporated by reference to Exhibit 4.45 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)
4.27	English translation of Power of Attorney between Giganology Shenzhen and Shenglong Zou, dated May 11, 2021 (incorporated by reference to Exhibit 4.46 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)
4.28	English translation of Power of Attorney between Giganology Shenzhen and Hao Cheng, dated May 10, 2021 (incorporated by reference to Exhibit 4.47 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)
4.29	English translation of Power of Attorney between Giganology Shenzhen and Fang Wang, dated May 10, 2021 (incorporated by reference to Exhibit 4.48 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)
4.30	English translation of Power of Attorney between Giganology Shenzhen and Jianming Shi, dated May 10, 2021 (incorporated by reference to Exhibit 4.49 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)

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4.31	English translation of Power of Attorney between Giganology Shenzhen and Guangzhou Shulian Information Investment Co., Ltd., dated May 10, 2021 (incorporated by reference to Exhibit 4.50 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)
4.32	English translation of technology development and software license framework agreement between Shenzhen Xunlei and Xunlei Computer dated January 1, 2020 (incorporated by reference to Exhibit 4.51 of our annual report on Form 20-F (file no. 001-35224) filed with the SEC on April 28, 2022)
4.33*	English translation of the Credit Agreement between China Merchants Bank Shenzhen Branch and Shenzhen Xunlei Network Technology Co., Ltd., dated February 21, 2023
8.1*	List of principal subsidiaries and variable interest entity of the Registrant
11.1	Code of business conduct and ethics of the Registrant (incorporated by reference to Exhibit 99.1 of our Registration Statement on Form F-1 (file no. 333-196221) filed with the Securities and Exchange Commission on June 12, 2014)
12.1*	Certification by Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
12.2*	Certification by Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
13.1**	Certification by Principal Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
13.2**	Certification by Principal Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
15.1*	Consent of Maples and Calder (Hong Kong) LLP
15.2*	Consent of TransAsia Lawyers
15.3*	Consent of PricewaterhouseCoopers Zhong Tian LLP, an independent registered public accounting firm
101.INS*	Inline XBRL Instance Document
101.SCH*	Inline XBRL Taxonomy Extension Schema Document
101.CAL*	Inline XBRL Taxonomy Extension Calculation Linkbase Document
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 (embedded within the Inline XBRL document)

* Filed herewith

** Furnished herewith

SIGNATURES

The registrant hereby certifies that it meets all of the requirements for filing its annual report on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

Xunlei Limited

By: /s/ Jinbo Li

Name: Jinbo Li

Title: Chairman of the Board and Chief Executive Officer

Date: April 26, 2023

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Xunlei Limited

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Xunlei Limited and its subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of comprehensive (loss)/income, of changes in shareholders’ equity and of cash flows for each of the three years in the period ended December 31, 2022, 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 referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2022 and 2021, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2022 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 audits 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 matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates 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 matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Goodwill impairment assessment

As described in Notes 2(k) and 12 to the consolidated financial statements, the Company's consolidated goodwill balance was US\$21.2 million as of December 31, 2022. The goodwill balance was associated with the Company as a whole, being the sole reporting unit of the Company. Management conducts a goodwill impairment test on an annual basis, or more frequently if events or changes in circumstances indicate that the goodwill may be impaired. The impairment test for goodwill determines the fair value of the reporting unit and compares it to the carrying value of the assets and liabilities, including goodwill, of the reporting unit. The fair value is estimated by management using the discounted cash flow model. The discounted cash flow model is derived from the long-term cash flow projections prepared by management which include significant judgments and assumptions relating to revenue forecast, operating margins, the discount rate, and the terminal growth rate. As a result of the impairment test, management determined that the estimated fair value of the reporting unit exceeded its carrying value and therefore no goodwill impairment losses were recognized for the year ended December 31, 2022.

The principal considerations for our determination that performing procedures relating to goodwill impairment assessment is a critical audit matter are (i) the significant judgment by management when developing the fair value measurement of the reporting unit; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating management's significant assumptions related to revenue forecast, operating margins, the discount rate, and the terminal growth rate; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

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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 management's goodwill impairment assessment, including controls over the valuation of the Company's reporting unit. These procedures also included, among others (i) testing management's process for developing the fair value estimate; (ii) evaluating the appropriateness of the discounted cash flow model; (iii) testing the completeness, accuracy, and relevance of underlying data used in the model; and (iv) evaluating the reasonableness of significant assumptions used by management, related to revenue forecast, operating margins, the discount rate, and the terminal growth rate. Evaluating management's significant assumptions involved evaluating whether the assumptions used by management were reasonable considering (i) historical performance; (ii) the consistency with relevant market and industry data; and (iii) whether these assumptions were consistent with evidence obtained in other areas of the audit. Professionals with specialized skill and knowledge were used to assist in the evaluation of the appropriateness of the Company's discounted cash flow model and reasonableness of certain significant assumptions, including the discount rate and the terminal growth rate.

/s/ PricewaterhouseCoopers Zhong Tian LLP
Shenzhen, the People's Republic of China
April 26, 2023

We have served as the Company's auditor since 2014.

Xunlei Limited
Consolidated Balance Sheets

(Amounts expressed in thousands of United States dollars ("USD"),
except for number of shares and per share data)

	Note	As of December 31, 2021	As of December 31, 2022
Assets			
Current assets:			
Cash and cash equivalents	3	123,358	177,154
Short-term investments	4	115,652	83,626
Accounts receivable, net (Allowance for current expected credit losses of USD 1,764 and USD1,429 as of December 31, 2021 and 2022, respectively)	5	26,135	29,763
Inventories	6	1,363	457
Due from related parties (Allowance for current expected credit losses of USD 339 and USD639 as of December 31, 2021 and 2022, respectively)	23	15,578	32,917
Prepayments and other current assets (Allowance for current expected credit losses of USD 11,069 and USD10,667 as of December 31, 2021 and 2022, respectively)	7	11,842	8,267
Total current assets		293,928	332,184
Non-current assets:			
Restricted cash	2(e)	4,078	7,654
Long-term investments	8	31,495	30,811
Deferred tax assets	21	—	213
Property and equipment, net	9	57,657	61,734
Right-of-use assets	10	27	865
Intangible assets, net	11	8,299	6,546
Goodwill	2(k), 12	23,136	21,179
Due from a related party (Allowance for current expected credit losses of USD 689 and nil as of December 31, 2021 and 2022, respectively)	23	19,311	—
Long-term prepayments and other assets	7	2,787	2,137
Total assets		440,718	463,323
Liabilities			
Current liabilities:			
Accounts payable (including accounts payable of the consolidated variable interest entities ("VIEs") without recourse to the Company of USD23,789 and USD23,398 as of December 31, 2021 and 2022, respectively)		26,407	25,432
Due to related parties (including due to related parties of the consolidated VIEs without recourse to the Company of USD91 and nil as of December 31, 2021 and 2022, respectively)	23	1,597	1,560
Contract liabilities and deferred income, current portion (including contract liabilities and deferred income, current portion of the consolidated VIEs without recourse to the Company of USD36,740 and USD37,781 as of December 31, 2021 and 2022, respectively)	13	36,892	38,967
Income tax payable (including income tax payable of the consolidated VIEs without recourse to the Company of USD2,451 and USD3,342 as of December 31, 2021 and 2022, respectively)		2,531	5,586
Accrued liabilities and other payables (including accrued liabilities and other payables of the consolidated VIEs without recourse to the Company of USD42,449 and USD43,446 as of December 31, 2021 and 2022, respectively)	14	49,557	49,438
Bank borrowings (including bank borrowings of the consolidated VIEs without recourse to the Company of USD2,876 and USD7,024 as of December 31, 2021 and 2022, respectively)	15	2,876	7,024
Lease liabilities (including lease liabilities, current portion of the consolidated VIEs without recourse to the Company of USD18 and USD283 as of December 31, 2021 and 2022, respectively)	10	18	283
Total current liabilities.		119,878	128,290

Xunlei Limited
Consolidated Balance Sheets (Continued)

(Amounts expressed in thousands of United States dollars
("USD"), except for number of shares and per share data)

	Note	As of December 31, 2021	As of December 31, 2022
Non-current liabilities:			
Contract liabilities and deferred income (including contract liabilities and deferred income, non-current portion of the consolidated VIEs without recourse to the Company of USD845 and USD876 as of December 31, 2021 and 2022, respectively)	13	845	876
Deferred tax liabilities (including deferred tax liabilities of the consolidated VIEs without recourse to the Company of USD930 and USD687 as of December 31, 2021 and 2022, respectively)	21	930	687
Bank borrowings (including bank borrowings of the consolidated VIEs without recourse to the Company of USD17,291 and USD24,750 as of December 31, 2021 and 2022, respectively)	15	17,291	24,750
Lease liabilities (including lease liabilities, non-current portion of the consolidated VIEs without recourse to the Company of USD7 and USD299 as of December 31, 2021 and 2022, respectively)	10	7	299
Total liabilities		138,951	154,902
Commitments and contingencies	25		
Equity			
Common shares (368,877,205 shares issued and 337,257,946 shares outstanding as of December 31, 2021; 375,001,940 shares issued and 325,047,736 shares outstanding as of December 31, 2022)	16	84	81
Additional paid-in-capital		476,057	477,495
Accumulated other comprehensive income/(loss)		1,988	(14,668)
Statutory reserves		6,155	7,036
Treasury shares (31,619,259 shares and 49,954,204 shares as of December 31, 2021 and 2022, respectively)		8	12
Accumulated deficits		(180,645)	(160,063)
Total Xunlei Limited's shareholders' equity		303,647	309,893
Non-controlling interests		(1,880)	(1,472)
Total liabilities and shareholders' equity		440,718	463,323

The accompanying notes are an integral part of these consolidated financial statements.

Xunlei Limited
Consolidated Statements of Comprehensive (Loss)/Income

(Amounts expressed in thousands of USD, except for number of shares and per share data)	Note	Years ended December 31,		
		2020	2021	2022
Net revenues				
Total revenues, net of rebates and discounts (including transactions with related parties of USD13,118, USD18,284 and USD15,991 for the years ended December 31, 2020, 2021 and 2022, respectively)	2(p), 2(x)	186,683	239,601	342,564
Business taxes and surcharges		(312)	(819)	(1,067)
Net revenues		186,371	238,782	341,497
Costs of revenues (including transactions with related parties of nil, nil and USD87 for the years ended December 31, 2020, 2021 and 2022, respectively)	19	(92,637)	(118,603)	(200,054)
Gross profit		93,734	120,179	141,443
Operating expenses				
Research and development expenses		(55,463)	(61,859)	(67,680)
Sales and marketing expenses		(18,064)	(24,569)	(24,841)
General and administrative expenses		(33,910)	(36,868)	(39,701)
Credit loss (expenses)/write-back, net		(5,090)	(1,206)	844
Total operating expenses		(112,527)	(124,502)	(131,378)
Operating (loss)/income		(18,793)	(4,323)	10,065
Interest income		1,471	723	1,898
Interest expense		(406)	(95)	(93)
Other income, net	20	4,737	4,678	13,545
(Loss)/income before income tax		(12,991)	983	25,415
Income tax (expenses)/benefits	21	(1,149)	125	(4,068)
Net (loss)/income for the year		(14,140)	1,108	21,347
Less: net loss attributable to the non-controlling interests		(300)	(83)	(116)
Net (loss)/income attributable to Xunlei Limited		(13,840)	1,191	21,463

Xunlei Limited
Consolidated Statements of Comprehensive Loss (Continued)

(Amounts expressed in thousands of USD, except for number of shares and per share data)		Years ended December 31,		
	Note	2020	2021	2022
Net (loss)/income for the year		(14,140)	1,108	21,347
Other comprehensive income/(loss): Currency translation adjustments, net of tax		11,135	4,116	(16,427)
Comprehensive (loss)/income		(3,005)	5,224	4,920
Less: comprehensive (loss)/income attributable to non-controlling interests		(446)	(99)	408
Comprehensive (loss)/income attributable to Xunlei Limited		(2,559)	5,323	4,512
(Loss)/income per share for common shares				
Basic	22	(0.0410)	0.0036	0.0639
Diluted	22	(0.0410)	0.0035	0.0638
Weighted average number of common shares used in calculating				
Basic	22	337,429,601	334,707,559	336,040,378
Diluted	22	337,429,601	335,969,780	336,235,501

The accompanying notes are an integral part of these consolidated financial statements.

Xunlei Limited
Consolidated Statements of Changes in Shareholders' Equity

(Amounts expressed in thousands of USD, except for number of shares and per share data)	Common shares		Treasury stock		Additional paid-in capital	Accumulated deficits	Statutory reserves	Accumulated other comprehensive (loss)/income	Total Xunlei Limited's shareholders' equity	Non-controlling interest	Total equity
	Shares	Amount	Shares	Amount							
Balance at January 1, 2020	339,165,241	85	29,711,964	7	472,052	(166,973)	5,132	(13,425)	296,878	(1,335)	295,543
Repurchase of common shares	(5,956,960)	(1)	5,956,960	1	(4,475)	—	—	—	(4,475)	—	(4,475)
Share-based compensation	—	—	—	—	2,310	—	—	—	2,310	—	2,310
Restricted shares vested	1,193,700	—	(1,193,700)	—	—	—	—	—	—	—	—
Appropriation of statutory reserves	—	—	—	—	—	(282)	282	—	—	—	—
Net loss	—	—	—	—	—	(13,840)	—	—	(13,840)	(300)	(14,140)
Currency translation adjustments	—	—	—	—	—	—	—	11,281	11,281	(146)	11,135
Balance at December 31, 2020	334,401,981	84	34,475,224	8	469,887	(181,095)	5,414	(2,144)	292,154	(1,781)	290,373
Share-based compensation	—	—	—	—	6,170	—	—	—	6,170	—	6,170
Restricted shares vested	2,855,965	—	(2,855,965)	—	—	—	—	—	—	—	—
Appropriation of statutory reserves	—	—	—	—	—	(741)	741	—	—	—	—
Net income	—	—	—	—	—	1,191	—	—	1,191	(83)	1,108
Currency translation adjustments	—	—	—	—	—	—	—	4,132	4,132	(16)	4,116
Balance at December 31, 2021	337,257,946	84	31,619,259	8	476,057	(180,645)	6,155	1,988	303,647	(1,880)	301,767
Issuance of common shares for vesting of restricted shares	—	—	6,124,735	1	(1)	—	—	—	—	—	—
Repurchase of common shares	(22,049,870)	(5)	22,049,870	5	(6,747)	—	—	—	(6,747)	—	(6,747)
Share-based compensation	—	—	—	—	8,184	—	—	—	8,184	—	8,184
Restricted shares vested	9,839,660	2	(9,839,660)	(2)	—	—	—	—	—	—	—
Appropriation of statutory reserves	—	—	—	—	—	(881)	881	—	—	—	—
Disposal of subsidiaries	—	—	—	—	2	—	—	—	2	358	360
Capital injection in a subsidiary from noncontrolling interest shareholders	—	—	—	—	—	—	—	—	—	(63)	(63)
Net income	—	—	—	—	—	21,463	—	—	21,463	(116)	21,347
Currency translation adjustments	—	—	—	—	—	—	—	(16,656)	(16,656)	229	(16,427)
Balance at December 31, 2022	325,047,736	81	49,954,204	12	477,495	(160,063)	7,036	(14,668)	309,893	(1,472)	308,421

The accompanying notes are an integral part of these consolidated financial statements.

Xunlei Limited
Consolidated Statements of Cash Flows

(Amounts expressed in thousands of USD except for number of shares and per share data)	Years ended December 31,		
	2020	2021	2022
Cash flows from operating activities			
Net (loss)/income for the year	(14,140)	1,108	21,347
Adjustments to reconcile net (loss)/income to net cash (used in)/generated from operating activities			
—Depreciation of property and equipment	9,277	6,319	2,666
—Amortization of intangible assets	1,216	1,129	1,086
—Amortization of the right-of-use assets	3,685	1,934	56
—Credit loss expenses/(write-back), net and impairment on prepayments	5,305	1,213	(844)
—(Gain)/loss on disposal of property and equipment	(55)	31	2
—Share-based compensation	2,310	6,170	8,184
—Net unrealized investment income from short-term investments	(664)	(404)	(367)
—Impairment of inventories	3,283	429	15
—Impairment on long-term investments	794	—	590
—Net unrealized gains on long-term investments	(794)	—	(437)
—Investment income on disposal of long-term investments	(214)	(42)	—
—Interest expense accrued on long-term payables	406	95	93
—Deferred income taxes	966	(178)	(382)
—Deferred government grants	(865)	(169)	(162)
Changes in operating assets and liabilities:			
—Accounts receivable	5,048	(2,168)	(5,979)
—Prepayments and other assets	(1,263)	(2,319)	4,111
—Due from/to related parties	(8,598)	(8,507)	1,099
—Accounts payable	(4,938)	5,238	1,064
—Inventories	643	(36)	851
—Contract liabilities	289	2,112	5,739
—Income tax payable	(163)	(77)	3,434
—Accrued liabilities and other payables	(11,707)	9,605	8,621
—Lease liabilities	(3,732)	(2,003)	322
Net cash (used in)/generated from operating activities	(13,911)	19,480	51,109
Cash flows from investing activities			
Purchase of short-term investments	(177,075)	(337,738)	(517,411)
Proceeds from collection upon maturities of short-term investments	167,439	341,960	545,073
Purchase of property and equipment (including construction in progress)	(13,554)	(13,202)	(14,969)
Purchase of intangible assets	(59)	(84)	(8)
Purchase of long-term investments	—	(3,627)	(1,000)
Proceeds from disposal of property and equipment	721	207	6
Proceeds from disposal of long-term investments	1,076	42	—
Repayment/(payment) of loans to employees	696	(177)	67
Loan to a related party	—	(20,000)	—
Net cash (used in)/generated from investing activities	(20,756)	(32,619)	11,758
Cash flows from financing activities			
Repurchase of common shares	(4,475)	—	(6,747)
Proceeds from bank borrowings	7,816	2,196	16,656
Repayment of bank borrowings	—	(2,419)	(3,344)
Repayment of loans due to a related party arising from a business combination	(662)	—	—
Capital injection from a non-controlling interest shareholder	—	—	76
Net cash generated from/(used in) financing activities	2,679	(223)	6,641
Net (decrease)/increase in cash, cash equivalents and restricted cash	(31,988)	(13,362)	69,508
Effect of exchange rates on cash and cash equivalents, and restricted cash	5,329	2,009	(12,136)
Cash and cash equivalents at beginning of the year	162,465	137,248	123,358
Restricted cash at beginning of the year	2,983	1,541	4,078
Cash, cash equivalents and restricted cash at beginning of the year	165,448	138,789	127,436
Cash and cash equivalents at end of the year	137,248	123,358	177,154
Restricted cash at end of year	1,541	4,078	7,654
Cash, cash equivalents and restricted cash at end of the year	138,789	127,436	184,808
Supplemental disclosure of cash flow information			
Income tax paid	356	66	1,178
Non-cash investing and financing activities			

—Purchase of property and equipment in form of other payables	5,217	568	593
—Addition of right-of-use assets and lease liabilities, net off impact from lease modification	3,325	10	555

The accompanying notes are an integral part of these consolidated financial statements.

Xunlei Limited
Notes to the consolidated financial statements
(Amounts in US dollars unless otherwise stated)

1. Organization and nature of operations

Xunlei Limited, previously known as Giganology Limited, (the “Company”) was incorporated under the law of the Cayman Islands as a limited liability company on February 3, 2005. The Company completed its initial public offering on June 24, 2014 on the NASDAQ Global Market. Each American Depositary Shares (“ADSs”) of the Company represents five common shares.

These consolidated financial statements include the financial statements of the Company, its subsidiaries, the variable interest entity (“VIE”) and VIE’s subsidiaries (collectively referred to as the “Group”). As of December 31, 2022, the Company’s major subsidiaries, VIE and VIE’s subsidiaries are as follows:

Name of entities	Place of incorporation	Period of incorporation	Relationship	% of direct or indirect economic ownership	Principal activities
Shenzhen Xunlei Networking Technologies Co., Ltd. (“Shenzhen Xunlei”)	People’s Republic of China (“PRC”)	January 2003	VIE	100 %	Development of software, provision of online advertising and membership subscription
Giganology (Shenzhen) Co., Ltd. (“Giganology Shenzhen”)	PRC	June 2005	Subsidiary	100 %	Development of computer software and provision of information technology services to related companies
Shenzhen Xunlei Wangwenhua Co., Ltd. (formerly known as “Shenzhen Fengdong Networking Technologies Co., Ltd.”) (“Wangwenhua”)	PRC	December 2005	VIE’s subsidiary	100 %	Development of computer software, provision of advertising services and operation of live steaming platforms
Xunlei Games Development (Shenzhen) Co., Ltd.	PRC	February 2010	VIE’s subsidiary	70 %	Development of online game and computer software to related companies and provision of advertising services
Xunlei Network Technologies Limited (“Xunlei BVI”)	British Virgin Islands	February 2011	Subsidiary	100 %	Investment holding company
Xunlei Network Technologies Limited (“Xunlei HK”)	Hong Kong	March 2011	Subsidiary	100 %	Investment holding company and development of computer software
Xunlei Computer (Shenzhen) Co., Ltd. (“Xunlei Computer”)	PRC	November 2011	Subsidiary	100 %	Development of computer software and provision of information technology services
Shenzhen Onething Technologies Co., Ltd. (“Onething”)	PRC	September 2013	VIE’s subsidiary	100 %	Development of cloud computing technology and provision of related services
Beijing Xunjing Technologies Co., Ltd. (formerly known as “Wangxin Century Technologies (Beijing) Co., Ltd.”)	PRC	October 2015	VIE’s subsidiary	100 %	Development of computer software and provision of information technology services

Xunlei Limited
Notes to the consolidated financial statements
(Amounts in US dollars unless otherwise stated)

1. Organization and nature of operations (Continued)

Name of entities	Place of incorporation	Period of incorporation	Relationship	% of direct or indirect economic ownership	Principal activities
Henan Tourism Information Co., Ltd.	PRC	June 2018	VIE's subsidiary	80 %	Software development, tourism consulting, ticket agent and other related services
Jiangxi Node Technology Service Co., Ltd. ("Jiangxi Node")	PRC	July 2020	VIE's subsidiary	100 %	Development of cloud computing technology and provision of related services
FUNI. PTE. LTD. ("FUNI")	Singapore	April 2021	Subsidiary	100 %	Operation of a live streaming platform

Note: The English names of the PRC companies represent management's translation of the Chinese names of these companies as they have not adopted formal English names.

The Group engages primarily in the provision of premium downloading services to its members, sales of bandwidth, platforms for live streaming services, advertising services and other internet value added services.

To comply with the PRC laws and regulations that prohibit or restrict foreign ownership of companies that provide online services and hold Internet Content Provider ("ICP") license, the Group mainly conducts its business through the VIE, Shenzhen Xunlei, and its subsidiaries in the PRC.

Through the various agreements enacted among the Company, Giganology Shenzhen, a wholly owned subsidiary of the Company, Shenzhen Xunlei and legal registered shareholders of Shenzhen Xunlei, the Company as the primary beneficiary received all of the economic benefits and residual interest and absorbed all of the risks and expected losses from Shenzhen Xunlei. Details of these agreements are as follows:

—**Loan Agreements** between Giganology Shenzhen and the shareholders of Shenzhen Xunlei— Giganology Shenzhen provided interest-free loans of RMB9 million to the legal shareholders of Shenzhen Xunlei for them to make contributions as registered capital into Shenzhen Xunlei. The terms of these agreements last for two years from the date it was signed, and will be automatically extended afterwards on a yearly basis until each legal shareholder of Shenzhen Xunlei has repaid the loans in its entirety in accordance with the loan agreement. The legal shareholders would not be allowed to transfer their interests in Shenzhen Xunlei without prior consent of Giganology Shenzhen. According to the loan agreements, the loans can only be repaid in the form of common shares of Shenzhen Xunlei. At any time during the term of the loan agreements, Giganology Shenzhen may, at their sole discretion, requires any of the legal shareholders of Shenzhen Xunlei to repay all or any portion of their outstanding loan under the agreement.

Under a separate loan agreement between Giganology Shenzhen and Mr. Sean Shenglong Zou as a legal registered shareholder of Shenzhen Xunlei, Giganology Shenzhen made an additional interest-free loan of RMB20 million to Mr. Sean Shenglong Zou, the entire amount of which was contributed to the registered capital of Shenzhen Xunlei, increasing the registered capital of Shenzhen Xunlei to RMB30 million. The term of this agreement lasts for two years from the date it was signed, and will be automatically extended afterwards on a yearly basis until Mr. Zou has repaid the loan in its entirety in accordance with the loan agreement. This loan will be deemed to be repaid when all equity interest held by the shareholders in Shenzhen Xunlei has been transferred to Giganology Shenzhen or its designated parties. At any time during the term of this loan agreement, the Company may, at their sole discretion, require all or any portion of the outstanding loan under the agreement to be repaid.

—**Business Operation Agreements** between Giganology Shenzhen and Shenzhen Xunlei - Under these agreements, Giganology Shenzhen has the rights to direct the operating activities of Shenzhen Xunlei, including the appointment of senior management. The legal shareholders of Shenzhen Xunlei also transferred all their shareholders' rights to Giganology Shenzhen. The term of this agreement may be extended with Giganology Shenzhen's confirmation prior to the expiration date. The agreement became expired in November 2016 and has been extended to November 2026.

Xunlei Limited
Notes to the consolidated financial statements
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1. Organization and nature of operations (Continued)

—**Equity Pledge Agreement** between Giganology Shenzhen and the legal shareholders of Shenzhen Xunlei - Under this agreement, the legal shareholders of Shenzhen Xunlei pledged all of their equity interests in Shenzhen Xunlei to Giganology Shenzhen. If Shenzhen Xunlei and/or its legal shareholders breach their contractual obligations under this agreement, Giganology Shenzhen, as pledgee, will be entitled to certain rights, including the right to sell the pledged equity interests.

—**Power of Attorney** - Each legal shareholder of Shenzhen Xunlei appointed Giganology Shenzhen as its attorney-in-fact to exercise their shareholders' rights in Shenzhen Xunlei, including shareholders' voting rights. Each power of attorney will remain in force for 10 years starting from May 2011 unless the business operation agreement among Giganology Shenzhen, Shenzhen Xunlei and the legal shareholders of Shenzhen Xunlei is terminated in advance. This period may be extended at Giganology Shenzhen's discretion. The agreement expired in May 2021 and has been extended to May 2031.

—**Service Agreements** between Giganology Shenzhen and Shenzhen Xunlei — Under various service agreements, Giganology Shenzhen will provide services including technical support, training, as well as consulting services to Shenzhen Xunlei in exchange for a service fee. These service agreements include the Exclusive Technology Support and Services Agreement, the Exclusive Technology Consulting and Training Agreement and the Software and Proprietary Technology License Contract. Giganology Shenzhen is entitled to service fees equal to 20%, 20% and 40% of the pre-tax operating profit of Shenzhen Xunlei according to the terms and provisions of these agreements, respectively (in aggregate 80% of pre-tax operating profit of Shenzhen Xunlei). In addition, these agreements also allow both parties to review and adjust the above mentioned percentage every six months according to the business operation and income of Shenzhen Xunlei so as to enable Giganology Shenzhen to extract substantially all the after tax operating profit of Shenzhen Xunlei.

For the Exclusive Technology Support and Services Agreement and the Exclusive Technology Consulting and Training Agreement, the term of these agreements will expire in 2025 and may be extended with Giganology Shenzhen's written confirmation prior to the expiration date. Giganology Shenzhen is entitled to terminate the agreement at any time by providing 30 days' prior written notice to Shenzhen Xunlei.

For the Proprietary Technology License Contract, the term of this contract became expired in March 2022 and has been extended with Giganology Shenzhen to March 2032. Giganology Shenzhen grants Shenzhen Xunlei a non-exclusive and non-transferable right to use Giganology Shenzhen's proprietary technology. Shenzhen Xunlei can only use the proprietary technology to conduct business according to its authorized business scope. Giganology Shenzhen or its designated representative(s) owns the rights to any new technology developed due to implementation of this contract.

—**Intellectual Properties Purchase Option Agreement** between Giganology Shenzhen and Shenzhen Xunlei — Giganology Shenzhen has an option to acquire Shenzhen Xunlei's intellectual properties at the lowest price permissible by the then-applicable PRC laws and regulation. The term of this contract became expired in March 2022 and had been automatically extended for an additional 10 years at Giganology Shenzhen's discretion to March 2032.

—**Call Option Agreement** — Giganology Shenzhen has an option to acquire all of the outstanding shares of Shenzhen Xunlei at a purchase price equal to RMB1 or the lowest price permissible by the then-applicable PRC laws and regulation. The term of the agreement will expire in 2022 and may be extended at Giganology Shenzhen's discretion.

As a result of these agreements (collectively defined as "Structured Service Contracts"), Giganology Shenzhen can exercise effective control over Shenzhen Xunlei, receives all of the economic benefits and residual interest and absorbs all of the risks and expected losses from Shenzhen Xunlei as if it were the sole shareholder, and has an exclusive option to purchase all of the equity interest in Shenzhen Xunlei at a minimal price. Therefore, Giganology Shenzhen is considered the primary beneficiary of Shenzhen Xunlei and accordingly Shenzhen Xunlei is regarded as VIE and its results of operations, assets and liabilities have been consolidated in the Company's financial statements.

Xunlei Limited
Notes to the consolidated financial statements
(Amounts in US dollars unless otherwise stated)

1. Organization and nature of operations (Continued)

VIE-related risks

A significant part of the Group's business is conducted through Shenzhen Xunlei, the VIE of the Group, of which the Company is the ultimate primary beneficiary. In the opinion of management, the contractual arrangements with the VIE and the nominee shareholders are in compliance with PRC laws and regulations and are legally binding and enforceable. The nominee shareholders indicate they will not act contrary to the contractual arrangements. 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 VIE 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.

On March 15, 2019, the National People's Congress approved the Foreign Investment Law, effective on January 1, 2020. The Foreign Investment Law and its current implementation and interpretation rules do not explicitly classify whether variable interest entities that are controlled through contractual arrangements would be deemed as foreign-invested enterprises if they are ultimately "controlled" by foreign investors. However, it has a catch-all provision under the definition of "foreign investment" that includes investments made by foreign investors in China through other means as provided by laws, administrative regulations, or the State Council. Therefore, it still leaves leeway for future laws, administrative regulations, or provisions of the State Council to provide for contractual arrangements as a form of foreign investment. Therefore, there can be no assurance that the Group's control over the variable interest entities through contractual arrangements will not be deemed as a foreign investment in the future. Furthermore, if future laws, administrative regulations or provisions mandate further actions to be taken by companies with respect to existing contractual arrangements, the Group may face substantial uncertainties as to whether the Group can complete such actions in a timely manner, or at all. Failure to take timely and appropriate measures to cope with any of these or similar regulatory compliance challenges could materially and adversely affect the Group's current corporate structure and business operations.

If a finding was made by PRC authorities under existing laws and regulations and becomes effective, the Group's operation of certain of its operations and businesses through VIE, regulatory authorities with jurisdiction over the licensing and operation of such operations and businesses would have broad discretion in dealing with such a violation, including levying fines, confiscating the Group's income, revoking the business or operating licenses of the affected businesses, requiring the Group to restructure its ownership structure or operations, or requiring the Group to discontinue all or any portion of its operations. Any of these actions could cause significant disruption to the Group's business operations, and have a severe adverse impact on the Group's cash flows, financial position and operating performance.

In addition, it is possible that the contracts among the Group, the VIE and shareholders of VIE would not be enforceable in China if PRC government authorities or courts were to find that such contracts contravene PRC law and regulations or are otherwise not enforceable for public policy reasons. The Group's operations also depend on the VIE and their nominee shareholders to honor their contractual arrangements with the Group. In the event that the Group was unable to enforce these contractual arrangements, the Group would not be able to exert effective control over the affected VIE. Consequently, such VIE's results of operations, assets and liabilities would not be included in the Group's consolidated financial statements. If such were the case, the Group's cash flows, financial position and operating performance would be severely adversely affected. The Group's contractual arrangements with respect to VIE are approved and in place. The Group's management believes that such contracts constitute valid and legally binding obligations of each party to such contractual arrangements under the PRC laws, and considers the possibility remote that PRC regulatory authorities with jurisdiction over the Group's operations and contractual relationships would find the contracts to be unenforceable.

Xunlei Limited
Notes to the consolidated financial statements
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2. Summary of significant accounting policies

(a) Basis of presentation and use of estimates

The consolidated financial statements of the Group have been prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”). Significant accounting policies followed by the Group in the preparation of the accompanying consolidated financial statements are summarized below.

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the accompanying consolidated financial statements and related disclosures. Actual results could differ materially from these estimates. Significant accounting estimates reflected in the Group’s consolidated financial statements mainly include allowance for credit losses, valuation allowance of deferred tax assets, impairment assessment of goodwill and impairment assessment of long-lived assets.

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.

(b) Consolidation

The consolidated financial statements include the financial statements of the Company, its subsidiaries, VIE for which the Company is the primary beneficiary and its subsidiaries. All significant transactions and balances among the Company, its subsidiaries, the VIE and VIE’s subsidiaries 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 power, or has the power to appoint or remove the majority of the members of the board of directors to cast majority of votes at meetings of the board of directors or to govern the financial and operating policies of the investee under a statute or agreement among the shareholders or equity holders.

An entity is considered to be a VIE if the entity’s equity holders do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties.

The Group consolidates entities for which the Company is the primary beneficiary if the entity’s other equity holders do not have the characteristics of a controlling financial interest or do not have sufficient equity at risk for the entity to finance its activities without additional subordinated financial support from other parties.

In determining whether the Company or its subsidiary is the primary beneficiary of a VIE, the Company considered whether it has the power to direct activities that are significant to the VIE’s economic performance, including the power to appoint senior management, right to direct company strategy, power to approve capital expenditure budgets, and power to establish and manage ordinary business operation procedures and internal regulations and systems.

Xunlei Limited
Notes to the consolidated financial statements
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2. Summary of significant accounting policies (Continued)

(b) Consolidation (Continued)

Management has evaluated the contractual arrangements among Giganology Shenzhen, Shenzhen Xunlei and its shareholders and concluded that Giganology Shenzhen receives all of the economic benefits and absorbs all of the expected losses from Shenzhen Xunlei and has the power to direct the aforementioned activities that are significant to Shenzhen Xunlei's economic performance, and is the primary beneficiary of Shenzhen Xunlei. Therefore, Shenzhen Xunlei and its subsidiaries' results of operation, assets and liabilities have been included in the Group's consolidated financial statements. Management monitors the regulatory risk associated with these contractual arrangements. See note 26 for further discussion.

Non-controlling interests represent the portion of the net assets of a subsidiary attributable to interests that are not owned by the Company. The non-controlling interests are presented in the consolidated balance sheets, separately from equity attributable to the shareholders of the Company. Non-controlling interests in the results of the Group is presented on the face of the consolidated statements of comprehensive (loss)/income as an allocation of the total income or loss for the year between non-controlling shareholders and the shareholders of the Company.

(c) Business combinations

The Group accounts for acquisitions of entities that include inputs and processes and have the ability to generate economic benefit as business combinations. The Group allocates the purchase price of the acquisition to the tangible assets and identifiable intangible assets acquired based on their estimated fair values. The excess of the purchase price over those fair values is recorded as goodwill. Acquisition-related costs are expensed as incurred.

(d) Foreign currency translation

The Company's reporting and functional currency is the United States Dollar ("USD"). The functional currency of Onething Co., Ltd. (Thailand) ("Thailand Onething") is the Thai Baht ("THB"), the functional currency of other subsidiaries, the VIE and VIE's subsidiaries located in the Mainland China is the Renminbi ("RMB"), and the functional currency of other subsidiaries located outside the Mainland China is the USD. Transactions denominated in foreign currencies are remeasured into the functional currency at the exchange rates prevailing on the transaction dates. Financial assets and liabilities denominated in foreign currencies are remeasured into the functional currency using the applicable exchange rates prevailing at the balance sheet date. The resulting exchange gains and losses from foreign currency transactions are included in "Other income, net" within the consolidated statements of comprehensive (loss)/income.

The Company uses the monthly average exchange rate for the year and the exchange rates at the balance sheet date to translate the operating results and financial position, respectively, of its subsidiaries whose functional currency is other than the USD. The resulting translation differences are recorded in cumulated translation adjustments, a component of shareholders' equity.

The exchange rate used is based on the rates released by Chinese State Administration of Foreign Exchange.

Xunlei Limited
Notes to the consolidated financial statements
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2. Summary of significant accounting policies (Continued)

(e) Cash and cash equivalents and restricted cash

Cash and cash equivalents include cash on hand, cash in bank and time deposits placed with banks or other financial institutions, which have original maturities of three months or less and are readily convertible to known amounts of cash.

Cash that is restricted as to withdrawal or for use or pledged as security is reported separately on the face of the consolidated balance sheets, and is included in the total cash, cash equivalents, and restricted cash in the consolidated statements of cash flows. The Group's restricted cash represented the cash balance on deposit as required by the court for ongoing litigations.

(f) Short-term investments

Short-term investments include deposits placed with banks with original maturities of more than three months but within one year and investments in financial instruments with a variable interest rate indexed to the performance of underlying assets. In accordance with *ASC 825 Financial Instruments*, for investments in financial instruments with a variable interest rate indexed to 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 the fair value are reflected in the consolidated statements of comprehensive (loss)/income. Interest generated from short term investments are recorded when interest payments are received at the maturity date. It is recorded as "Other income, net" on the statement of comprehensive (loss)/income and measured based on the actual amount of interest the Group received.

(g) Allowance for expected credit losses

Effective on January 1, 2020, the Group adopted Accounting Standards Update (ASU) 2016-13, *Financial Instruments - Credit Losses (Topic 326)* under a modified retrospective transition, which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost with the cumulative-effect adjustment recognized to the opening balance of accumulated deficit of the Group as of January 1, 2020. ASU 2016-13 replaces the existing incurred loss impairment model with an expected loss methodology, referred to as a current expected credit losses ("CECL") methodology, which will result in more timely recognition of credit losses. The CECL methodology requires that the full amount of expected credit losses for the lifetime of the financial instrument be recorded at the time it is originated or acquired, considering relevant historical experience, current conditions and reasonable and supportable macroeconomic forecasts that affect the collectability of financial assets, and adjusted for changes in expected lifetime credit losses subsequently, which may require earlier recognition of credit losses. The Group's accounts receivable, due from related parties and other current assets (including other receivables) and other long-term non-current assets (including other long-term receivables) are within the scope of ASC Topic 326.

The Group assessed the credit loss for accounts receivable with similar risk characteristics on a pool basis. The credit loss assessment for each pool was mainly based on past collection experience, consideration of current and future economic conditions and changes in the Group's collection trends.

(h) Inventories

Inventories are stated at the lower of cost or net realizable value. Cost is determined using actual cost on a weighted average basis. Net realizable value is the amount that can be realized from the sale of the inventory in the normal course of business after allowing for the costs of realization.

Xunlei Limited
Notes to the consolidated financial statements
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2. Summary of significant accounting policies (Continued)

(i) Long-term investments

The Group holds investments in privately held companies. The Group adopted ASU 2016-01, *Financial Instruments*, and measure long-term equity investments, other than equity method investments, at fair value through earnings. For those investments over which the Group does not have significant influence and without readily determinable fair value, the Group elected to record these investments at cost, less impairment, and plus or minus subsequent adjustments for observable price changes. Under this measurement alternative, changes in the carrying value of equity investments will be required to be made whenever there are observable price changes in orderly transactions for the identical or similar investment of the same issuer.

Management regularly evaluates the impairment of long-term equity investments based on performance and financial position of the investee as well as other evidence of market value. Such evaluation includes, but not limited to, reviewing the investee's cash position, recent financing, projected and historical financial performance, cash flow forecasts and financing needs. An impairment loss recognised equal to the excess of the investment costs over its fair value at the end of each reporting period for which the assessment is made. The fair value would then become the new cost basis of investment.

During the years ended December 31, 2020, 2021 and 2022, the Group recognized an impairment of USD794,000, nil and USD590,000, respectively.

(j) 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 asset at the end of the estimated useful life as a percentage of the original cost. If the Group commits to a plan to abandon a long-lived asset before the end of its previous estimated useful life, depreciation shall be revised to reflect a shortened useful life.

	Estimated useful lives	Residual rate
Office building	20 years	5 %
Building decoration	10 years	5 %
Servers and network equipment	3-5 years	5 %
Computer equipment	5 years	5 %
Furniture, fixtures and office equipment	3-5 years	5 %
Motor vehicles	5 years	5 %
Leasehold improvements	Shorter of lease term or 3 years	—

Repair and maintenance costs are expensed as incurred. Expenditures that substantially increase an asset's useful life are capitalized. Upon sale or disposal, 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 (loss)/income. The cost and related accumulated depreciation are removed from the consolidated balance sheets.

Xunlei Limited
Notes to the consolidated financial statements
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2. Summary of significant accounting policies (Continued)

(k) Goodwill

Goodwill represents the excess of the purchase consideration over the fair value of the identifiable tangible and intangible assets acquired and liabilities assumed from the acquired entity as a result of the Company's acquisitions of interests in its subsidiaries, the VIE and VIE's subsidiaries. Goodwill is not amortized but is tested for impairment on an annual basis, or more frequently if events or changes in circumstances indicate that it might be impaired.

On January 1, 2020, the Company adopted the ASU 2017-04: Intangibles—*Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment*. After adopting this guidance, the Group performs the quantitative impairment test by comparing the fair value of each reporting unit to its carrying amount, including goodwill. If the fair value of the reporting unit exceeds its carrying amount, goodwill is not considered to be impaired. If the carrying amount of a reporting unit exceeds its fair value, the amount by which the carrying amount exceeds the reporting unit's fair value is recognized as impairment.

The Group's goodwill was attributable to the Company as a whole. The Group applies the quantitative assessment for the impairment test of goodwill as of December 31, 2021 and 2022. The impairment test for goodwill determines the fair value of the reporting unit, the Company as a whole, and compares it to the carrying value of the assets and liabilities, including goodwill, of the reporting unit. The fair value of the Company was estimated by management using the discounted cash flow model derived from the long-term (five-year) cash flow projections, which included significant judgements and assumptions relating to revenue forecast and operating margins, discount rate that reflects market assessments of the time value and the specific risks relating to the Company, and cash flows beyond the five-year period are extrapolated using a terminal growth rate.

No goodwill impairment losses were recognized for the years ended December 31, 2020, 2021 and 2022 based on the impairment test performed by the Group.

(l) Intangible assets

Intangible assets, which include land use rights, acquired computer software and audio-visual license, are carried at cost less accumulated amortization with no residual value and impairment loss, if any. Amortization of intangible assets is computed using the straight-line method over the estimated useful lives of the assets as follows:

	Estimated useful lives
Land use rights	30 years
Acquired computer software	5 years
Audio-visual license	9 years

(m) Impairment of long-lived assets

For other long-lived assets, the Group evaluates its long-lived assets for impairment whenever events or changes in circumstances 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 be received from use of the assets and their eventual disposition at the lowest level of identifiable cash flows. 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. If the Group identifies an impairment, the carrying value of the asset will be reduced to its estimated fair value based on a discounted cash flow approach or, when available and appropriate, to comparable market values.

Xunlei Limited
Notes to the consolidated financial statements
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2. Summary of significant accounting policies (Continued)

(n) Commitments and contingencies

In the normal course of business, the Group is subject to contingencies, such as legal proceedings and claims arising out of its business, that cover a wide range of matters. Liabilities for such contingencies are recorded when it is probable that a liability has been incurred and the amount of the assessment can be reasonably estimated. In regard to legal cost, the Group recorded such costs as incurred.

Certain conditions may exist as of the date the financial statements are issued, which may result in a loss to the Group, but which will only be resolved when one or more future events occur or fail to occur. The Group's management and its legal counsel assess such contingent liabilities, and such assessment inherently involves an exercise of judgment. In assessing loss contingencies related to legal proceedings that are pending against the Group or unasserted claims that may result in such proceedings, the Group, in consultation with its legal counsel, evaluates the perceived merits of any legal proceedings or unasserted claims as well as the perceived merits of the amount of relief sought or expected to be sought therein.

If the assessment of a contingency indicates that it is probable that a material loss has been incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in the Group's financial statements. If the assessment indicates that a potentially material loss contingency is not probable, but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability, together with an estimate of the range of possible loss, if determinable and material, would be disclosed.

(o) Operating leases

The adoption of *ASC Topic 842 Leases* ("ASC 842") requires a lessee to recognize a right-of-use asset and a lease liability, initially measured at the present value of the lease payments, in its balance sheet.

Lessees shall follow the requirements to classify most leases as either financing or operating using principles similar to previous lease accounting. In the statement of comprehensive (loss)/income, a lessee shall present both of the following: a) for finance leases, the interest expense on the lease liability and amortization of the right-of-use asset are not required to be presented as separate line items and shall be presented in a manner consistent with how the entity presents other interest expense and depreciation or amortization of similar assets, respectively; b) for operating leases, lease expense shall be included in the lessee's income from operations.

The Group have elected the short-term lease exemption for all leases with a lease term of 12 months. Payments associated with short-term leases are recognized on a straight-line basis as an expense in profit or loss.

The standard also requires a lessee to recognize a single lease cost related to operating lease, calculated so that the cost of the lease is allocated over the lease term, on a generally straight-line basis.

With the adoption of ASC 842, the Group assesses, at contract inception, whether a contract is, or contains, a lease. That is, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

In determining the appropriate discount rate to use in calculating the present value of contractual lease payments, management regularly evaluates the lessee's incremental borrowing rate, as the rate implicit in the lease cannot be readily determined.

(p) Revenue recognition

Revenue is recognized when or as the control of the services or goods is transferred to the customer. Depending on the terms of the contract and the laws that apply to the contract, control of the services and goods may be transferred over time or at a point in time.

A contract liability is the Group's obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer. Contract costs includes incremental costs of obtaining a contract and costs to fulfil a contract.

The Group generates revenues from various streams. Net revenues presented in the consolidated statements of comprehensive (loss)/income represent revenues from

service and product sales net off sales discount, value-added tax and related surcharges.

Xunlei Limited
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2. Summary of significant accounting policies (Continued)

(p) Revenue recognition (Continued)

(I) Subscription revenues

The Group operates a VIP membership program where VIP members can have access to high speed online acceleration services, online streaming and other access privileges. The membership fee is time-based and is collected up-front from subscribers. The terms of time-based subscriptions range from one month to twelve months, with the subscribers having the option to renew the contract. The receipt of subscription fee is initially recorded as contract liabilities. The Group satisfies its various performance obligations by providing services throughout the subscription period and revenue is recognized rateably over the period of subscription as services are rendered. Unrecognized portion beyond 12 months from balance sheet date is classified as a long-term liability. The Group evaluated the principal versus agent criteria and determined that the Group is the principal in the transaction and accordingly records revenue on a gross basis. In determining whether to report revenues gross for the amount of subscription revenue, the Group assesses whether it maintains the principal relationship with the VIP members, whether it bears the credit risk and whether it establishes prices for the end users. Service fees levied by online system and mobile payment channels ("Payment handling charges") are recorded as the cost of revenues in the same period as the revenue for the membership fee is recognized.

(II) Live streaming revenues

The Group operates certain live streaming platforms where users can access the platform, view the live streaming content provided by performers, and purchase virtual gifts which they can grant to performers in the live streaming platform to show support for their favorite performers. Xunlei is the principal in the provision of the live streaming content and experience, which is considered as the performance obligation of the Group. The Group recognizes revenue from sales of virtual gifts to the viewers when the relevant virtual gifts are presented to the performers or over the duration of stated period of the time-based item. The Group does not have further obligations to the viewers after the virtual gifts are consumed immediately or after the stated period for time-based items, although the Group will continue to provide the live streaming content to the viewers in order to continue to generate sales of virtual gifts.

(III) Cloud computing revenues

On a monthly basis, the Group records the bandwidth it delivers and recognizes revenue from customers under contractual rates applied (price per Gigabyte ("GB") of bandwidth multiplies total GBs of bandwidth per month).

Xunlei Limited
Notes to the consolidated financial statements
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2. Summary of significant accounting policies (Continued)

(p) Revenue recognition (Continued)

(IV) Other internet value-added services revenues

(i) Advertising revenues

The Group entered into a user traffic monetization agreement with Beijing Itui Online Network Technology Co., Ltd. ("Itui Online"), a company controlled by the Company's principal shareholder since May 2020. Itui Online has been handling substantially all of the Group's advertising resources, including negotiation and entering into contract with advertisers, matching the requirements of advertisers and dispatching the advertising content to Xunlei's platforms, accordingly advertisers or advertising agencies are considered as customers of Itui Online and Itui Online is viewed as the customer of the Group. Revenue arising from this transaction is recognized monthly based on the data publicized on the platforms and pre-agreed sharing portion.

Prior to the above arrangement, the Group cooperated with third-party advertising platforms for placing of the advertising content to the Group's advertising resources. As these third-party advertising platforms are viewed as customers in these transactions, revenue is recognized monthly based on the data publicized on the platforms and pre-agreed sharing portion.

(ii) Online games revenues

The Group enters into a series of technical cooperation agreements with third party online game operators. Users access to the Group's platform and purchase in-game virtual items which can then be used in games provided by the third-party online game operators. The Group provides the third-party online game operators with a portal which the online game operators can host the online games. The Group charges the online game operators based on a pre-determined portion of proceeds earned from paying users pursuant to the revenue sharing arrangements for the provision of portal and payment collection service to the online game operators. The third-party online game operators are the principal in the provision of games to users and the Group provides the relevant platform to the game operators, therefore, the game operators are viewed as the customers in these transactions.

The service fees receivable from the third-party online game operators are variable, which are contingent upon future events (future cash proceeds paid by game players), and are recognized when the contingency is met provided that collectability is reasonably assured.

(q) Sales and marketing expenses

Sales and marketing expenses comprise primarily salaries and benefits of sales and marketing personnel and external advertising and market promotion expenses. The external advertising and market promotion expenses from operations amounted to approximately USD11,026,000, USD15,052,000 and USD12,551,000 for the years ended December 31, 2020, 2021 and 2022, respectively.

(r) General and administrative expenses

General and administrative expenses consist primarily of salaries and benefits (including related share-based compensation), professional service fees, legal expenses and other administrative expenses.

Xunlei Limited
Notes to the consolidated financial statements
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2. Summary of significant accounting policies (Continued)

(s) Research and development costs

The Group incurred research and development costs to develop its acceleration products, live streaming platforms and bandwidth crowdsourcing technologies to enhance the competitive advantages of the Group's key products, such as Xunlei Accelerator and cloud computing services. Costs incurred during the research phase are expensed as incurred. Costs incurred for the development of the downloading software, live streaming platforms and bandwidth crowdsourcing technologies prior to the establishment of technological feasibility, which is when a working model is available, are expensed when incurred. The development costs qualified for capitalization were immaterial for the periods presented.

In addition, the Group incurred other research and development costs in relation to software used to support its operations. Any development costs qualified for capitalization were immaterial for the periods presented.

(t) Taxation and uncertain tax positions

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statements' carrying amounts of existing assets and liabilities and their respective tax bases and tax loss carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the year in which the difference is expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the consolidated statement of operations in the period that includes the enactment date. A valuation allowance is provided to reduce the carrying amount of deferred tax assets if it is considered more likely than not that some portion, or all, of the deferred tax assets will not be realized. The estimation of future taxable income involves significant judgement and estimates. Based on management's estimated future taxable income, management concluded that it is more likely than not that the net operating losses carried forward cannot be utilized prior to their respective expiration dates. The Group adopted the ASC 740 "Income Taxes" regarding uncertain tax positions and evaluated its open tax positions that exist in each jurisdiction for each reporting period. If an uncertain tax position is taken or expected to be taken in a tax return, the tax benefit from that uncertain position is recognized in the Group's consolidated financial statements if it is more likely than not that the position is sustainable upon examination by the relevant taxing authority. The Group did not have any significant uncertain tax position and there was no effect on its financial condition or results of operations as a result of implementing the ASC 740 "Income Taxes". The Group recognizes interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense, if any.

PRC Value-added Tax ("VAT")

VAT payable on goods sold or taxable labor services provided by a general VAT taxpayer for a taxable period is the net balance of the output VAT for the period after crediting the input VAT for the period. In addition to the product revenues currently subject to VAT at a rate of 13%, the Group's revenue from subscription, live streaming, cloud computing services, online advertising and other internet value-added services are now subject to VAT at a rate of 6%.

According to the policy of the PRC State Tax Bureau, starting from April 1, 2019 to December 31, 2021, enterprises that engage in postal services, telecommunication services and consumer services are entitled to claim 110% of the input tax incurred as tax credit in determining VAT payable. The policy has been extended to December 31, 2022 by the PRC State Tax Bureau on February 18, 2022. Starting from January 1, 2023 to December 31, 2023, enterprises that engage in previously mentioned services are entitled to claim 105% of the input tax incurred as tax credit in determining VAT payable according to the policy of the PRC State Tax Bureau on January 9, 2023.

Xunlei Limited
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2. Summary of significant accounting policies (Continued)

(u) Employee benefits

Full-time employees of the Company's subsidiaries, VIE and VIE's subsidiaries in the PRC participate in a government mandated defined contribution plan pursuant to which certain pension benefits, medical care, unemployment insurance, employee housing fund and other welfare benefits are provided to employees. Chinese labor regulations require that the subsidiaries, VIE and VIE's subsidiaries of the Company make contributions to the government for these benefits based on certain percentages of the employees' salaries. The Group has no legal obligation for the benefits beyond the contributions made. The total amounts from operations for such employee benefits, which are expensed as incurred, were USD7,949,000, USD12,411,000 and USD14,266,000 for the years ended December 31, 2020, 2021 and 2022, respectively.

(v) Share-based compensation

The Group measures share-based compensation based on the stock price at the grant date. As the Group has granted restricted shares with service-only condition, the Group elected to recognize compensation costs net of estimated forfeitures on a straight-line basis over the requisite service period, which is generally the same as the vesting period. The amount of compensation cost recognized at any date is at least equal to the portion of the grant-date value of the award that is vested at that date.

(w) Government subsidies

The Group receives subsidies from the local PRC government for general use or purchase of equipment. General-use subsidies which are not subject to any conditions or specific use requirements are recorded as subsidy income in the consolidated statements of operations. Subsidies for purchase of equipment are recorded as deferred government grant when received, and are recorded as other income over the expected useful life of the assets after the related equipment has been purchased.

(x) Segment reporting

The Group's Chief Executive Officer has been identified as the chief operating decision maker, who reviews consolidated operating results of the Group when making decisions about allocating resources and assessing performance of the Group as a whole. The Group has internal reporting of revenues, costs and expenses that does not distinguish between segments, and reports costs and expenses by nature as a whole. The Group does not distinguish between markets or segments for the purpose of internal reporting. Management has determined that the Group operates and manages its business as a single segment, around 88% of revenues of the Group were derived from mainland China during the year ended December 31, 2022.

Xunlei Limited
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2. Summary of significant accounting policies (Continued)

(x) Segment reporting (Continued)

An analysis of the different types of total revenues for the years ended December 31, 2020, 2021 and 2022 are summarized as follows:

Revenue from operations (In thousands)	Years ended December 31,		
	2020	2021	2022
Subscription revenue	84,299	91,174	100,557
Live streaming revenue and other internet value-added services (note a)	38,039	53,614	122,372
Cloud computing services and product revenue (note b)	64,345	94,813	119,635
Total revenues	186,683	239,601	342,564

Notes:

(a) Other internet value-added services mainly comprised online advertising, online games and other technical services.

(b) Product revenue comprised sales of OneThing Cloud and Onething Edge Station devices and hard disks.

(c) The total revenues were reclassified to present in three types for the year ended December 31, 2022, and accordingly the classification of total revenues has been adjusted retrospectively for the years ended December 31, 2020 and 2021.

(y) Net (loss)/income per share

Net basic (loss)/income per share is computed by dividing net (loss)/income attributable to holders of common shares by the weighted-average number of common shares outstanding during the year using the two-class method. Using the two-class method, net (loss)/income is allocated between common shares and other participating securities based on their participating rights.

Net diluted (loss)/income per share is calculated by dividing net (loss)/income attributable to common shareholders as adjusted for the effect of dilutive common equivalent shares, if any, by the weighted-average number of common and dilutive common equivalent shares outstanding during the year. Dilutive equivalent shares are excluded from the computation of diluted (loss)/income per share if their effects would be anti-dilutive. Common share equivalents are included for the unvested stock under the treasury stock method.

(z) Comprehensive (loss)/income

Comprehensive (loss)/income is defined as the change in equity of the Group during the period from transactions and other events and circumstances excluding transactions resulting from investments from shareholders and distributions to shareholders. Accumulated other comprehensive (loss)/income, as presented on the accompanying consolidated balance sheets, consists of cumulative translation adjustments.

Xunlei Limited
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2. Summary of significant accounting policies (Continued)

(aa) Profit appropriation and statutory reserves

The Group's subsidiaries, the VIE and VIE's subsidiaries incorporated in the PRC are required on an annual basis to make appropriations of retained earnings set at certain percentage of after-tax profit determined in accordance with PRC accounting standards and regulations. Appropriation to the statutory general reserve should be at least 10% of the after-tax net income determined in accordance with the legal requirements in the PRC until the reserve is equal to 50% of the entities' registered capital. The Group is not required to make appropriation to other reserve funds and the Group does not have any intentions to make appropriations to any other reserve funds.

The general reserve fund can only be used for specific purposes, such as setting off the accumulated losses, enterprise expansion or increasing the registered capital. Appropriations to the general reserve funds are classified in the consolidated balance sheets as statutory reserves.

There are no legal requirements in the PRC to fund these reserves by transfer of cash to restricted accounts, and the Group does not do so.

(bb) Dividends

Dividends are recognized when declared. No dividends were declared for the years ended December 31, 2020, 2021 and 2022. The Group does not have any present plan to pay any dividends on common shares in the foreseeable future. The Group currently intends to retain the available funds and any future earnings to operate and expand its business.

(cc) Recent accounting pronouncements

In June 2022, the FASB issued ASU No. 2022-03, *Fair Value Measurement (Topic 820): Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions*, which (1) to clarify the guidance in *Topic 820, Fair Value Measurement*, when measuring the fair value of an equity security subject to contractual restrictions that prohibit the sale of an equity security, (2) to amend a related illustrative example, and (3) to introduce new disclosure requirements for equity securities subject to contractual sale restrictions that are measured at fair value in accordance with *Topic 820*. The new amendments are effective for fiscal years beginning after December 15, 2023 and interim periods within those fiscal years, including interim periods within those fiscal years. Early adoption is permitted for both interim and annual financial statements that have not yet been issued or made available for issuance.

In October 2021, the FASB issued ASU No. 2021-08, *Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers* (ASU 2021-08), which clarifies that an acquirer of a business should recognize and measure contract assets and contract liabilities in a business combination in accordance with *Topic 606, Revenue from Contracts with Customers*. The new amendments are effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. The amendments should be applied prospectively to business combinations occurring on or after the effective date of the amendments, with early adoption permitted.

The Group does not expect that the adoption of those guidance will have a material impact on the consolidated financial statements.

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3. Cash and cash equivalents

Cash and cash equivalents represent cash on hand, cash held at bank, and time deposits placed with banks or other financial institutions, which have original maturities of three months or less. Cash on hand and cash held at bank balance as of December 31, 2021 and 2022 primarily consist of the following currencies:

(In thousands)	December 31, 2021		December 31, 2022	
	Amount	USD equivalent	Amount	USD equivalent
RMB	356,535	55,922	699,666	100,461
USD	66,650	66,650	73,449	73,449
SGD	739	547	2,370	1,760
Hong Kong Dollar	1,413	181	1,223	157
Others	Not applicable	58	Not applicable	1,327
Total		123,358		177,154

As of December 31, 2021 and 2022, included in the cash and cash equivalents are time deposits with original maturities of three months or less of USD31,050,000 and USD54,350,000, respectively.

4. Short-term investments

(In thousands)	December 31, 2021	December 31, 2022
Time deposits	62,379	51,044
Investments in financial instruments (note a)	53,273	32,582
Total	115,652	83,626

Notes:

- (a) The financial instruments were issued by commercial banks in the PRC with a variable interest rate indexed to performance of underlying assets. Since these investments' maturity dates are within one year, they are classified as short-term investments.
- (b) Time deposits and investments in financial instruments are stated on the balance sheets at the principal amount plus accrued interest. Interest income is recorded in "Other income, net" in the consolidated statements of comprehensive (loss)/income.

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5. Accounts receivable, net

(In thousands)	December 31, 2021	December 31, 2022
Accounts receivable	27,899	31,192
Less: Allowance for current expected credit losses	(1,764)	(1,429)
Accounts receivable, net	26,135	29,763

The following table presents movement in the allowance for current expected credit loss:

(In thousands)	December 31, 2020	December 31, 2021	December 31, 2022
Balance at beginning of the year	7,604	9,329	1,764
Additions	1,137	72	—
Reversals	—	(481)	(188)
Write-off	—	(7,375)	(2)
Exchange difference	588	219	(145)
Balance at end of the year	9,329	1,764	1,429

The accounts receivable due from the top 10 customers accounted for about 86% and 86% of the balance of accounts receivable as of December 31, 2021 and 2022, respectively. The following table summarizes customers with balances of accounts receivable which was greater than 10% of the Group's total accounts receivable:

	December 31, 2021	December 31, 2022
Customer A	26 %	*
Customer B	16 %	39 %
Customer C	13 %	*
Customer D	11 %	12 %
Customer E	*	17 %

* Less than 10%.

6. Inventories

(In thousands)	December 31, 2021	December 31, 2022
Hardware devices	1,595	532
Others	238	206
Less: Impairment	(470)	(281)
Total	1,363	457

Note: The inventories written down was USD429,000 and USD15,000 for the years ended December 31, 2021 and 2022, respectively.

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7. Prepayments and other assets

(In thousands)	December 31, 2021	December 31, 2022
Current portion:		
Deposit related to an ongoing litigation (note a)	4,862	—
Advances to suppliers (note b)	3,003	4,042
Receivable related to an asset disposal in 2019	4,684	4,288
Receivable from a business disposal in 2015	3,623	3,316
Loans to employees (note c)	1,713	1,851
Rental and other deposits	1,159	1,397
Others	3,867	4,040
Less: Allowance for current expected credit losses	(11,069)	(10,667)
Total of prepayments and other current assets	11,842	8,267
Non-current portion:		
Loans to employees, non-current portion (note c)	1,473	1,543
Advances to suppliers, non-current portion (note b)	1,314	594
Total of long-term prepayments and other assets	2,787	2,137

The following table presents movement in the allowance for current expected credit loss:

(In thousands)	December 31, 2020	December 31, 2021	December 31, 2022
Balance at beginning of the year	5,503	10,283	11,069
Additions	4,168	745	745
Reversals	—	(150)	(197)
Write-off	—	(54)	—
Exchange difference	612	245	(950)
Balance at end of the year	10,283	11,069	10,667

Notes:

- (a) The balance as of December 31, 2021 represented the deposits placed in a custodian bank account of the court to secure an order for preservation of assets against a supplier of the Group. The deposit was repaid to the Group when the related litigation was withdrawn in January 2022.
- (b) Advances to suppliers primarily include prepayments to bandwidth suppliers, prepayments for the construction and improvements related to Xunlei Tower and other prepaid expenses.
- (c) The Group entered into loan contracts with certain employees, under which the Group provided interest-free loans or low-interest loans to these employees. The loan amounts vary amongst different employees from repayable on demand to repayable in equal installments on a monthly basis over a term of 5 to 10 years. The balances classified as current represented loan amounts that are repayable on demand or repayable within the next twelve months from the balance sheet date.

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8. Long-term investments

(In thousands)	December 31, 2021	December 31, 2022
Equity interests without a readily determinable fair value:		
Balance at beginning of the year	26,734	31,495
Additions	4,627	—
Net unrealized gains on investments held (note c)	—	437
Impairment on long-term investments (note d)	—	(590)
Exchange difference	134	(531)
Balance at end of the year	31,495	30,811

Details of the Group's ownership of the long-term investments are as follows:

Investee	Percentage of ownership of shares as of December 31,	
	2021	2022
Equity method investment:		
Shenzhen Mojingou Information Services Co., Ltd.	28.77 %	28.77 %
Equity interests without a readily determinable fair value:		
Guangzhou Yuechuan Network Technology Co., Ltd.	9.30 %	9.30 %
Chengdu Diting Technology Co., Ltd.	12.74 %	12.74 %
Shanghai Guozhi Electronic Technology Co., Ltd.	16.80 %	16.80 %
Guangzhou Hongsi Network Technology Co., Ltd.	19.90 %	19.90 %
Xiamen Diensi Network Technology Co., Ltd.	14.25 %	14.25 %
11.2 Capital I, L.P.	2.03 %	2.03 %
Cloudtropy	9.69 %	9.69 %
Lexiang Technology Co., Ltd. (formerly named as "Shanghai Lexiang Technology Co., Ltd.") ("Lexiang") (note a)	6.93 %	6.49 %
Hangzhou Feixiang Data Technology Co., Ltd.	28.00 %	28.00 %
Shenzhen Meizhi Interactive Technology Co., Ltd.	9.40 %	9.40 %
Beijing Yunhui Tianxia Technology Co., Ltd.	13.70 %	13.70 %
Yingshi Innovation Technology Co., Ltd. (formerly named as "Shenzhen Arashi Vision Interactive Technology Co., Ltd.")	8.73 %	8.73 %
Beijing Cloudin Technology Co., Ltd.	4.12 %	4.12 %
Quanxun Huiju Networking Technology (Beijing) Co., Ltd. ("Quanxun Huiju")	5.40 %	5.40 %
Blue Bayread Limited ("Blue Bayread") (note b)	1.63 %	1.63 %
Clapper Media Group Inc. ("Clapper") (note c)	10.00 %	9.58 %
Beijing Yunshang Hemei Culture Media Co., Ltd. ("Yunshang Hemei") (note d)	10.00 %	10.00 %

Notes :

- (a) In October 2020, the Group disposed 4.82% of the equity interest in Lexiang, for which full impairment have been provided in December 2019, at a consideration of USD268,000. The remaining equity interest in Lexiang was remeasured based on this observable price change from the disposal, a fair value gain of USD794,000 was recognized accordingly. The Group recognized impairment against this investment of USD794,000 as of December 31, 2020, after considering Shanghai Lexiang's operation performance, financial and liquidity position after the above transaction.

In September 2021 and May 2022, the Group's interest in Lexiang was diluted to 6.93% and 6.49%, respectively, as additional shares were issued by Lexiang, no changes in the carrying value in Lexiang was made as the related transactions did not provide observable price changes to the Group.

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8. Long-term investments (Continued)

- (b) In December 2021, the Group made an equity investment of USD3,000,000 to acquire 1.63% equity interest of Blue Bayread, which is a privately-held company.
- (c) In October 2021, the Group made an equity investment of USD1,000,000 to acquire 10% equity interest of Clapper, which is a privately-held company.

In March 2022, the Group's interest in Clapper was diluted to 9.58% as additional shares were issued by Clapper, and fair value gain of USD437,000 was recognized based on the observable price changes of Clapper as indicated in its new financing.

- (d) In December 2021, the Group made an equity investment of USD627,384 (equivalent to RMB4,000,000) to acquire 10% equity interest of Yunshang Hemei, which is a privately-held company.

In March 2022, full impairment of USD 590,000 (equivalent to RMB4,000,000) was provided by the Group, after considering Yunshang Hemei's operation performance, financial and liquidity position.

9. Property and equipment, net

Property and equipment consist of the following:

(In thousands)	December 31, 2021	December 31, 2022
Servers and network equipment	15,522	15,065
Computer equipment	1,737	1,624
Furniture, fixtures and office equipment	857	790
Motor vehicles	492	449
Office building (note)	—	47,902
Building decoration and leasehold improvements (note)	7,428	8,705
Total original costs	26,036	74,535
Less: Accumulated depreciation	(18,638)	(12,801)
Less: Accumulated impairment	(2)	—
Sub-total	7,396	61,734
Construction in progress (note)	50,261	—
Total	57,657	61,734

Note: The construction of Xunlei Tower was completed in December 2022 and the balance of construction in progress was transferred to office building and building decoration accordingly. The ownership certificate of Xunlei Tower was still under registration process as of December 31, 2022.

No impairment loss was recognized for the years ended December 31, 2020, 2021 and 2022.

Depreciation expense recognized for the years ended December 31, 2020, 2021 and 2022 are summarized as follows:

(In thousands)	Years ended December 31,		
	2020	2021	2022
Costs of revenues	6,247	4,805	1,362
Research and development expenses	529	436	467
General and administrative expenses	2,492	1,068	828
Sales and marketing expenses	9	10	9

Total	9,277	6,319	2,666
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10. Right-of-use assets and lease liabilities

The right-of-use assets, represented the leased offices of the Group, are amortized over the lease terms, which are greater than 1 year but less than 3 years. Right-of-use assets for long-term operating leases were as below:

(In thousands)	Office leases
Net book amount as of January 1, 2021	1,954
Additions	25
Modification of operating lease	(43)
Amortization	(1,934)
Effect of foreign currency exchange differences	25
Net book amount as of December 31, 2021	27
Additions	920
Amortization	(56)
Effect of foreign currency exchange differences	(26)
Net book amount as of December 31, 2022	865

During the years ended December 31, 2020, 2021 and 2022, the general and administrative expenses for long-term operating lease were US\$8,762,000, US\$1,934,000 and US\$262,000, respectively. A charge of US\$291,000, US\$786,000 and US\$2,457,000 were recognized in relation to short-term lease for the years ended December 31, 2020, 2021 and 2022.

As of December 31, 2022, the future minimum payments under non-cancellable short-term operating leases was US\$45,000.

The weighted average discount rate related to operating leases was 5.4%, 5.4% and 5.4%, respectively, as of December 31, 2020, 2021 and 2022, and the weighted average remaining lease term were 1.0 year, 0.8 year and 3.0 years as of December 31, 2020, 2021 and 2022, respectively.

The total cash payments in respect of operating lease were US\$3,797,000, US\$2,003,000 and US\$2,792,000 for the years ended December 31, 2020, 2021 and 2022, respectively.

The undiscounted cash payments for each of the next five years as of December 31, 2022 is:

(In thousands)	
2023	316
2024	316
Total undiscounted payments	632
Less: effect of discounting	(50)
Discounted lease liabilities	582

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11. Intangible assets, net

(In thousands)	December 31,					
	2021			2022		
	Cost	Amortization	Net book value	Cost	Amortization	Net book value
Land use rights	5,218	(1,461)	3,757	4,777	(1,498)	3,279
Acquired computer software	3,875	(3,053)	822	3,264	(2,744)	520
Audio-visual license	6,151	(2,431)	3,720	5,631	(2,884)	2,747
Total	15,244	(6,945)	8,299	13,672	(7,126)	6,546

Amortization expense recognized for the years ended December 31, 2020, 2021 and 2022 are summarized as follows:

(In thousands)	Years ended December 31		
	2020	2021	2022
Cost of revenues	—	10	54
General and administrative expenses	1,210	1,113	1,032
Research and development expenses	6	6	—
Total	1,216	1,129	1,086

The estimated aggregate amortization expense for each of the next five years as of December 31, 2022 is:

(In thousands)	Intangible assets
2023	1,046
2024	983
2025	892
2026	871
2027 and thereafter	2,754

The weighted average amortization periods of intangible assets as of December 31, 2021 and 2022 are as below:

(In year)	December 31, 2021	December 31, 2022
Land use rights	30	30
Acquired computer software	5	5
Audio-visual license	9	9
Total weighted average amortization periods	10	10

12. Goodwill

(In thousands)	December 31, 2021	December 31, 2022
Beginning balance	22,607	23,136
Foreign currency translation adjustment	529	(1,957)
Ending balance	23,136	21,179

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13. Contract liabilities and deferred income

(In thousands)	December 31, 2021	December 31, 2022
Contract liabilities (note a)		
Membership subscription	35,490	37,721
Live streaming	735	969
Others	1,340	1,153
Deferred income		
Government grants	172	—
Total	37,737	39,843
Less: non-current portion (note b)	(845)	(876)
Contract liabilities and deferred income, current portion	36,892	38,967

Notes:

- (a) Contract liabilities were related to unsatisfied performance obligations at the end of the year. Due to the generally short-term duration of the contracts, the majority of the performance obligations are satisfied in the following period. The amount of revenue recognized that was included in contract liabilities balance at the beginning of the year was USD32,611,000 and USD35,380,000 for the years ended December 31, 2021 and 2022, respectively.
- (b) As of December 31, 2021 and 2022, the non-current portion consists of membership subscription of USD845,000 and USD876,000, respectively.

14. Accrued liabilities and other payables

(In thousands)	December 31, 2021	December 31, 2022
Payroll and welfare	18,618	23,277
Tax levies	2,397	4,178
Payables related to Xunlei Kankan	2,642	2,418
Payables for advertisement	3,821	1,980
Legal and litigation related expenses (note 25)	973	634
Professional service fees	2,175	1,656
Agency commissions and rebates from online advertising	2,759	2,525
Payables for construction in progress and office building	9,750	8,528
Others	6,422	4,242
Total	49,557	49,438

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15. Bank borrowings

(In thousands)	December 31, 2021	December 31, 2022
Bank borrowings, current portion	2,876	7,024
Bank borrowings, non-current portion	17,291	24,750
Total	20,167	31,774

The bank borrowings were borrowed by Shenzhen Xunlei for the construction of Xunlei Tower, which was pledged by the land use rights and Xunlei Tower. The interest expense of USD890,000, USD1,000,000 and USD1,593,000 has been capitalized for the years ended December 31, 2020, 2021 and 2022, respectively. The capitalized interest amount included in the carrying amount of Xunlei Tower is depreciated according to the Group's accounting policies as stated in Note 2(j).

The bank borrowings are denominated in RMB, and the interest rate is calculated based on the Loan Prime Rate plus 15 basis points.

As of December 31, 2022, the bank borrowings will be due according to the following schedule:

(In thousands)	Principal amounts
Within 1 year	7,024
Between 1 to 2 years	7,024
Between 2 to 3 years	7,024
Between 3 to 4 years	7,024
Between 4 to 5 years	3,678

16. Common shares

The Company's Memorandum and Articles of Association authorizes the Company to issue 1,000,000,000 shares of USD 0.00025 par value per common share as of December 31, 2022. Each common share is entitled to one vote. The holders of common shares are also entitled to receive dividends whenever funds are legally available and when declared by the Board of Directors, which is subject to the approval by the holders of the common shares representing a majority of the aggregate voting power of all outstanding shares. As of December 31, 2021 and 2022, there were 337,257,946 and 325,047,736 common shares outstanding, respectively.

17. Repurchase of shares

In June 2020, the Board of Directors of the Company authorized a share buyback program (the "2020 Share Buyback Program"), whereby the Company may repurchase up to USD20 million of common shares or ADSs from June 29, 2020 for twelve months on the open market at the prevailing market prices, in privately negotiated transactions, in block trades and through other legally permissible means, depending on market conditions and in accordance with applicable rules and regulations. During the year ended December 31, 2020, 1,191,392 ADSs were purchased at an aggregate consideration of USD4.5 million under the 2020 Share Buyback Program. No shares were repurchased during the year ended December 31, 2021.

In March 2022, the Board of Directors of the Company authorized another share repurchase program (the "2022 Share Buyback Program"), whereby the Company may repurchase up to USD20 million of common shares or ADSs from March 31, 2022 for twelve months in the open market and through privately negotiated transactions, in block trades and/or through other legally permissible means, depending on market conditions and in accordance with applicable rules and regulations. During the year ended December 31, 2022, 4,409,974 ADSs were purchased at an aggregate consideration of approximately USD6.7 million under the 2022 Share Buyback Program.

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18. Share-based compensation

2010 share incentive plan

In December 2010, the Group adopted a share incentive plan, which is referred to as the 2010 Share Incentive Plan (the “2010 Plan”). The purpose of the plan is to attract and retain the best available personnel by linking the personal interests of the members of the board, employees, and consultants to the success of the Group’s business and by providing such individuals with an incentive for outstanding performance to generate superior returns for our shareholders. Under the 2010 Plan, the maximum number of shares in respect of which share options, restricted shares, or restricted share units may be granted is 26,822,828 shares (excluding the share options previously granted to the directors who are the founders of the Company). The number of shares available for such grants was nil as of December 31, 2021 and 2022, as such shares have been transferred to the 2020 share incentive plan since its adoption in June 2020, please refer to the details below.

The maximum term of any issued share option is seven or ten years from the grant date. Share options granted to employees and officers vest over a four-year schedule as stated below:

- (1) One-fourth of the options shall be vested upon the first anniversary of the grant date;
- (2) The remaining three quarters of the options shall be vested on monthly basis over the next thirty-six months (¹/₄₈ of options shall be vested per month subsequently).

Share options granted to directors were subject to a vesting schedule of approximately 32 months.

All share-based payments to employees are measured based on their grant-date fair values. Compensation expense is recognized on a straight-line basis over the requisite service period.

In November 2014, January 2015 and October 2022, the Company issued to the depository bank of 10,000,000 common shares, 10,991,120 common shares and 6,124,735 common shares, respectively, which were reserved for the future exercise of share options or vesting of restricted shares.

The following table summarizes the share option activities for the year ended December 31, 2020, 2021 and 2022:

	Number of share options	Weighted average exercise price (USD)	Weighted- average grant-date fair value (USD)	Weighted average remaining contractual life (years)	Aggregate intrinsic value (USD)
Outstanding, January 1, 2020	10,000	3.97	—	1.16	—
Vested and expected to vest as of January 1, 2020	10,000	3.97	1.01	1.16	—
Expired	(10,000)	3.97	—	—	—
Outstanding, December 31, 2020	—	—	—	—	—
Vested and expected to vest as of December 31, 2020, 2021 and 2022	—	—	—	—	—

As of December 31, 2021 and 2022, there were no unrecognized share-based compensation costs related to share options of the 2010 Plan.

As of December 31, 2022, 10,770,520 restricted shares (2021: 10,770,520), excluding those converted from share options, were granted to employees and officers under the 2010 Plan.

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18. Share-based compensation (Continued)

2010 share incentive plan (Continued)

A summary of the restricted shares activities under the 2010 Plan for the years ended December 31, 2020, 2021 and 2022 is presented below:

	Number of restricted shares
Unvested as of January 1, 2020	5,184,500
Expected to vest as of January 1, 2020	4,406,825
Vested	(965,500)
Forfeited	(2,959,000)
Unvested as of December 31, 2020	1,260,000
Expected to vest as of December 31, 2020	1,071,000
Vested	(400,000)
Forfeited	(210,000)
Unvested as of December 31, 2021	650,000
Expected to vest as of December 31, 2021	552,500
Vested	(330,000)
Unvested as of December 31, 2022	320,000
Expected to vest as of December 31, 2022	272,000

Based upon the Company's historical and expected forfeitures for stock options granted, the directors of the Company estimated that its future forfeiture rate would be 15% for employees and nil for directors and advisors.

As of December 31, 2022, total unrecognized compensation expense relating to the restricted shares was USD352,479 (2021: USD1,031,340).

2013 share incentive plan

In November 2013, the Group adopted a share incentive plan, which is referred to as the 2013 Share Incentive Plan (the "2013 Plan"). The purpose of the plan is to motivate, attract and retain the best available personnel by linking the personal interests of senior officers to the success of the Group's business. Under the 2013 Plan, the maximum number of restricted shares that may be granted is 9,073,732 shares. The number of shares available for such grants was nil as of December 31, 2021 and 2022, as such shares have been transferred to the 2020 share incentive plan in June 2020, please refer to the details below.

The vesting schedules of the restricted shares under the 2013 Plan are determined by the directors of the Company.

There were no restricted shares activities under the 2013 Plan for the years ended December 31, 2020, 2021 and 2022, and the number of unvested restricted shares were nil for the years then ended.

As of December 31, 2021 and 2022, total unrecognized compensation expense relating to the restricted shares was both nil.

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18. Share-based compensation (Continued)

2014 share incentive plan

In April 2014, the Group adopted a share incentive plan, which is referred to as the 2014 Share Incentive Plan (the “2014 Plan”). The purpose of the plan is to motivate, attract and retain the best available personnel by linking the personal interests of senior management to the success of the Group’s business. Under the 2014 Plan, the maximum number of restricted shares that may be granted to officers, directors or employees of, or advisors or consultants to the Company and its subsidiaries, the VIE and VIE’s subsidiaries is 14,195,412 shares. The Company issued 14,195,412 common shares to Leading Advice Holdings Limited, a company owned by the co-founder, to facilitate the administration of the 2014 Plan. The number of shares available for such grants was nil as of December 31, 2021 and 2022, as such shares have been transferred to the 2020 share incentive plan in June 2020, please refer to the details below.

A summary of the restricted shares activities under the 2014 Plan for the years ended December 31, 2020, 2021 and 2022 is presented below:

	Number of restricted shares
Unvested as of January 1, 2020	1,321,200
Vested	(228,200)
Forfeited	(1,067,000)
Unvested as of December 31, 2020	26,000
Expected to vest as of December 31, 2020	22,100
Unvested as of January 1, 2021	26,000
Vested	(26,000)
Unvested as of December 31, 2021 and 2022	—
Expected to vest as of December 31, 2021 and 2022	—

As of December 31, 2022, the total unrecognized compensation expense relating to the restricted shares was nil (2021: nil).

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18. Share-based compensation (Continued)

2020 share incentive plan

In June 2020, the Group terminated its 2010 Plan, 2013 Plan and 2014 Plan (the “Existing Plans”) and adopted a 2020 share incentive plan, which is referred to as the 2020 Share Incentive Plan (the “2020 Plan”). Under the 2020 Plan, the maximum aggregate number of shares of the Company that may be granted is 31,000,000, among which 21,039,742 common shares were reserved under the Existing Plans and had not been granted as of the termination of the Existing Plans, 9,667,230 common shares were repurchased pursuant to the repurchase programs authorized by the Company in December 2014 and January 2016, and 293,028 common shares were reserved for issuance under the 2020 Plan. The number of shares available for such grants as of December 31, 2022 is 2,202,325 (2021: 2,685,660).

Upon termination of the Existing Plans, the awards that are granted and outstanding under the Existing Plans remain effective under the 2020 Plan, subject to any amendment and modification to the original award agreements that the Company shall determine.

As of December 31, 2022, the restricted shares units granted to employees and officers (excluding those forfeited) under the 2020 Plan vest as follows:

- (1) 15,059,340 of these restricted shares will vest over a two-year schedule in which one-second of the restricted shares shall be vested upon the first and second anniversary of the grant day, respectively.
- (2) 90,000 of these restricted shares will vest over a three-year schedule in which one-third of the restricted shares shall be vested upon the first, second and third anniversary of the grant day, respectively. Among which, 30,000 shares were vested in an accelerated manner in December 2021.
- (3) 13,148,335 of these restricted shares will vest over a three-year schedule in which two-third of the restricted shares shall be vested upon the second anniversary and one-third of the restricted shares shall be vested upon the third anniversary of the grant day, respectively. Among which, 2,299,965 shares, 1,699,990 shares and 133,335 shares were vested in an accelerated manner in December 2021, June 2022 and November 2022, respectively.
- (4) 500,000 of these restricted shares will vest over a five-year schedule in which one-fifth of the restricted shares shall be vested upon the first, second, third, fourth and fifth anniversary of the grant day, respectively. Among which, 100,000 shares were vested in an accelerated manner in December 2021.

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18. Share-based compensation (Continued)

2020 share incentive plan (Continued)

A summary of the restricted shares activities under the 2020 Plan for the years ended December 31, 2021 and 2022 is presented below:

	Number of restricted shares	Weighted-average grant-date fair value (USD)
Unvested as of January 1, 2021	—	
Granted	31,091,840	0.83
Vested	(2,429,965)	
Forfeited	(2,777,500)	
Unvested as of December 31, 2021	25,884,375	
Expected to vest as of December 31, 2021	19,413,281	
Unvested as of January 1, 2022	25,884,375	
Granted	2,200,000	0.31
Vested	(9,509,660)	
Forfeited	(1,716,665)	
Unvested as of December 31, 2022	16,858,050	
Expected to vest as of December 31, 2022	12,643,538	

Based upon the Company's historical and expected forfeitures for restricted share units granted, the directors of the Company estimated that its future forfeiture rate would be 25% for employees and directors.

As of December 31, 2022, the total unrecognized compensation expense relating to the restricted shares was USD 10,161,241 (2021: USD18,147,328).

Total compensation costs recognized for the years ended December 31, 2020, 2021 and 2022 are as follows:

(In thousands)	Years ended December 31,		
	2020	2021	2022
Sales and marketing expenses	185	59	—
General and administrative expenses	1,209	4,682	6,855
Research and development expenses	916	1,429	1,329
Total	2,310	6,170	8,184

19. Costs of revenues

(In thousands)	Years ended December 31,		
	2020	2021	2022
Bandwidth costs	62,384	80,720	104,580
Revenue-sharing from live streaming business	15,640	26,506	78,636
Payment handling charges	1,459	3,066	6,500
Cost of inventories sold	1,660	1,516	2,228
Depreciation of servers and other equipment	6,247	4,805	1,363
Other costs (note)	5,247	1,990	6,747

Total	92,637	118,603	200,054
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Note: Other costs mainly included content review costs, technical service costs and write-down of inventories.

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20. Other income, net

(In thousands)	Years ended December 31,		
	2020	2021	2022
Government subsidy income	2,287	3,206	2,377
Investment income from short-term investments	2,943	2,486	2,903
Net unrealized gains arising from long-term investments	794	—	437
Investment income on disposal of long-term investments	214	42	—
Impairment on long-term investments	(794)	—	(590)
Exchange (losses)/gains, net	(2,948)	(1,205)	4,494
VAT deduction	1,361	818	1,220
Gains from reversal of long outstanding payables	—	—	3,239
Others	880	(669)	(535)
Total	4,737	4,678	13,545

21. Taxation

(i) Cayman Islands

Under the current laws of the Cayman Islands, the Company is not subject to tax on income or capital gains. Additionally, upon payment of dividends by the Company to its shareholders, no Cayman Islands withholding tax will be imposed.

(ii) British Virgin Islands (“BVI”)

Subsidiaries in the BVI are exempted from income tax on its foreign-derived income in the BVI. There are no withholding taxes in the BVI.

(iii) Hong Kong

Subsidiaries in Hong Kong are subject to 16.5% income tax on their taxable income generated from operations in Hong Kong.

(iv) Singapore

Subsidiaries incorporated in Singapore were subject to 17% of their taxable income.

(v) PRC Enterprise Income Tax (“EIT”)

The EIT is calculated based on the taxable income determined under the PRC laws and accounting standards.

Under the EIT Law, foreign invested enterprises and domestic enterprises are subject to a unified EIT rate of 25%. In accordance with the implementation rules of the EIT Law, a qualified “High and New Technology Enterprise” (“HNTE”) is eligible for a preferential tax rate of 15%.

Shenzhen Xunlei, Onething, Wangwenhua and Xunlei Computer have been recognized as HNTE and entitled to preferential tax rate of 15% for the years ended December 31, 2020, 2021 and 2022. In addition, Onething was established in Qianhai Shenzhen Hongkong Modern Service Industry Cooperation Zone and met the requirements set out by the local authorities, accordingly it is also entitled to a preferential tax rate of 15% for the years ended December 31, 2020, 2021 and 2022.

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21. Taxation (Continued)

(v) PRC Enterprise Income Tax (“EIT”) (Continued)

In July 2020, Jiangxi Node was qualified for a preferential tax rate of 15% and started to apply this rate from then on. The preferential tax rate is awarded to companies which are located in the West Regions of China and operate in certain encouraged industries. This qualification will need to be assessed on an annual basis. For the years ended December 31, 2020, 2021 and 2022, the tax rate assessed for Jiangxi Node was 15%.

Hainan Xunlei Hammer Network Technology Co., Ltd. was established in Hainan Free Trade Port and met the requirements set out by the local authorities, accordingly, it is entitled to a preferential tax rate of 15% for the years ended December 31, 2021 and 2022.

Certain subsidiaries of the Group in the PRC have been granted certain tax concessions to small scale entities by tax authorities in the PRC whereby the subsidiaries operating in the respective region are entitled to tax concessions, the remaining PRC subsidiaries and VIE’s subsidiaries are subject to a 25% EIT rate.

According to a policy of the PRC State Tax Bureau, enterprises that engage in research and development activities are entitled to claim 175% of the research and development expenses incurred in a year as tax deductible expenses in determining their tax assessable profits for that year (“Super Deduction”) from January 1, 2018. In addition, enterprises that engage in research and development activities are allowed to claim 200% of the research and development expenses incurred during October 1, 2022 to December 31, 2022 as tax deductible expenses in determining their tax assessable profits, based on the policy announced by the PRC State Tax Bureau in September 2022.

In addition, according to the EIT Law and its implementation rules, foreign enterprises, which have no establishment or place in the PRC but derive dividends, interest, rents, royalties and other income (including capital gains) from sources in the PRC are 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 generally applicable to any dividends to be distributed from Giganology Shenzhen and Xunlei Computer to the Company out of any profits of Giganology Shenzhen and Xunlei Computer derived after January 1, 2008. Up to December 31, 2022, both Giganology Shenzhen and Xunlei Computer did not declare any dividend to the parent company and have determined that they have no present plan to declare and pay any dividends. The Group currently plans to continue to reinvest its subsidiaries’ undistributed earnings, if any, in its operations in China indefinitely. Accordingly, no withholding income tax was accrued or required to be accrued for the years ended December 31, 2020, 2021 and 2022.

Moreover, the current EIT Law treats enterprises established outside of China with “effective management and control” located in the PRC as PRC resident enterprises for tax purposes. The term “effective management and control” is generally defined as exercising overall management and control over the business, personnel, accounting, properties etc. of an enterprise. The Company, if considered a PRC resident enterprise for tax purposes, would be subject to the PRC EIT at the rate of 25% on its worldwide income for the period after January 1, 2008. As of December 31, 2021 and 2022, the Company has not accrued for PRC tax on such basis. The Company will continue to monitor its tax status.

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21. Taxation (Continued)

(v) PRC Enterprise Income Tax ("EIT") (Continued)

The current and deferred portions of income tax expenses/(benefits) included in the consolidated statements of operations are as follows:

(In thousands)	Years ended December 31,		
	2020	2021	2022
Current income tax expenses	183	53	4,450
Deferred income tax expenses/(benefits)	966	(178)	(382)
Income tax expenses/(benefits)	1,149	(125)	4,068

The aggregate amount and per share effect of the tax holidays and concession are as follows:

	Years ended December 31,		
	2020	2021	2022
Aggregate dollar effect (in thousands)	197	4,100	5,243
Per share effect—basic	(0.00)	0.01	0.02
Per share effect—diluted	(0.00)	0.01	0.02

The reconciliation of total tax expenses/(benefits) computed by applying the respective statutory income tax rates to pre-tax loss is as follows:

(In thousands)	Years ended December 31,		
	2020	2021	2022
Income tax (benefits)/expenses at PRC statutory rate (based on statutory tax rate applicable to enterprises in China)	(3,736)	246	5,047
Effects of differences in tax rates in different jurisdictions applicable to entities of the Group outside of the PRC	787	2,571	1,640
Non-deductible expenses	101	47	468
Effect of Super Deduction	(733)	(2,262)	(2,594)
Effect of tax holidays and tax concessions	(197)	(4,100)	(5,243)
Change in valuation allowance of deferred tax assets	4,704	3,507	4,709
Expiration of tax loss	84	—	—
Others	139	(134)	41
Income tax expenses/(benefits)	1,149	(125)	4,068

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21. Taxation (Continued)

(v) PRC Enterprise Income Tax ("EIT") (Continued)

The tax effects of temporary differences that give rise to the deferred tax assets and liabilities balances of December 31, 2021 and 2022 are as follows:

(In thousands)	December 31, 2021	December 31, 2022
Deferred tax assets, non-current portion:		
Net operating losses carried forward (note a)	39,188	41,240
Impairment of long-term equity investments	4,245	3,972
Provision of allowance for expected credit losses	1,938	1,841
Others	209	383
Valuation allowance (note b)	(45,580)	(47,223)
Deferred tax assets, net	—	213
Deferred tax liabilities:		
Deferred credit arising from an asset acquisition	(930)	(687)

Notes:

- (a) As of December 31, 2022, the accumulated net operating loss of USD5,854,000 of the Group's subsidiaries incorporated in Hong Kong can be carried forward indefinitely to offset future taxable income, the remaining accumulated net operating loss of USD220,231,000, mainly arose from the Company's subsidiaries, the VIE and VIE's subsidiaries established in the PRC, can be carried forward to offset future taxable income and will expire during the period from 2023 to 2030.
- (b) The deferred tax liabilities balances are expected to be recoverable as follows:

(In thousands)	December 31, 2021	December 31, 2022
Within one year	180	165
After one year	750	522
Total	930	687

Movement of valuation allowance is as follows:

(In thousands)	Years ended December 31,		
	2020	2021	2022
Beginning balance	34,257	40,924	45,580
Additions	4,704	3,507	5,931
Reversals	—	—	(1,222)
Exchange difference	1,963	1,149	(3,066)
Ending balance	40,924	45,580	47,223

For the years ended December 31, 2020, 2021 and 2022, valuation allowance was provided for net operating loss carryforwards from certain subsidiaries, the VIE and VIE's subsidiaries because it was more likely than not that such deferred tax assets will not be realized based on the Group's estimate of future taxable income of those companies.

As of December 31, 2022, the tax returns of the Group's PRC subsidiaries, VIE and VIE's subsidiaries for tax years 2018 through 2022 are still open to examination, the tax

returns of FUNI for tax years 2021 through 2022 are still open to examination.

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22. Basic and diluted net (loss)/income per share

Basic and diluted net (loss)/income per share for the years ended December 31, 2020, 2021 and 2022 are calculated as follows:

(Amounts expressed in thousands of USD, except for number of shares and per share data)	Years ended December 31,		
	2020	2021	2022
Numerator:			
Net (loss)/income	(14,140)	1,108	21,347
Less: Net loss attributable to the non-controlling interest	(300)	(83)	(116)
Net (loss)/income attributable to Xunlei Limited's common shareholders for basic/dilutive net (loss)/income per share calculation	(13,840)	1,191	21,463
Denominator:			
Weighted average number of common shares outstanding, basic	337,429,601	334,707,559	336,040,378
Dilutive effect of restricted share units	—	1,262,221	195,123
Weighted average number of common shares outstanding, diluted	337,429,601	335,969,780	336,235,501
Basic net(loss)/ income per share	(0.0410)	0.0036	0.0639
Diluted net (loss)/income per share	(0.0410)	0.0035	0.0638

All potentially dilutive securities, including the restricted share units, were not included in the calculation of dilutive net loss per share for the year ended December 31, 2020 as their effects would be anti-dilutive.

23. Related party transactions

The table below sets forth the related parties and their relationships with the Group:

Related party	Relationship with the Group
Weimin Luo	Former Director and Chief Operating Officer of the Company (note i)
Vantage Point Global Limited	Shareholder of the Company
Aiden & Jasmine Limited	Shareholder of the Company
Millet Technology Co., Ltd. ("Xiaomi Technology")	(note ii)
Guangzhou Millet Information Service Co., Ltd. ("Guangzhou Millet")	(note ii)
Shenzhen Xiaomi Technology Co., Ltd. ("Shenzhen Xiaomi")	(note ii)
Beijing Xiaobu Technology Co., Ltd. ("Beijing Xiaobu")	Company owned by the principal shareholder of the Company (note iii)
Sungai Pte. Ltd. ("Sungai")	Company owned by the principal shareholder of the Company (note iii)
Beijing Itui Technology Co., Ltd. ("Beijing Itui")	Company owned by the principal shareholder of the Company (note iii)
Itui Online	Company owned by the principal shareholder of the Company (note iii)
Chizz (HK) Limited ("Chizz")	Company owned by the principal shareholder of the Company (note iii)

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23. Related party transactions (Continued)

Notes:

- (i) Weimin Luo resigned from the board and resigned as the Chief Operating Officer of the Company on May 19, 2021 and June 1, 2021, respectively.
- (ii) Prior to April 2, 2020, these companies were related companies to the Company as they were affiliated companies of a shareholder of the Company, Best Ventures Limited ("Best Ventures", formerly known as Xiaomi Ventures Limited).

On April 2, 2020, Best Ventures ceased to be the shareholder of the Company as Best Ventures together with certain shareholders of the Company exchanged their common shares of the Company for the shares of Itui International Inc. ("Itui"). In addition, Best Ventures entitled to certain veto rights in determining Itui's voting on the Company. As a result, Best Ventures and the companies controlled by Best Ventures continued to be related parties of the Company.

- (iii) These companies become related parties of Xunlei since April 2, 2020 when Itui became the principal shareholder of the Company.

During the years ended December 31, 2020, 2021 and 2022, significant related party transactions were as follows:

(In thousands)	Years ended December 31,		
	2020	2021	2022
Bandwidth revenue from Xiaomi Technology (note a)	2,211	2,798	4,978
Bandwidth revenue from Beijing Itui (note b)	1,119	821	592
Advertisement revenue from Itui Online (note c)	7,269	11,648	7,804
Advertisement revenue from Shenzhen Xiaomi	53	380	112
Technology service revenue from Guangzhou Millet (note d)	2,466	1,245	—
Technology service revenue from Shenzhen Xiaomi (note d)	—	1,392	2,505
Interest income from Chizz	—	176	176
Bandwidth cost from Quianxun Huiju	594	730	—
Interest accrued to Vantage Point Global Limited (note e)	243	—	—
Interest accrued to Aiden & Jasmine Limited (note e)	91	55	54
Distribution costs to Beijing Xiaobu	—	—	87
Repayment of loans to Weimin Luo arising from a business combination	662	—	—

Notes:

- (a) From August 2019 till now, Onething entered into the contract with Xiaomi Technology for the provision of bandwidth to Xiaomi Technology based on actual usage.
- (b) Onething entered into a sales contract with Beijing Itui for provision of bandwidth charged based on actual usage since July 2019. The contract was extended for one year from July 2021 to June 2022 and extended for another year to June 30, 2023, based on the same terms.
- (c) In May 2020, a user traffic monetization agreement was entered into with Itui Online, according to which Xunlei is entitled to receive a mutually agreed sharing of net advertising revenue covering a period from mid-May 2020 to mid-May 2021. The contract was extended for one year from mid-May 2021 to mid-May 2022 and extended for another year to May 13, 2023, based on the same terms.
- (d) The Group is entitled to receive a mutually agreed sharing of net advertising revenue covering a period from mid-June 2017 to mid-June 2019, as compensation for technology solution services provided to Guangzhou Millet. The contract was extended for two years from mid-June 2019 to mid-June 2021. A similar contract was entered into with Shenzhen Xiaomi in July 2021, covering a period of two years.

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23. Related party transactions (Continued)

- (e) In 2014, the Group repurchased 3,860,733 common shares from Aiden & Jasmine Limited (Co founder's company) for USD10,879,000 and 10,334,679 common shares from Vantage Point Global Limited for USD 29,121,000. According to the repurchase contract, the Company was entitled to an amount (the "Withheld Price") to withhold any taxes with respect to this repurchase as required under the applicable laws. If the Seller has not been specifically required by the applicable governmental or regulatory authority to pay any taxes as required under the applicable laws in connection with the repurchase, after the fifth anniversary of the Closing Date, the Company will pay to the Seller the Withheld Price with a simple interest thereon at the rate of five percent (5)% per annum from the Closing Date. Therefore, the Withheld Price for Aiden & Jasmine Limited and Vantage Point Global Limited was USD1,451,000 (including interest of USD363,000) and USD3,883,000 (including interest of USD971,000), respectively. The Group has repaid USD3,883,000 to Vantage Point Global Limited in January 2021.

As of December 31, 2021 and 2022, the amounts due from/to related parties were as follows:

(In thousands)	December 31, 2021	December 31, 2022
Amounts due from related parties -current		
Accounts receivable due from Itui Online	12,156	7,910
Accounts receivable due from Shenzhen Xiaomi	1,520	1,378
Accounts receivable due from Xiaomi Technology	831	1,871
Accounts receivable due from Beijing Xiaobu	—	1,419
Accounts receivable due from Beijing Itui	857	537
Accounts receivable due from Sungai.	—	92
Other receivable due from Chizz (note)	176	19,689
Other receivable due from Xiaomi Technology	16	—
Other receivables due from other related parties (individual balance was less than USD10)	22	21
Total	15,578	32,917
Amounts due from a related party - non-current		
Other receivable due from Chizz (note)	19,311	—
Total	19,311	—

Note: In September 2021, Xunlei Network provided a loan amounted to USD20 million to Chizz at an interest rate of 3% per annum for a term of 2 years.

(In thousands)	December 31, 2021	December 31, 2022
Amounts due to related parties		
Accounts payable due to Quanyun Huiju	91	—
	1,506	1,560
Other payable due to Aiden & Jasmine Limited		
Total	1,597	1,560

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24. Fair value measurements

ASC 820-10 establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1 — Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets

Level 2 — Include other inputs that are directly or indirectly observable in the marketplace or based on quoted price in markets that are not active

Level 3 — Unobservable inputs which are supported by little or no market activity and are significant to the overall fair value measurement

ASC 820-10 describes three main approaches to measuring 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.

The following table sets forth the financial instruments, measured at fair value, by level within the fair value hierarchy as of December 31, 2021 and 2022.

Fair value measurements as of December 31, 2021				
		Quoted prices in active market for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
(In thousands)	Total			
Short-term investments:				
Investments in structured deposits and wealth management products	53,273	—	53,273	—
Fair value measurements as of December 31, 2022				
		Quoted prices in active market for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
(In thousands)	Total			
Short-term investments:				
Investments in structured deposits and wealth management products	32,582	—	32,582	—

Investments in privately held companies for which the Company elected to record using the measurement alternative are re-measured on a non-recurring basis, and are categorized within Level 3 under the fair value hierarchy. The values are estimated based on valuation methods using the observable transaction price at the transaction date and other unobservable inputs including volatility, as well as rights and obligations of the securities.

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25. Commitments and contingencies

Bandwidth purchase commitments

The Group purchase bandwidth in the PRC under non-cancellable contract expiring on different dates. Payments under purchase of bandwidth are expensed on a straight-line basis over the duration of the respective periods.

As of December 31, 2022, future minimum payments under non-cancellable bandwidth contracts consist of the following:

(In thousands)	December 31, 2022
2023	1,925

Capital commitments

As of December 31, 2022, the Group has unconditional purchase obligations for office building and office equipment that had not been recognized as follows:

(In thousands)	December 31, 2022
2023	7,311
2024 and after	1,090
	8,401

Litigation

The Group is involved in a number of cases pending in various courts. These cases are substantially related to alleged copyright infringement as well as routine and incidental matters to its business, among others. Adverse results in these lawsuits may include awards of damages and may also result in, or even compel, a change in the Group's business practices, which could impact the Group's future financial results. The Group had incurred USD997,000 and USD188,000 legal and litigation related expenses for the years ended December 31, 2021 and 2022, respectively, while the Group reversed USD 1,217,000 legal and litigation related expense for the year ended December 31, 2020.

Up to April 26, 2023, which is the date when the consolidated financial statements were issued, the Group had 5 lawsuits pending against the Group, relating to the alleged copyright infringement and claims for other damages with an aggregate claimed amount of approximately RMB5.6 million (USD0.8 million) which occurred before December 31, 2022 (2021: USD1.7 million). The Group had accrued for USD634,000 litigation related expenses in "Accrued liabilities and other payables" in the consolidated balance sheet as of December 31, 2022 (2021: USD973,000), which is the most probable and reasonably estimable outcome. In addition, there have been a dispute relating to a construction contract which is currently under arbitration procedure, the Group had recognized related payable in "Accrued liabilities and other payables" in the consolidated financial balance sheet as of December 31, 2022 based on the reasonably estimable outcome.

The Group estimated the litigation compensation based on judgments handed down by the court, out-of-court settlements of similar cases as well as advices from the Group's legal counsels. The Group is in the process of appealing certain judgments for which the losses had been accrued. Although the results of unsettled litigation and claims cannot be predicted with certainty, the Group does not expect that the outcome of the 6 lawsuits will result in the amounts accrued materially different from the range of reasonably possible losses. In the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of recorded accrual, with respect to loss contingencies for asserted legal and other claims. However, the outcome of litigation is inherently uncertain. If one or more of these legal matters were resolved against the Company in a reporting period for amounts in excess of management's expectations, the Company's consolidated financial statements for that reporting period could be materially adversely affected.

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26. Certain risks and concentration

PRC regulations

Current PRC laws and regulations place certain restrictions on foreign ownership of companies that engage in internet businesses, including the provision of online advertising services and live streaming service. Specifically, foreign ownership in an internet content provider or other value-added telecommunication service providers may not exceed 50%. The Group conducts its operations in China principally through contractual arrangements among Giganology Shenzhen, its wholly-owned PRC subsidiary, Shenzhen Xunlei and its shareholders. Shenzhen Xunlei holds the licenses and permits necessary to conduct its resource discovery network, online advertising, online games and related businesses in China and hold various operating subsidiaries that conduct a majority of its operations in China. The Company conducts substantially all of its operations in China through, Shenzhen Xunlei, a variable interest entity, which it consolidates as a result of a series contractual arrangements entered. If the Company had ownership of Shenzhen Xunlei, it would be able to exercise its rights as a shareholder to effect changes in the board of directors of Shenzhen Xunlei, which in turn could effect changes at the management level, subject to any applicable fiduciary obligations. However, under the current contractual arrangements, it relies on Shenzhen Xunlei and its shareholders' performance of their contractual obligations to exercise effective control. In addition, its operating contract with Shenzhen Xunlei has a term of ten years, which is subject to Giganology Shenzhen's unilateral termination right. None of Shenzhen Xunlei or its shareholders may terminate the contracts prior to the expiration date.

Further, the Group believes that the contractual arrangements among Giganology Shenzhen, Shenzhen Xunlei and its shareholders are in compliance with PRC law and are legally enforceable. However, the Chinese government may issue from time to time new laws or new interpretations on existing laws to regulate this industry. Regulatory risk also encompasses the interpretation by the tax authorities of current tax laws, and the Group's legal structure and scope of operations in the PRC, which could be subject to further restrictions resulting in limitations on the Company's ability to conduct business in the PRC. The PRC government may also require the Company to restructure the Group's operations entirely if it finds that its contractual arrangements do not comply with applicable laws and regulations. Furthermore, it could revoke the Group's business and operating licenses, require it to discontinue or restrict its operations, restrict its right to collect revenues, block its website, require it to restructure its operations, impose additional conditions or requirements with which the Group may not be able to comply, or take other regulatory or enforcement actions against the Group that could be harmful to its business. The imposition of any of these penalties may result in a material and adverse effect on the Group's ability to conduct the Group's business. In addition, if the imposition of any of these penalties causes the Group to lose the rights to direct the activities of Shenzhen Xunlei and its subsidiaries or the right to receive their economic benefits, the Group would no longer be able to consolidate Shenzhen Xunlei and its subsidiaries. The Group does not believe that any penalties imposed or actions taken by the PRC Government would result in the liquidation of the Company, Giganology Shenzhen or Shenzhen Xunlei.

As stated above, Shenzhen Xunlei holds assets that are important to the operation of the Group's business, including patents for proprietary technology, related domain names and trademarks. If Shenzhen Xunlei or its subsidiaries falls into bankruptcy and all or part of its assets become subject to liens or rights of third-party creditors, the Group may be unable to conduct its business activities in China, which could have a material adverse effect on the Group's future financial position, results of operations or cash flows. However, the Group believes this is a normal business risk many companies face. The Group will continue to closely monitor the financial conditions of Shenzhen Xunlei and its subsidiaries.

Shenzhen Xunlei and its subsidiaries' assets comprise both recognized and unrecognized revenue-producing assets. The recognized revenue-producing assets include intangible assets, purchased property and equipment. The balances of these assets held by Shenzhen Xunlei and its subsidiaries are included in "property and equipment, net" and "intangible assets, net" in the consolidated balance sheet and specifically in the VIE table on the following page. The unrecognized revenue-producing assets mainly consist of license, patents, trademarks, and domain names which are not recorded in the financial statement as they did not meet the recognition criteria set in ASC 350-30-25. The licenses stated above primarily consist of licenses that grant Shenzhen Xunlei and its subsidiaries the right to produce and broadcast internet, radio, and television programs. One of them is the ICP licenses as described in note 1.

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26. Certain risks and concentration (Continued)

PRC regulations (Continued)

As of December 31, 2022, Shenzhen Xunlei and its subsidiaries held patents granted in the PRC and in the United States. Presently, certain patent applications are being examined by the State Intellectual Property Office of the PRC.

As of December 31, 2022, Shenzhen Xunlei and its subsidiaries have applied to register trademarks, of which the Company has received registered trademarks in different applicable trademark categories, including registered with World Intellectual Property Organization.

The following financial information of the consolidated VIEs (including VIE and VIE's subsidiaries) was included in the accompanying consolidated financial statements, before elimination of balances with the Company and its subsidiaries, as of and for the years ended:

(In thousands)	As of December 31,	
	2021	2022
Current assets:		
Cash and cash equivalents	16,645	52,142
Short-term investments	6,373	—
Accounts receivable, net	26,003	29,162
Amount due from group companies	3,102	5,326
Due from related parties	15,387	13,121
Inventories	1,363	457
Prepayments and other current assets	7,142	2,574
Total current assets	76,015	102,782
Non-current assets:		
Long-term investments	6,467	5,345
Property and equipment, net	57,417	61,545
Intangible assets, net	8,299	6,546
Goodwill	23,136	21,179
Long-term prepayments and other assets	2,684	2,094
Right-of-use assets	27	865
Restricted cash	4,078	7,654
Total assets	178,123	208,010
Current liabilities:		
Accounts payable	23,789	23,398
Amount due to group companies	146,732	71,925
Due to related parties	91	—
Bank borrowings	2,876	7,024
Contract liabilities and deferred income	36,740	37,781
Income tax payable	2,451	3,342
Accrued liabilities and other payables	42,449	43,446
Lease liabilities, current portion	18	283
Total current liabilities	255,146	187,199
Non-current liabilities:		
Contract liabilities and deferred income	845	876
Deferred tax liabilities	930	687
Amount due to group companies	31,369	97,617
Bank borrowings	17,291	24,750
Lease liabilities	7	299
Total liabilities	305,588	311,428

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26. Certain risks and concentration (Continued)

PRC regulations (Continued)

(In thousands)	Years ended December 31,		
	2020	2021	2022
Third-party revenues	186,679	228,736	301,853
Third-party costs of revenues	(92,388)	(109,722)	(171,116)
Inter-company operating expenses	(7,177)	(8,032)	(4,863)
Third-party operating expenses	(101,421)	(110,367)	(115,578)
Net (loss)/income attributable to Xunlei Limited	(10,673)	2,913	11,136

(In thousands)	Years ended December 31,		
	2020	2021	2022
Purchases of goods and services from group companies	—	—	(29,738)
Other operating activities with external parties	(13,423)	24,945	54,684
Net cash (used in)/generated from operating activities	(13,423)	24,945	24,946
Loans to group companies	(6,329)	—	—
Repayment of loans from group companies	502	—	—
Other investing activities with external parties	(9,160)	(19,417)	(8,801)
Net cash used in investing activities	(14,987)	(19,417)	(8,801)
Loans from group companies	2,542	23,527	25,580
Repayment of loans to group companies	(4,300)	(24,425)	(10,830)
Other financing activities with external parties	7,154	(223)	13,388
Net cash generated from/(used in) financing activities	5,396	(1,121)	28,138
	(23,014)	4,407	44,283

Xunlei Limited
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26. Certain risks and concentration (Continued)

Foreign exchange risk

The Group's financing activities are denominated mainly in USD. The RMB is not freely convertible into foreign currencies. Remittances of foreign currencies into the PRC and exchange of foreign currencies into the RMB 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. The revenues and expenses of the Company's subsidiaries, the VIE and VIE's subsidiaries are generally denominated in RMB and their assets and liabilities are denominated in RMB.

Concentration of customer risk

The top 10 customers accounted for approximately 38%, 35% and 33% of the net revenues for the years ended December 31, 2020, 2021 and 2022, respectively.

For the years ended December 31, 2020, 2021 and 2022, revenue from Customer A was USD21.0 million, USD14.9 million and USD8.2 million, accounted for approximately 11%, 6% and 2% of the Group's total revenues, revenue from Customer B was USD14.2 million, USD31.4 million and USD49.4 million, accounted for approximately 8%, 13% and 14% of the Group's total revenues, respectively. Other than this, no revenue derived from transactions with any other single customer represented 10% or more of the Group's total revenues.

Credit risk

As of December 31, 2021 and 2022, substantially all of the Group's cash and cash equivalents, restricted cash and short-term investments were held at reputable financial institutions in the jurisdictions where the Company, the Company's subsidiaries, the VIE and VIE's subsidiaries are located. The Group believes that it is not exposed to unusual risks as these financial institutions have high credit quality. The Group has not experienced any losses on its deposits of cash and cash equivalents, restricted cash and short-term investments.

Prior to entering into sales agreements, the Group performs ongoing credit assessments of its customers, taking into account their financial position, credit history and other factors such as current market conditions. Further, the Group has not experienced any significant bad debts with respect to its accounts receivable for the years ended December 31, 2020, 2021 and 2022.

The Group is exposed to credit risk in relation to other assets comprised of due from related parties and other receivables, which are typically unsecured. In evaluating the collectability of the balances, the Group considered various factors, including the related parties and third parties' repayment history and their credit-worthiness. An allowance for credit losses is made when collection of the full amount is no longer probable.

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26. Certain risks and concentration (Continued)

Restricted net assets

Relevant PRC laws and regulations permit payments of dividends by the Company's subsidiaries, the VIE and VIE's subsidiaries in China only out of their retained earnings, if any, as determined in accordance with PRC accounting standards and regulations. In addition, the Company's subsidiaries, the VIE and VIE's subsidiaries in China are required to make certain appropriation of net after-tax profits or increase in net assets to the statutory surplus fund (see note 2(aa)) prior to payment of any dividends. As a result of these and other restrictions under PRC laws and regulations, the Company's subsidiaries, the VIE and VIE's subsidiaries in China are restricted in their ability to transfer their net assets to the Company in terms of cash dividends, loans or advances, which restricted portion amounted to USD172,120,000 as of December 31, 2022, or 56% of the Company's total consolidated net assets. Even though the Company currently does not require any such dividends, loans or advances from the PRC subsidiaries, the VIE and VIE's subsidiaries for working capital and other funding purposes, the Company may in the future require additional cash resources from the Company's subsidiaries, the VIE and VIE's subsidiaries in China due to changes in business conditions, to fund future acquisitions and development, or merely to declare and pay dividends to make distributions to shareholders.

Furthermore, 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 at the time of requesting such conversion may temporarily delay the ability of the PRC subsidiaries, the VIE and VIE's subsidiaries to remit sufficient foreign currency to pay dividends or other payments to the Company, or otherwise satisfy their foreign currency denominated obligations.

27. Subsequent events

On March 13, 2023, the Board of Directors of the Company amended and restated the 2020 Plan, the maximum aggregate number of shares of the Company available for grant of awards was increased from 31,000,000 to 46,561,200.

28. Additional information: condensed financial statements of the Company

Regulation S-X requires condensed financial information as to financial position, statements of cash flows and results of operations of a parent company as of the same dates and for the same periods for which audited consolidated financial statements have been presented when the restricted net assets of consolidated and unconsolidated subsidiaries together exceed 25 percent of consolidated net assets as of the end of the most recently completed fiscal year.

The Company records its investment in its subsidiaries, the VIE and VIE's subsidiaries under the equity method of accounting.

Such investments are presented on the separate condensed balance sheets of the Company as "Investments in subsidiaries and consolidated VIEs".

The subsidiaries did not pay any dividends to the Company for the periods presented. Certain information and footnote disclosures generally included in financial statements prepared in accordance with U.S. GAAP have been condensed and omitted. The footnote disclosures represent supplemental information relating to the operations of the Company, as such, these statements should be read in conjunction with the notes to the consolidated financial statements of the Group.

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28. Additional information: condensed financial statements of the Company (Continued)

The Company did not have significant other commitments, long-term obligations, or guarantees as of December 31, 2022.

Condensed Balance Sheets

(In thousands)	December 31, 2021	December 31, 2022
Assets		
Current assets:		
Cash and cash equivalents	32,015	32,004
Short-term investments	40,972	29,342
Due from group companies	107,484	5,808
Prepayments and other current assets	183	927
Total current assets	180,654	68,081
Non-current assets:		
Due from group companies	92,917	200,471
Investments in subsidiaries and consolidated VIEs	36,324	49,888
Total assets	309,895	318,440
Liabilities		
Current liabilities:		
Accounts payable	55	55
Due to group companies	2,546	5,028
Due to related parties	1,506	1,560
Income tax payables	—	10
Accrued liabilities and other payables	2,141	1,894
Total current liabilities	6,248	8,547
Total liabilities	6,248	8,547
Commitments and contingencies		
Shareholders' equity		
Common shares	84	81
Treasury shares (31,619,259 shares and 49,954,204 shares as of December 31, 2021 and 2022, respectively)	8	12
Other shareholders' equity	303,555	309,800
Total Xunlei Limited's shareholders' equity	303,647	309,893
Total liabilities and shareholders' equity	309,895	318,440

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28. Additional information: condensed financial statements of the Company (Continued)

Condensed Statements of Operations

(In thousands)	Years ended December 31,		
	2020	2021	2022
Operating expenses			
General and administrative expenses	(1,438)	(3,302)	(6,436)
Total operating expenses	(1,438)	(3,302)	(6,436)
Operating loss	(1,438)	(3,302)	(6,436)
Interest income	2	107	360
Interest expense	(399)	(95)	(93)
Other income, net	2,455	585	368
(Loss)/income from subsidiaries and consolidated VIEs	(14,361)	3,935	27,300
(Loss)/income before income tax	(13,741)	1,230	21,499
Income tax expenses	(99)	(39)	(36)
Net (loss)/income	(13,840)	1,191	21,463
Net (loss)/income attributable to Xunlei Limited's common shareholders	(13,840)	1,191	21,463

Condensed Statements of Cash Flows

(In thousands)	Years ended December 31,		
	2020	2021	2022
Other operating activities with external parties	649	(5,732)	(948)
Net cash generated from/(used in) operating activities	649	(5,732)	(948)
Loans to group companies	(1,802)	(26,391)	(3,450)
Repayment of loans from group companies	500	—	—
Other investing activities with external parties	55,030	6,553	11,134
Net cash generated from/(used in) investing activities	53,728	(19,838)	7,684
Other financing activities with external parties	(4,475)	—	(6,747)
Net cash used in financing activities	(4,475)	—	(6,747)
Net increase/(decrease) in cash and cash equivalents	49,902	(25,570)	(11)
Cash and cash equivalents at beginning of year	7,683	57,585	32,015
Effect of exchange rates on cash and cash equivalents	—	—	—
Cash and cash equivalents at end of year	57,585	32,015	32,004