

Facebook Inc
Form 10-K
January 31, 2019

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

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018

or

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

For the transition period from _____ to _____
Commission File Number: 001-35551

FACEBOOK, INC.

(Exact name of registrant as specified in its charter)

Delaware 20-1665019
(State or other jurisdiction of incorporation or organization) (I.R.S. Employer Identification Number)
1601 Willow Road, Menlo Park, California 94025
(Address of principal executive offices and Zip Code)
(650) 543-4800
(Registrant's telephone number, including area code)

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

Class A Common Stock, \$0.000006 par value The Nasdaq Stock Market LLC
(Title of each class) (Name of each exchange on which registered)

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

None

(Title of class)

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

Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. 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 (Exchange Act) 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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or

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information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. " Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See definition of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐

Non-accelerated filer ☐ Smaller reporting company ☐

Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. "

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting stock held by non-affiliates of the registrant as of June 29, 2018, the last business day of the registrant's most recently completed second fiscal quarter, was \$486 billion based upon the closing price reported for such date on the Nasdaq Global Select Market.

On January 28, 2019, the registrant had 2,385,533,940 shares of Class A common stock and 468,455,860 shares of Class B common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the 2019 Annual Meeting of Stockholders are incorporated herein by reference in Part III of this Annual Report on Form 10-K to the extent stated herein. Such proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2018.

FACEBOOK, INC.
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NOTE ABOUT FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. All statements contained in this Annual Report on Form 10-K other than statements of historical fact, including statements regarding our future results of operations and financial position, our business strategy and plans, and our objectives for future operations, are forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," and similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, business strategy, short-term and long-term business operations and objectives, and financial needs. These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in Part I, Item 1A, "Risk Factors" in this Annual Report on Form 10-K. Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the future events and trends discussed in this Annual Report on Form 10-K may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

We undertake no obligation to revise or publicly release the results of any revision to these forward-looking statements, except as required by law. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

Unless expressly indicated or the context requires otherwise, the terms "Facebook," "company," "we," "us," and "our" in this document refer to Facebook, Inc., a Delaware corporation, and, where appropriate, its wholly owned subsidiaries. The term "Facebook" may also refer to our products, regardless of the manner in which they are accessed. For references to accessing Facebook on the "web" or via a "website," such terms refer to accessing Facebook on personal computers. For references to accessing Facebook on "mobile," such term refers to accessing Facebook via a mobile application or via a mobile-optimized version of our website such as m.facebook.com, whether on a mobile phone or tablet.

LIMITATIONS OF KEY METRICS AND OTHER DATA

The numbers for our key metrics, which include our daily active users (DAUs), monthly active users (MAUs), and average revenue per user (ARPU), are calculated using internal company data based on the activity of user accounts. While these numbers are based on what we believe to be reasonable estimates of our user base for the applicable period of measurement, there are inherent challenges in measuring usage of our products across large online and mobile populations around the world. In addition, we are continually seeking to improve our estimates of our user base, and such estimates may change due to improvements or changes in our methodology.

We regularly evaluate these metrics to estimate the number of "duplicate" and "false" accounts among our MAUs. A duplicate account is one that a user maintains in addition to his or her principal account. We divide "false" accounts into two categories: (1) user-misclassified accounts, where users have created personal profiles for a business, organization, or non-human entity such as a pet (such entities are permitted on Facebook using a Page rather than a personal profile under our terms of service); and (2) undesirable accounts, which represent user profiles that we determine are intended to be used for purposes that violate our terms of service, such as spamming. The estimates of duplicate and false accounts are based on an internal review of a limited sample of accounts, and we apply significant judgment in making this determination. For example, to identify duplicate accounts we use data signals such as similar IP addresses or user names, and to identify false accounts we look for names that appear to be fake or other behavior that appears inauthentic to the reviewers. Our estimates may change as our methodologies evolve, including through the application of new data signals or technologies, which may allow us to identify previously undetected duplicate or false accounts and may improve our ability to evaluate a broader population of our users. Duplicate and false accounts are very difficult to measure at our scale, and it is possible that the actual number of duplicate and false accounts may vary significantly from our estimates.

In the fourth quarter of 2018, we estimate that duplicate accounts may have represented approximately 11% of our worldwide MAUs. We believe the percentage of duplicate accounts is meaningfully higher in developing markets such as the Philippines and Vietnam, as compared to more developed markets. In the fourth quarter of 2018, we estimate that false accounts may have represented approximately 5% of our worldwide MAUs. Our estimation of false accounts can vary as a result of episodic spikes in the creation of such accounts, which we have seen originate more frequently in specific countries such as Indonesia and Vietnam. From time to time, we may make product changes or take other actions to reduce the number of duplicate or false accounts among our users, which may also reduce our DAU and MAU estimates in a particular period.

Our data limitations may affect our understanding of certain details of our business. For example, while user-provided data indicates a decline in usage among younger users, this age data is unreliable because a disproportionate number of our younger users register with an inaccurate age. Accordingly, our understanding of usage by age group may not be complete.

In addition, our data regarding the geographic location of our users is estimated based on a number of factors, such as the user's IP address and self-disclosed location. These factors may not always accurately reflect the user's actual location. For example, a user may appear to be accessing Facebook from the location of the proxy server that the user connects to rather than from the user's actual location. The methodologies used to measure user metrics may also be susceptible to algorithm or other technical errors. Our estimates for revenue by user location and revenue by user device are also affected by these factors.

We regularly review our processes for calculating these metrics, and from time to time we may discover inaccuracies in our metrics or make adjustments to improve their accuracy, including adjustments that may result in the recalculation of our historical metrics. We believe that any such inaccuracies or adjustments are immaterial unless otherwise stated. We intend to disclose our estimates of the number of duplicate and false accounts among our MAUs on an annual basis. In addition, our DAU and MAU estimates will differ from estimates published by third parties due to differences in methodology.

The numbers of DAUs and MAUs discussed in this Annual Report on Form 10-K, as well as ARPU, do not include Instagram, WhatsApp, or Oculus users unless they would otherwise qualify as such users, respectively, based on their other activities on Facebook.

In addition, other user engagement metrics included herein do not include Instagram, WhatsApp, or Oculus unless otherwise specifically stated.

PART I

Item 1. Business

Overview

Our mission is to give people the power to build community and bring the world closer together.

Our top priority is to build useful and engaging products that enable people to connect and share with friends and family through mobile devices, personal computers, and other surfaces. We also help people discover and learn about what is going on in the world around them, enable people to share their opinions, ideas, photos and videos, and other activities with audiences ranging from their closest friends to the public at large, and stay connected everywhere by accessing our products, including:

Facebook. Facebook enables people to connect, share, discover, and communicate with each other on mobile devices and personal computers. There are a number of different ways to engage with people on Facebook, including News Feed which displays an algorithmically-ranked series of stories and advertisements individualized for each person.

Instagram. Instagram brings people closer to the people and things they love. It is a community for sharing photos, videos, and messages, and enables people to discover interests that they care about.

Messenger. Messenger is a simple yet powerful messaging application for people to connect with friends, family, groups and businesses across platforms and devices.

WhatsApp. WhatsApp is a simple, reliable and secure messaging application that is used by people and businesses around the world to communicate in a private way.

Oculus. Our hardware, software, and developer ecosystem allows people around the world to come together and connect with each other through our Oculus virtual reality (VR) products.

We generate substantially all of our revenue from selling advertising placements to marketers. Our ads enable marketers to reach people based on a variety of factors including age, gender, location, interests, and behaviors. Marketers purchase ads that can appear in multiple places including on Facebook, Instagram, Messenger, and third-party applications and websites.

We are also investing in other consumer hardware products and a number of longer-term initiatives, such as connectivity efforts, artificial intelligence (AI), and augmented reality, to develop technologies that we believe will help us better serve our mission to give people the power to build community and bring the world closer together.

Competition

Our business is characterized by innovation, rapid change, and disruptive technologies. We compete with companies that sell advertising, as well as with companies that provide social, media, and communication products and services that are designed to engage users on the web, mobile devices and online generally. We face significant competition in every aspect of our business, including from companies that facilitate communication and the sharing of content and information, companies that enable marketers to display advertising, companies that distribute video and other forms of media content, and companies that provide development platforms for applications developers. We compete to attract, engage, and retain people who use our products, to attract and retain marketers, and to attract and retain developers to build compelling mobile and web applications that integrate with our products.

We also compete with the following:

Companies that offer products across broad platforms that replicate capabilities we provide. For example, among other areas, we compete with Apple in messaging, Google and YouTube in advertising and video, Tencent in messaging and social media, and Amazon in advertising.

Companies that provide regional social networks, many of which have strong positions in particular countries.

Traditional, online, and mobile businesses that provide media for marketers to reach their audiences and/or develop tools and systems for managing and optimizing advertising campaigns.

Companies that develop and deliver consumer hardware and virtual reality products and services.

As we introduce or acquire new products, as our existing products evolve, or as other companies introduce new products and services, we may become subject to additional competition.

Technology

Our product development philosophy is centered on continuous innovation in creating and improving products that are social by design, which means that our products are designed to place people and their social interactions at the core of the product experience. As our user base grows, as engagement with products like video increases, and as we deepen our investment in new technologies like AI, our computing needs continue to expand. We make significant investments in technology both to improve our existing products and services and to develop new ones, as well as for our marketers and developers. We are also investing in protecting the security and integrity of our platform by investing in both people and technology to strengthen our systems against abuse.

Sales and Operations

The majority of our marketers use our self-service ad platform to launch and manage their advertising campaigns. We also have a global sales force that is focused on attracting and retaining advertisers and providing support to them throughout the stages of the marketing cycle from pre-purchase decision-making to real-time optimizations to post-campaign analytics. We work directly with these advertisers, as well as through advertising agencies and resellers. We operate more than 60 offices around the globe, the majority of which have a sales presence. We also invest in and rely on self-service tools to provide direct customer support to our users and partners.

Marketing

To date, our communities have grown organically with people inviting their friends to connect with them, supported by internal efforts to stimulate awareness and interest. In addition, we have invested and will continue to invest in marketing our products and services to grow our brand and help build community around the world.

Intellectual Property

To establish and protect our proprietary rights, we rely on a combination of patents, trademarks, copyrights, trade secrets, including know-how, license agreements, confidentiality procedures, non-disclosure agreements with third parties, employee disclosure and invention assignment agreements, and other contractual rights. In addition, to further protect our proprietary rights, from time to time we have purchased patents and patent applications from third parties. We do not believe that our proprietary technology is dependent on any single patent or copyright or groups of related patents or copyrights. We believe the duration of our patents is adequate relative to the expected lives of our products.

Government Regulation

We are subject to a variety of laws and regulations in the United States and abroad that involve matters central to our business. Many of these laws and regulations are still evolving and being tested in courts, and could be interpreted in ways that could harm our business. These may involve privacy, data protection and personal information, rights of publicity, content, intellectual property, advertising, marketing, distribution, data security, data retention and deletion, electronic contracts and other communications, competition, protection of minors, consumer protection, telecommunications, product liability, taxation, economic or other trade prohibitions or sanctions, securities law compliance, and online payment services. In particular, we are subject to federal, state, and foreign laws regarding privacy and protection of people's data. Foreign data protection, privacy, content, competition, and other laws and regulations can impose different obligations or be more restrictive than those in the United States. U.S. federal and state and foreign laws and regulations, which in some cases can be enforced by private parties in addition to government entities, are constantly evolving and can be subject to significant change. As a result, the application, interpretation, and enforcement of these laws and regulations are often uncertain, particularly in the new and rapidly evolving industry in which we operate, and may be interpreted and applied inconsistently from country to country and inconsistently with our current policies and practices.

Proposed or new legislation and regulations could also significantly affect our business. For example, the European General Data Protection Regulation (GDPR) took effect in May 2018 and applies to all of our products and services used by people in Europe. The GDPR includes operational requirements for companies that receive or process personal data of residents of the European Union that are different from those previously in place in the European Union, and includes significant penalties for non-compliance. Similarly, there are a number of legislative proposals in the European Union, the United States, at both the federal and state level, as well as other jurisdictions that could impose new obligations in areas affecting our business, such as liability for copyright infringement. In addition, some countries are considering or have passed legislation implementing data protection requirements or requiring local

storage and processing of data or similar requirements that could increase the cost and complexity of delivering our services.

We are and expect to continue to be the subject of investigations, inquiries, data requests, actions, and audits by government authorities and regulators in the United States, Europe, and around the world, particularly in the areas of privacy, data protection, law enforcement, consumer protection, and competition, as we continue to grow and expand our operations. We are currently, and may in the future be, subject to regulatory orders or consent decrees. Orders issued by, or inquiries or enforcement actions initiated by,

government or regulatory authorities could cause us to incur substantial costs, expose us to unanticipated civil and criminal liability or penalties (including substantial monetary fines), or require us to change our business practices in a manner materially adverse to our business.

Employees

As of December 31, 2018, we had 35,587 employees.

Corporate Information

We were incorporated in Delaware in July 2004. We completed our initial public offering in May 2012 and our Class A common stock is listed on The Nasdaq Global Select Market under the symbol "FB." Our principal executive offices are located at 1601 Willow Road, Menlo Park, California 94025, and our telephone number is (650) 543-4800. Facebook, the Facebook logo, FB, the Like button, Instagram, Oculus, WhatsApp, and our other registered or common law trademarks, service marks, or trade names appearing in this Annual Report on Form 10-K are the property of Facebook, Inc. or its affiliates. Other trademarks, service marks, or trade names appearing in this Annual Report on Form 10-K are the property of their respective owners.

Available Information

Our website address is www.facebook.com. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended (Exchange Act), are filed with the U.S. Securities and Exchange Commission (SEC). We are subject to the informational requirements of the Exchange Act and file or furnish reports, proxy statements, and other information with the SEC. Such reports and other information filed by us with the SEC are available free of charge on our website at investor.fb.com when such reports are available on the SEC's website. We use our investor.fb.com and newsroom.fb.com websites as well as Mark Zuckerberg's Facebook Page (<https://www.facebook.com/zuck>) as means of disclosing material non-public information and for complying with our disclosure obligations under Regulation FD.

The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov.

The contents of the websites referred to above are not incorporated into this filing. Further, our references to the URLs for these websites are intended to be inactive textual references only.

Item 1A. Risk Factors

Certain factors may have a material adverse effect on our business, financial condition, and results of operations. You should consider carefully the risks and uncertainties described below, in addition to other information contained in this Annual Report on Form 10-K, including our consolidated financial statements and related notes. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties that we are unaware of, or that we currently believe are not material, may also become important factors that adversely affect our business. If any of the following risks actually occurs, our business, financial condition, results of operations, and future prospects could be materially and adversely affected. In that event, the trading price of our Class A common stock could decline, and you could lose part or all of your investment.

Risks Related to Our Business and Industry

If we fail to retain existing users or add new users, or if our users decrease their level of engagement with our products, our revenue, financial results, and business may be significantly harmed.

The size of our user base and our users' level of engagement are critical to our success. Our financial performance has been and will continue to be significantly determined by our success in adding, retaining, and engaging active users of our products, particularly for Facebook and Instagram. We anticipate that our active user growth rate will generally decline over time as the size of our active user base increases, and it is possible that the size of our active user base may fluctuate or decline in one or more markets, particularly in markets where we have achieved higher penetration rates. For example, in the fourth quarter of 2017, we experienced a slight decline on a quarter-over-quarter basis in the number of daily active users on Facebook in the United States & Canada region. If people do not perceive our products to be useful, reliable, and trustworthy, we may not be able to attract or retain users or otherwise maintain or increase the frequency and duration of their engagement. A number of other social networking companies that achieved early popularity have since seen their active user bases or levels of engagement decline, in some cases precipitously. There is no guarantee that we will not experience a similar erosion of our active user base or engagement levels. Our user engagement patterns have changed over time, and user engagement can be difficult to measure, particularly as we introduce new and different products and services. Any number of factors could potentially negatively affect user retention, growth, and engagement, including if:

- users increasingly engage with other competitive products or services;
- we fail to introduce new features, products or services that users find engaging or if we introduce new products or services, or make changes to existing products and services, that are not favorably received;
- users feel that their experience is diminished as a result of the decisions we make with respect to the frequency, prominence, format, size, and quality of ads that we display;
- users have difficulty installing, updating, or otherwise accessing our products on mobile devices as a result of actions by us or third parties that we rely on to distribute our products and deliver our services;
- user behavior on any of our products changes, including decreases in the quality and frequency of content shared on our products and services;
- we are unable to continue to develop products for mobile devices that users find engaging, that work with a variety of mobile operating systems and networks, and that achieve a high level of market acceptance;
- there are decreases in user sentiment due to questions about the quality or usefulness of our products or our user data practices, or concerns related to privacy and sharing, safety, security, well-being, or other factors;
- we are unable to manage and prioritize information to ensure users are presented with content that is appropriate, interesting, useful, and relevant to them;
- we are unable to obtain or attract engaging third-party content;
- we are unable to successfully maintain or grow usage of and engagement with mobile and web applications that integrate with Facebook and our other products;
- users adopt new technologies where our products may be displaced in favor of other products or services, or may not be featured or otherwise available;
- there are changes mandated by legislation, regulatory authorities, or litigation that adversely affect our products or users;
-

there is decreased engagement with our products, or failure to accept our terms of service, as part of changes that we implemented in connection with the General Data Protection Regulation (GDPR) in Europe, other similar changes that

we implemented in the United States and around the world, or other changes we may implement in the future in connection with other regulations, regulatory actions or otherwise;

- technical or other problems prevent us from delivering our products in a rapid and reliable manner or otherwise affect the user experience, such as security breaches or failure to prevent or limit spam or similar content;
- we adopt terms, policies, or procedures related to areas such as sharing, content, user data, or advertising that are perceived negatively by our users or the general public;
- we elect to focus our product decisions on longer-term initiatives that do not prioritize near-term user growth and engagement;
- we make changes in how we promote different products and services across our family of apps;
- initiatives designed to attract and retain users and engagement are unsuccessful or discontinued, whether as a result of actions by us, third parties, or otherwise;
- third-party initiatives that may enable greater use of our products, including low-cost or discounted data plans, are discontinued;
- there is decreased engagement with our products as a result of taxes imposed on the use of social media or other mobile applications in certain countries, or other actions by governments that may affect the accessibility of our products in their countries;
- we fail to provide adequate customer service to users, marketers, developers, or other partners;
- we, developers whose products are integrated with our products, or other partners and companies in our industry are the subject of adverse media reports or other negative publicity, including as a result of our or their user data practices; or
- our current or future products, such as our development tools and application programming interfaces that enable developers to build, grow, and monetize mobile and web applications, reduce user activity on our products by making it easier for our users to interact and share on third-party mobile and web applications.

If we are unable to maintain or increase our user base and user engagement, our revenue and financial results may be adversely affected. Any decrease in user retention, growth, or engagement could render our products less attractive to users, marketers, and developers, which is likely to have a material and adverse impact on our revenue, business, financial condition, and results of operations. If our active user growth rate continues to slow, we will become increasingly dependent on our ability to maintain or increase levels of user engagement and monetization in order to drive revenue growth.

We generate substantially all of our revenue from advertising. The loss of marketers, or reduction in spending by marketers, could seriously harm our business.

Substantially all of our revenue is currently generated from third parties advertising on Facebook and Instagram. As is common in the industry, our marketers do not have long-term advertising commitments with us. Many of our marketers spend only a relatively small portion of their overall advertising budget with us. Marketers will not continue to do business with us, or they will reduce the budgets they are willing to commit to us, if we do not deliver ads in an effective manner, or if they do not believe that their investment in advertising with us will generate a competitive return relative to other alternatives. We have recently implemented, and we may continue to implement, changes to our user data practices. Some of these changes will reduce marketers' ability to effectively target their ads, which has to some extent adversely affected, and will continue to adversely affect, our advertising business. If we are unable to provide marketers with a suitable return on investment, the pricing of our ads may not increase, or may decline, in which case our revenue and financial results may be harmed.

Our advertising revenue could also be adversely affected by a number of other factors, including:

- decreases in user engagement, including time spent on our products;
- our inability to continue to increase user access to and engagement with our products;
- product changes or inventory management decisions we may make that change the size, format, frequency, or relative prominence of ads displayed on our products or of other unpaid content shared by marketers on our products;
- our inability to maintain or increase marketer demand, the pricing of our ads, or both;

our inability to maintain or increase the quantity or quality of ads shown to users, including as a result of technical infrastructure constraints;

user behavior or product changes that may reduce traffic to features or products that we successfully monetize, including as a result of our efforts to promote the Stories format or increased usage of our messaging products;

reductions of advertising by marketers due to our efforts to implement advertising policies that protect the security and integrity of our platform;

changes to third-party policies that limit our ability to deliver or target advertising;

the availability, accuracy, utility, and security of analytics and measurement solutions offered by us or third parties that demonstrate the value of our ads to marketers, or our ability to further improve such tools;

loss of advertising market share to our competitors, including if prices to purchase our ads increase or if competitors offer lower priced, more integrated or otherwise more effective products;

adverse government actions or legal developments relating to advertising, including legislative and regulatory developments and developments in litigation;

decisions by marketers to reduce their advertising as a result of adverse media reports or other negative publicity involving us, our user data practices, our advertising metrics or tools, content on our products, developers with mobile and web applications that are integrated with our products, or other companies in our industry;

reductions of advertising by marketers due to objectionable content published on our products by third parties, questions about our user data practices, concerns about brand safety, or uncertainty regarding their own legal and compliance obligations;

the effectiveness of our ad targeting or degree to which users opt out of certain types of ad targeting, including as a result of product changes and controls that we implemented in connection with the GDPR, other similar changes that we implemented in the United States and around the world, or other product changes or controls we may implement in the future, whether in connection with other regulations, regulatory actions or otherwise, that impact our ability to target ads;

the degree to which users cease or reduce the number of times they engage with our ads;

changes in the way advertising on mobile devices or on personal computers is measured or priced;

changes in the composition of our marketer base or our inability to maintain or grow our marketer base; and

the impact of macroeconomic conditions, whether in the advertising industry in general, or among specific types of marketers or within particular geographies.

The occurrence of any of these or other factors could result in a reduction in demand for our ads, which may reduce the prices we receive for our ads, or cause marketers to stop advertising with us altogether, either of which would negatively affect our revenue and financial results.

Our user growth, engagement, and monetization on mobile devices depend upon effective operation with mobile operating systems, networks, technologies, products, and standards that we do not control.

The substantial majority of our revenue is generated from advertising on mobile devices. There is no guarantee that popular mobile devices will continue to feature Facebook or our other products, or that mobile device users will continue to use our products rather than competing products. We are dependent on the interoperability of Facebook and our other products with popular mobile operating systems, networks, technologies, products, and standards that we do not control, such as the Android and iOS operating systems and mobile browsers. Any changes, bugs, or technical issues in such systems, or changes in our relationships with mobile operating system partners, handset manufacturers, browser developers, or mobile carriers, or in their terms of service or policies that degrade our products' functionality, reduce or eliminate our ability to distribute our products, give preferential treatment to competitive products, limit our ability to deliver, target, or measure the effectiveness of ads, or charge fees related to the distribution of our products or our delivery of ads could adversely affect the usage of Facebook or our other products and monetization on mobile devices. For example, Apple recently released an update to its Safari browser that limits the use of third-party cookies, which reduces our ability to provide the most relevant ads to our users and impacts monetization. Additionally, in order to deliver high quality mobile products, it is important that our products work well with a range of mobile technologies, products, systems, networks, and standards that we do not control, and that we have good relationships with handset manufacturers, mobile carriers and browser developers. We may not be successful in maintaining or developing relationships with key participants in the mobile ecosystem or in developing products that operate effectively with these technologies, products, systems, networks, or standards. In the event that it is more difficult for our users to access and use Facebook or our other products on their mobile devices, or if our users choose not to access or use Facebook or our other products on their mobile devices or use mobile products that do not offer access to Facebook or our other products, our user growth and user engagement could be harmed. From time to time, we may also take actions regarding the distribution of our products or the operation of our business based on what we believe to be in our long-term best interests. Such actions may adversely affect our users and our relationships with the operators of mobile operating systems, handset manufacturers, mobile carriers, browser developers, or other business partners, and there is no assurance that these actions will result in the anticipated long-term benefits. In the event that our users are adversely affected by these actions or if our relationships with such third parties deteriorate, our user growth, engagement, and monetization could be adversely affected and our business could be harmed.

Our business is highly competitive. Competition presents an ongoing threat to the success of our business.

We compete with companies that sell advertising, as well as with companies that provide social, media, and communication products and services that are designed to engage users on the web, mobile devices and online generally. We face significant competition in every aspect of our business, including from companies that facilitate communication and the sharing of content and information, companies that enable marketers to display advertising, companies that distribute video and other forms of media content, and companies that provide development platforms for applications developers. We compete with companies that offer products across broad platforms that replicate capabilities we provide. For example, among other areas, we compete with Apple in messaging, Google and YouTube in advertising and video, Tencent in messaging and social media, and Amazon in advertising. We also compete with companies that provide regional social networks, many of which have strong positions in particular countries. Some of our competitors may be domiciled in different countries and subject to political, legal, and regulatory regimes that enable them to compete more effectively than us. In addition, we face competition from traditional, online, and mobile businesses that provide media for marketers to reach their audiences and/or develop tools and systems for managing and optimizing advertising campaigns. We also compete with companies that develop and deliver consumer hardware and virtual reality products and services.

Some of our current and potential competitors may have greater resources or stronger competitive positions in certain product segments, geographic regions, or user demographics than we do. These factors may allow our competitors to respond more effectively than us to new or emerging technologies and changes in market conditions. We believe that some users, particularly younger users, are aware of and actively engaging with other products and services similar to, or as a substitute for, Facebook products and services, and we believe that some users have reduced their use of and

engagement with our products and services in favor of these other products and services. In the event that users increasingly engage with other products and services, we may experience a decline in use and engagement in key user demographics or more broadly, in which case our business would likely be harmed.

Our competitors may develop products, features, or services that are similar to ours or that achieve greater acceptance, may undertake more far-reaching and successful product development efforts or marketing campaigns, or may adopt more aggressive pricing policies. In addition, developers whose mobile and web applications are integrated with Facebook or our other products may use information shared by our users through our products in order to develop products or features that compete with us. Some competitors may gain a competitive advantage against us in areas where we operate, including: by making acquisitions; by limiting our ability to deliver, target, or measure the effectiveness of ads; by imposing fees or other charges related to our delivery of ads; by making access to our products more difficult or impossible; by making it more difficult to communicate with our users; or by integrating competing platforms, applications, or features into products they control such as mobile device operating systems, search engines, browsers, or e-commerce platforms. For example, each of Apple and Google have integrated competitive products with iOS and Android, respectively. As a result, our competitors may acquire and engage users or generate advertising or other revenue at the

expense of our own efforts, which may negatively affect our business and financial results. In addition, from time to time, we may take actions in response to competitive threats, but we cannot assure you that these actions will be successful or that they will not negatively affect our business and financial results.

We believe that our ability to compete effectively depends upon many factors both within and beyond our control, including:

- the popularity, usefulness, ease of use, performance, and reliability of our products compared to our competitors' products;
- the size and composition of our user base;
- the engagement of users with our products and competing products;
- the timing and market acceptance of products, including developments and enhancements to our or our competitors' products;
- our safety and security efforts and our ability to protect user data and to provide users with control over their data;
- our ability to distribute our products to new and existing users;
- our ability to monetize our products;
- the frequency, size, format, quality, and relative prominence of the ads displayed by us or our competitors;
- customer service and support efforts;
- marketing and selling efforts, including our ability to measure the effectiveness of our ads and to provide marketers with a compelling return on their investments;
- our ability to establish and maintain developers' interest in building mobile and web applications that integrate with Facebook and our other products;
- our ability to establish and maintain publisher interest in integrating their content with Facebook and our other products;
- changes mandated by legislation, regulatory authorities, or litigation, some of which may have a disproportionate effect on us;
- acquisitions or consolidation within our industry, which may result in more formidable competitors;
- our ability to attract, retain, and motivate talented employees, particularly software engineers, designers, and product managers;
- our ability to cost-effectively manage and grow our operations; and
- our reputation and brand strength relative to those of our competitors.

If we are not able to compete effectively, our user base and level of user engagement may decrease, we may become less attractive to developers and marketers, and our revenue and results of operations may be materially and adversely affected.

Actions by governments that restrict access to Facebook or our other products in their countries, or that otherwise impair our ability to sell advertising in their countries, could substantially harm our business and financial results. Governments of one or more countries in which we operate from time to time seek to censor content available on Facebook or our other products in their country, restrict access to our products from their country entirely, or impose other restrictions that may affect the accessibility of our products in their country for an extended period of time or indefinitely. For example, user access to Facebook and certain of our other products has been or is currently restricted in whole or in part in China, Iran, and North Korea. In addition, government authorities in other countries may seek to restrict user access to our products if they consider us to be in violation of their laws or a threat to public safety or for other reasons, and certain of our products have been restricted by governments in other countries from time to time. It is possible that government authorities could take action that impairs our ability to sell advertising, including in countries where access to our consumer-facing products may be blocked or restricted. For example, we generate meaningful revenue from a limited number of resellers representing advertisers based in China. In the event that content shown on Facebook or our other products is subject to censorship, access to our products is restricted, in whole or in part, in one or more countries, or other restrictions are imposed on our products, or our competitors are able to successfully penetrate new geographic markets or capture a greater share of existing geographic markets that we cannot access or where we face other restrictions, our ability to retain or increase our user base, user engagement, or the level of advertising by marketers may be adversely affected, we may not be able to maintain or grow our revenue as anticipated, and our financial results could be adversely affected.

Our new products and changes to existing products could fail to attract or retain users or generate revenue and profits. Our ability to retain, increase, and engage our user base and to increase our revenue depends heavily on our ability to continue to evolve our existing products and to create successful new products, both independently and in conjunction with developers or other third parties. We may introduce significant changes to our existing products or acquire or introduce new and unproven products, including using technologies with which we have little or no prior development or operating experience. For example, we do not have significant experience with consumer hardware products or virtual or augmented reality technology, which may adversely affect our ability to successfully develop and market these products and technologies, and we will incur increased costs in connection with the development and marketing of such products and technologies. In addition, the introduction of new products, or changes to existing products, may result in new or enhanced governmental or regulatory scrutiny or other complications that could adversely affect our business and financial results. We have also invested, and expect to continue to invest, significant resources in growing our WhatsApp and Messenger products. We have historically monetized messaging in only a very limited fashion, and we may not be successful in our efforts to generate meaningful revenue from messaging over the long term. If these or other new or enhanced products fail to engage users, marketers, or developers, or if our business plans are unsuccessful, we may fail to attract or retain users or to generate sufficient revenue, operating margin, or other value to justify our investments, and our business may be adversely affected.

We make product and investment decisions that may not prioritize short-term financial results and may not produce the long-term benefits that we expect.

We frequently make product and investment decisions that may not prioritize short-term financial results if we believe that the decisions are consistent with our mission and benefit the aggregate user experience and will thereby improve our financial performance over the long term. For example, we have recently implemented, and we may continue to implement, changes to our user data practices. Some of these changes will reduce marketers' ability to effectively target their ads, which has to some extent adversely affected, and will continue to adversely affect, our advertising business. Similarly, we previously announced changes to our News Feed ranking algorithm to help our users have more meaningful interactions, and these changes have had, and we expect will continue to have, the effect of reducing time spent and some measures of user engagement with Facebook, which could adversely affect our financial results. From time to time, we may also change the size, frequency, or relative prominence of ads in order to improve ad quality and overall user experience. In addition, we have made, and we expect to continue to make, other changes to our products which may adversely affect the distribution of content of publishers, marketers, and developers, and could reduce their incentive to invest in their efforts on Facebook. We also may introduce new features or other changes to existing products, or introduce new stand-alone products, that attract users away from properties, formats,

or use cases where we have more proven means of monetization. For example, we plan to continue to promote the Stories format, which is becoming increasingly popular for sharing content across our products, but our advertising efforts with this format are still under development and we do not currently monetize Stories at the same rate as News Feed. In addition, as we focus on growing users and engagement across our family of apps, it is possible that these efforts may from time to time reduce engagement with one or more products and services in favor of other products or services that we monetize less successfully or that are not growing as quickly. These decisions may adversely affect our business and results of operations and may not produce the long-term benefits that we expect.

If we are not able to maintain and enhance our brands, our ability to expand our base of users, marketers, and developers may be impaired, and our business and financial results may be harmed.

We believe that our brands have significantly contributed to the success of our business. We also believe that maintaining and enhancing our brands is critical to expanding our base of users, marketers, and developers. Many of our new users are referred by existing users. Maintaining and enhancing our brands will depend largely on our ability to continue to provide useful, reliable, trustworthy, and innovative products, which we may not do successfully. We may introduce new products or terms of service or policies that users do not like, which may negatively affect our brands. Additionally, the actions of our developers or advertisers may affect our brands if users do not have a positive experience using third-party mobile and web applications integrated with our products or interacting with parties that advertise through our products. We will also continue to experience media, legislative, or regulatory scrutiny of our actions or decisions regarding user privacy, content, advertising, and other issues, including actions or decisions in connection with elections, which may adversely affect our reputation and brands. For example, we previously announced our discovery of certain ads and other content previously displayed on our products that may be relevant to government investigations relating to Russian interference in the 2016 U.S. presidential election. In addition, in March 2018, we announced developments regarding the misuse of certain data by a developer that shared such data with third parties in violation of our terms and policies. We also may fail to respond expeditiously or appropriately to the sharing of objectionable content on our services or objectionable practices by advertisers or developers, or to otherwise address user concerns, which could erode confidence in our brands. Our brands may also be negatively affected by the actions of users that are deemed to be hostile or inappropriate to other users, by the actions of users acting under false or inauthentic identities, by the use of our products or services to disseminate information that is deemed to be misleading (or intended to manipulate opinions), by perceived or actual efforts by governments to obtain access to user information for security-related purposes or to censor certain content on our platform, or by the use of our products or services for illicit, objectionable, or illegal ends. Maintaining and enhancing our brands may require us to make substantial investments and these investments may not be successful. Certain of our past actions, such as the foregoing matter regarding developer misuse of data, have eroded confidence in our brands, and if we fail to successfully promote and maintain our brands or if we incur excessive expenses in this effort, our business and financial results may be adversely affected.

Security breaches and improper access to or disclosure of our data or user data, or other hacking and phishing attacks on our systems, could harm our reputation and adversely affect our business.

Our industry is prone to cyber-attacks by third parties seeking unauthorized access to our data or users' data or to disrupt our ability to provide service. Any failure to prevent or mitigate security breaches and improper access to or disclosure of our data or user data, including personal information, content, or payment information from users, or information from marketers, could result in the loss or misuse of such data, which could harm our business and reputation and diminish our competitive position. In addition, computer malware, viruses, social engineering (predominantly spear phishing attacks), and general hacking have become more prevalent in our industry, have occurred on our systems in the past, and will occur on our systems in the future. We also regularly encounter attempts to create false or undesirable user accounts, purchase ads, or take other actions on our platform for purposes such as spamming, spreading misinformation, or other objectionable ends. As a result of our prominence, the size of our user base, and the types and volume of personal data on our systems, we believe that we are a particularly attractive target for such breaches and attacks. Our efforts to address undesirable activity on our platform may also increase the risk of retaliatory attacks. Such attacks may cause interruptions to the services we provide, degrade the user experience, cause users or marketers to lose confidence and trust in our products, impair our internal systems, or result in financial harm to us. Our efforts to protect our company data or the information we receive may also be unsuccessful due to software bugs or other technical malfunctions; employee, contractor, or vendor error or malfeasance; government surveillance; or other threats that evolve. In addition, third parties may attempt to fraudulently induce employees or users to disclose information in order to gain access to our data or our users' data. Cyber-attacks continue to evolve in sophistication and volume, and inherently may be difficult to detect for long periods of time. Although we have developed systems and processes that are designed to protect our data and user data, to prevent data loss, to disable undesirable accounts and activities on our platform, and to prevent or detect security breaches, we cannot assure you

that such measures will provide absolute security, and we may incur significant costs in protecting against or remediating cyber-attacks.

In addition, some of our developers or other partners, such as those that help us measure the effectiveness of ads, may receive or store information provided by us or by our users through mobile or web applications integrated with Facebook. We provide limited information to such third parties based on the scope of services provided to us.

However, if these third parties or developers fail to adopt or adhere to adequate data security practices, or in the event of a breach of their networks, our data or our users' data may be improperly accessed, used, or disclosed.

Affected users or government authorities could initiate legal or regulatory actions against us in connection with any actual or perceived security breaches or improper disclosure of data, which could cause us to incur significant expense and liability or result in orders or consent decrees forcing us to modify our business practices. Such incidents or our efforts to remediate such incidents may also result in a decline in our active user base or engagement levels. Any of these events could have a material and adverse effect on our business, reputation, or financial results.

For example, in September 2018, we announced our discovery of a third-party cyber-attack that exploited a vulnerability in Facebook's code to steal user access tokens, which were then used to access certain profile information from approximately 29 million user accounts on Facebook. While we took steps to remediate the attack, including fixing the vulnerability, resetting user access tokens and notifying affected users, we may discover and announce additional developments, which could further erode confidence in our brand. In addition, the events surrounding this cyber-attack became the subject of Irish Data Protection Commission, U.S. Federal Trade Commission and other government inquiries in the United States, Europe, and other jurisdictions. Any such inquiries could subject us to substantial fines and costs, require us to change our business practices, divert resources and the attention of management from our business, or adversely affect our business.

We anticipate that our ongoing investments in safety, security, and content review will identify additional instances of misuse of user data or other undesirable activity by third parties on our platform.

In addition to our efforts to mitigate cybersecurity risks, we are making significant investments in safety, security, and content review efforts to combat misuse of our services and user data by third parties, including investigations and audits of platform applications that previously accessed information of a large number of users of our services. As a result of these efforts we have discovered and announced, and anticipate that we will continue to discover and announce, additional incidents of misuse of user data or other undesirable activity by third parties. We may not discover all such incidents or activity, including as a result of our data limitations or the scale of activity on our platform, and we may be notified of such incidents or activity via the media or other third parties. Such incidents and activities may include the use of user data in a manner inconsistent with our terms, contracts or policies, the existence of false or undesirable user accounts, election interference, improper ad purchases, activities that threaten people's safety on- or offline, or instances of spamming, scraping, or spreading misinformation. The discovery of the foregoing may negatively affect user trust and engagement, harm our reputation and brands, require us to change our business practices in a manner adverse to our business, and adversely affect our business and financial results. Any such discoveries may also subject us to additional litigation and regulatory inquiries, which could subject us to monetary penalties and damages, divert management's time and attention, and lead to enhanced regulatory oversight.

Unfavorable media coverage could negatively affect our business.

We receive a high degree of media coverage around the world. Unfavorable publicity regarding, for example, our privacy practices, terms of service, product changes, product quality, litigation or regulatory activity, government surveillance, the actions of our advertisers, the actions of our developers whose products are integrated with our products, the use of our products or services for illicit, objectionable, or illegal ends, the substance or enforcement of our community standards, the actions of our users, the quality and integrity of content shared on our platform, or the actions of other companies that provide similar services to ours, has in the past, and could in the future, adversely affect our reputation. For example, beginning in March 2018, we were the subject of intense media coverage involving the misuse of certain data by a developer that shared such data with third parties in violation of our terms and policies, and we have continued to receive negative publicity. Such negative publicity could have an adverse effect on the size, engagement, and loyalty of our user base and result in decreased revenue, which could adversely affect our business and financial results.

Our financial results will fluctuate from quarter to quarter and are difficult to predict.

Our quarterly financial results have fluctuated in the past and will fluctuate in the future. Additionally, we have a limited operating history with the current scale of our business, which makes it difficult to forecast our future results. As a result, you should not rely upon our past quarterly financial results as indicators of future performance. You should take into account the risks and uncertainties frequently encountered by companies in rapidly evolving markets. Our financial results in any given quarter can be influenced by numerous factors, many of which we are unable to predict or are outside of our control, including:

- our ability to maintain and grow our user base and user engagement;
- our ability to attract and retain marketers in a particular period;
- fluctuations in spending by our marketers due to seasonality, such as historically strong spending in the fourth quarter of each year, episodic regional or global events, or other factors;
- the frequency, prominence, size, format, and quality of ads shown to users;

- the success of technologies designed to block the display of ads;
- the pricing of our ads and other products;
- the diversification and growth of revenue sources beyond advertising on Facebook and Instagram;

our ability to generate revenue from Payments, or the sale of our consumer hardware products or other products we may introduce in the future;

changes to existing products or services or the development and introduction of new products or services by us or our competitors;

user behavior or product changes that may reduce traffic to features or products that we successfully monetize;

increases in marketing, sales, and other operating expenses that we will incur to grow and expand our operations and to remain competitive, including costs related to our data centers and technical infrastructure;

costs related to our safety, security, and content review efforts;

costs and expenses related to the development and delivery of our consumer hardware products;

our ability to maintain gross margins and operating margins;

costs related to acquisitions, including costs associated with amortization and additional investments to develop the acquired technologies;

charges associated with impairment of any assets on our balance sheet;

our ability to obtain equipment, components, and labor for our data centers and other technical infrastructure in a timely and cost-effective manner;

system failures or outages or government blocking, which could prevent us from serving ads for any period of time;

breaches of security or privacy, and the costs associated with any such breaches and remediation;

changes in the manner in which we distribute our products or inaccessibility of our products due to third-party actions;

fees paid to third parties for content or the distribution of our products;

share-based compensation expense, including acquisition-related expense;

adverse litigation judgments, settlements, or other litigation-related costs;

changes in the legislative or regulatory environment, including with respect to privacy and data protection, or actions by governments or regulators, including fines, orders, or consent decrees;

the overall tax rate for our business, which may be affected by the mix of income we earn in the U.S. and in jurisdictions with comparatively lower tax rates, the effects of share-based compensation, the effects of integrating intellectual property from acquisitions, and the effects of changes in our business;

the impact of changes in tax laws or judicial or regulatory interpretations of tax laws, which are recorded in the period such laws are enacted or interpretations are issued, and may significantly affect the effective tax rate of that period;

tax obligations that may arise from resolutions of tax examinations, including the examination we are currently under by the Internal Revenue Service (IRS), that materially differ from the amounts we have anticipated;

fluctuations in currency exchange rates and changes in the proportion of our revenue and expenses denominated in foreign currencies;

fluctuations in the market values of our portfolio investments and in interest rates;

changes in U.S. generally accepted accounting principles; and

changes in global business or macroeconomic conditions.

We expect our rates of growth to decline in the future.

We expect that our user growth rate will generally decline over time as the size of our active user base increases, and it is possible that the size of our active user base may fluctuate or decline in one or more markets, particularly as we achieve greater market penetration. We expect our revenue growth rate will continue to decline over time as our revenue increases to higher levels. As our growth rates decline, investors' perceptions of our business may be adversely affected and the trading price of our Class A common stock could decline.

Our costs are continuing to grow, which could reduce our operating margin and profitability. If our investments are not successful, our business and financial performance could be harmed.

Operating our business is costly, and we expect our expenses to continue to increase in the future as we broaden our user base, as users increase the amount and types of content they consume and the data they share with us, for example with respect to video, as we develop and implement new products, as we market new and existing products and promote our brands, as we continue to expand our technical infrastructure, as we continue to invest in new and unproven technologies, and as we continue to hire additional employees and contractors to support our expanding operations, including our efforts to focus on safety, security, and content review. We will continue to invest in our messaging, video content, and global connectivity efforts, as well as other initiatives that may not have clear paths to monetization. In addition, we will incur increased costs in connection with the development and marketing of our consumer hardware and virtual and augmented reality products and technologies. Any such investments may not be successful, and any such increases in our costs may reduce our operating margin and profitability. In addition, if our investments are not successful, our ability to grow revenue will be harmed, which could adversely affect our business and financial performance.

Given our levels of share-based compensation, our tax rate may vary significantly depending on our stock price.

The tax effects of the accounting for share-based compensation may significantly impact our effective tax rate from period to period. In periods in which our stock price is higher than the grant price of the share-based compensation vesting in that period, we will recognize excess tax benefits that will decrease our effective tax rate. For example, in 2018, excess tax benefits recognized from share-based compensation decreased our provision for income taxes by \$717 million and our effective tax rate by approximately three percentage points as compared to the tax rate without such benefits. In future periods in which our stock price is lower than the grant price of the share-based compensation vesting in that period, our effective tax rate may increase. The amount and value of share-based compensation issued relative to our earnings in a particular period will also affect the magnitude of the impact of share-based compensation on our effective tax rate. These tax effects are dependent on our stock price, which we do not control, and a decline in our stock price could significantly increase our effective tax rate and adversely affect our financial results.

Our business is subject to complex and evolving U.S. and foreign laws and regulations regarding privacy, data protection, content, competition, consumer protection, and other matters. Many of these laws and regulations are subject to change and uncertain interpretation, and could result in claims, changes to our business practices, monetary penalties, increased cost of operations, or declines in user growth or engagement, or otherwise harm our business. We are subject to a variety of laws and regulations in the United States and abroad that involve matters central to our business, including privacy, data protection and personal information, rights of publicity, content, intellectual property, advertising, marketing, distribution, data security, data retention and deletion, electronic contracts and other communications, competition, protection of minors, consumer protection, telecommunications, product liability, taxation, economic or other trade prohibitions or sanctions, securities law compliance, and online payment services. The introduction of new products, expansion of our activities in certain jurisdictions, or other actions that we may take may subject us to additional laws, regulations, or other government scrutiny. In addition, foreign data protection, privacy, content, competition, and other laws and regulations can impose different obligations or be more restrictive than those in the United States.

These U.S. federal and state and foreign laws and regulations, which in some cases can be enforced by private parties in addition to government entities, are constantly evolving and can be subject to significant change. As a result, the application, interpretation, and enforcement of these laws and regulations are often uncertain, particularly in the new and rapidly evolving industry in which we operate, and may be interpreted and applied inconsistently from country to country and inconsistently with our current policies and practices. For example, regulatory or legislative actions

affecting the manner in which we display content to our users or obtain consent to various practices could adversely affect user growth and engagement. Such actions could affect the manner in which we provide our services or adversely affect our financial results.

We are also subject to laws and regulations that dictate whether, how, and under what circumstances we can transfer, process and/or receive certain data that is critical to our operations, including data shared between countries or regions in which we operate and data shared among our products and services. For example, in 2016, the European Union and United States agreed to an alternative transfer framework for data transferred from the European Union to the United States, called the Privacy Shield, but this new framework is subject to an annual review that could result in changes to our obligations and also is subject to challenge by regulators and private parties. In addition, the other bases upon which Facebook relies to legitimize the transfer of such data, such as Standard Contractual Clauses (SCCs), have been subjected to regulatory and judicial scrutiny. For example, the Irish Data Protection Commissioner has challenged the legal grounds for transfers of user data to Facebook, Inc., and the Irish High Court has referred this challenge to the Court of Justice of the European Union for decision. We have also been managing investigations and lawsuits in Europe, India, and other jurisdictions regarding the August 2016 update to WhatsApp's terms of service and privacy policy and its sharing of certain data with other Facebook products and services, including a lawsuit currently pending before the Supreme Court of India. If one or more of the legal bases for transferring data from Europe to the United States is invalidated, if we are unable to transfer data between and among countries and regions in which we operate, or if we are restricted from sharing data among our products and services, it could affect the manner in which we provide our services or our ability to target ads, which could adversely affect our financial results.

Proposed or new legislation and regulations could also significantly affect our business. For example, the European General Data Protection Regulation (GDPR) took effect in May 2018 and applies to all of our products and services used by people in Europe. The GDPR includes operational requirements for companies that receive or process personal data of residents of the European Union that are different from those previously in place in the European Union. As a result, we implemented measures to change our service for minors under the age of 16 for certain countries in Europe that maintain the minimum age of 16 under the GDPR. We also obtain consent and/or offer new controls to existing and new users in Europe before processing data for certain aspects of our service. In addition, the GDPR requires submission of breach notifications to our designated European privacy regulator, the Irish Data Protection Commissioner, and includes significant penalties for non-compliance with the notification obligation as well as other requirements of the regulation. The California Consumer Privacy Act, or AB 375, was also recently passed and creates new data privacy rights for users, effective in 2020. Similarly, there are a number of legislative proposals in the European Union, the United States, at both the federal and state level, as well as other jurisdictions that could impose new obligations in areas affecting our business. In addition, some countries are considering or have passed legislation implementing data protection requirements or requiring local storage and processing of data or similar requirements that could increase the cost and complexity of delivering our services.

These laws and regulations, as well as any associated inquiries or investigations or any other government actions, may be costly to comply with and may delay or impede the development of new products, result in negative publicity, increase our operating costs, require significant management time and attention, and subject us to remedies that may harm our business, including fines or demands or orders that we modify or cease existing business practices.

We have been subject to regulatory and other government investigations, enforcement actions, and settlements, and we expect to continue to be subject to such proceedings and other inquiries in the future, which could cause us to incur substantial costs or require us to change our business practices in a manner materially adverse to our business.

From time to time, we receive formal and informal inquiries from government authorities and regulators regarding our compliance with laws and regulations, many of which are evolving and subject to interpretation. We are and expect to continue to be the subject of investigations, inquiries, data requests, actions, and audits in the United States, Europe, and around the world, particularly in the areas of privacy, data protection, law enforcement, consumer protection, and competition, as we continue to grow and expand our operations. In addition, we are currently, and may in the future be, subject to regulatory orders or consent decrees. For example, data protection and consumer protection authorities in the European Union have initiated actions, investigations, or administrative orders seeking to restrict the ways in which we collect and use information, or impose sanctions, and other authorities may do the same. In addition, beginning in March 2018, we became subject to U.S. Federal Trade Commission, Securities and Exchange Commission, state attorneys general, and other government inquiries in the United States, Europe, and other jurisdictions in connection with our platform and user data practices as well as the misuse of certain data by a

developer that shared such data with third parties in violation of our terms and policies. Beginning in September 2018, we also became subject to Irish Data Protection Commission, U.S. Federal Trade Commission and other government inquiries in the United States, Europe, and other jurisdictions in connection with a third-party cyber-attack that exploited a vulnerability in Facebook's code to steal user access tokens and access certain profile information from user accounts on Facebook. Orders issued by, or inquiries or enforcement actions initiated by, government or regulatory authorities could cause us to incur substantial costs, expose us to unanticipated civil and criminal liability or penalties (including substantial monetary fines), or require us to change our business practices in a manner materially adverse to our business.

If we are unable to protect our intellectual property, the value of our brands and other intangible assets may be diminished, and our business may be adversely affected.

We rely and expect to continue to rely on a combination of confidentiality, assignment, and license agreements with our employees, consultants, and third parties with whom we have relationships, as well as trademark, copyright, patent, trade secret, and domain name protection laws, to protect our proprietary rights. In the United States and internationally, we have filed various applications for protection of certain aspects of our intellectual property, and we currently hold a significant number of registered trademarks and issued patents in multiple jurisdictions and have acquired patents and patent applications from third parties. Third parties may knowingly or unknowingly infringe our proprietary rights, third parties may challenge proprietary rights held by us, and pending and future trademark and patent applications may not be approved. In addition, effective intellectual property protection may not be available in every country in which we operate or intend to operate our business. In any or all of these cases, we may be required to expend significant time and expense in order to prevent infringement or to enforce our rights. Although we have generally taken measures to protect our proprietary rights, there can be no assurance that others will not offer products or concepts that are substantially similar to ours and compete with our business. In addition, we regularly contribute software source code under open source licenses and have made other technology we developed available under other open licenses, and we include open source software in our products. For example, we have contributed certain specifications and designs related to our data center equipment to the Open Compute Project Foundation, a non-profit entity that shares and develops such information with the technology community, under the Open Web Foundation License. As a result of our open source contributions and the use of open source in our products, we may license or be required to license or disclose code and/or innovations that turn out to be material to our business and may also be exposed to increased litigation risk. If the protection of our proprietary rights is inadequate to prevent unauthorized use or appropriation by third parties, the value of our brands and other intangible assets may be diminished and competitors may be able to more effectively mimic our products, services, and methods of operations. Any of these events could have an adverse effect on our business and financial results.

We are currently, and expect to be in the future, party to patent lawsuits and other intellectual property rights claims that are expensive and time consuming and, if resolved adversely, could have a significant impact on our business, financial condition, or results of operations.

Companies in the Internet, technology, and media industries own large numbers of patents, copyrights, trademarks, and trade secrets, and frequently enter into litigation based on allegations of infringement, misappropriation, or other violations of intellectual property or other rights. In addition, various "non-practicing entities" that own patents and other intellectual property rights often attempt to aggressively assert their rights in order to extract value from technology companies. Furthermore, from time to time we may introduce or acquire new products, including in areas where we historically have not competed, which could increase our exposure to patent and other intellectual property claims from competitors and non-practicing entities.

From time to time, we receive notice from patent holders and other parties alleging that certain of our products and services, or user content, infringe their intellectual property rights. We presently are involved in a number of intellectual property lawsuits, and as we face increasing competition and gain an increasingly high profile, we expect the number of patent and other intellectual property claims against us to grow. Defending patent and other intellectual property litigation is costly and can impose a significant burden on management and employees, and there can be no assurances that favorable final outcomes will be obtained in all cases. In addition, plaintiffs may seek, and we may become subject to, preliminary or provisional rulings in the course of any such litigation, including potential preliminary injunctions requiring us to cease some or all of our operations. We may decide to settle such lawsuits and disputes on terms that are unfavorable to us. Similarly, if any litigation to which we are a party is resolved adversely, we may be subject to an unfavorable judgment that may not be reversed upon appeal. The terms of such a settlement or judgment may require us to cease some or all of our operations or pay substantial amounts to the other party. In addition, we may have to seek a license to continue practices found to be in violation of a third party's rights, which may not be available on reasonable terms, or at all, and may significantly increase our operating costs and expenses. As a result, we may also be required to develop alternative non-infringing technology or practices or discontinue the practices. The development of alternative non-infringing technology or practices could require significant effort and

expense or may not be feasible. Our business, financial condition, and results of operations could be adversely affected as a result of an unfavorable resolution of the disputes and litigation referred to above.

We are involved in numerous class action lawsuits and other litigation matters that are expensive and time consuming, and, if resolved adversely, could harm our business, financial condition, or results of operations.

In addition to intellectual property claims, we are also involved in numerous other lawsuits, including putative class action lawsuits, many of which claim statutory damages and/or seek significant changes to our business operations, and we anticipate that we will continue to be a target for numerous lawsuits in the future. Because of the scale of our user base, the plaintiffs in class action cases filed against us typically claim enormous monetary damages even if the alleged per-user harm is small or non-existent. In addition, we may be subject to additional class action lawsuits based on employment claims, product performance or other claims related to the use of consumer hardware and software, as well as virtual reality technology and products, which are new and unproven.

For example, we are currently the subject of multiple putative class action suits in connection with our platform and user data practices and the misuse of certain data by a developer that shared such data with third parties in violation of our terms and policies, the disclosure of our earnings results for the second quarter of 2018, and a third-party cyber-attack that exploited a vulnerability in Facebook's code to steal user access tokens and access certain profile information from user accounts on Facebook. We believe these lawsuits are without merit and are vigorously defending them. Any negative outcome from any such lawsuits could result in payments of substantial monetary damages or fines, or undesirable changes to our products or business practices, and accordingly our business, financial condition, or results of operations could be materially and adversely affected. Although the results of such lawsuits and claims cannot be predicted with certainty, we do not believe that the final outcome of those matters relating to our products that we currently face will have a material adverse effect on our business, financial condition, or results of operations.

There can be no assurances that a favorable final outcome will be obtained in all our cases, and defending any lawsuit is costly and can impose a significant burden on management and employees. Any litigation to which we are a party may result in an onerous or unfavorable judgment that may not be reversed upon appeal or in payments of substantial monetary damages or fines, or we may decide to settle lawsuits on similarly unfavorable terms, which could adversely affect our business, financial conditions, or results of operations.

We may incur liability as a result of information retrieved from or transmitted over the Internet or published using our products or as a result of claims related to our products.

We have faced, currently face, and will continue to face claims relating to information that is published or made available on our products. In particular, the nature of our business exposes us to claims related to defamation, dissemination of misinformation or news hoaxes, discrimination, intellectual property rights, rights of publicity and privacy, personal injury torts, or laws regulating hate speech or other types of content. This risk is enhanced in certain jurisdictions outside the United States where our protection from liability for third-party actions may be unclear or where we may be less protected under local laws than we are in the United States. For example, there have been recent legislative proposals in the European Union that could expose online platforms to liability for copyright infringement. In addition, there have been various Congressional efforts to restrict the scope of the protections available to online platforms under Section 230 of the Communications Decency Act, and our current protections from liability for third-party content in the United States could decrease or change. We could incur significant costs investigating and defending such claims and, if we are found liable, significant damages. We could also face fines or orders restricting or blocking our services in particular geographies as a result of content hosted on our services. For example, recently enacted legislation in Germany may result in the imposition of significant fines for failure to comply with certain content removal and disclosure obligations, and other countries are considering or have implemented similar legislation imposing penalties for failure to remove content. If any of these events occur, our business and financial results could be adversely affected.

Our CEO has control over key decision making as a result of his control of a majority of the voting power of our outstanding capital stock.

Mark Zuckerberg, our founder, Chairman, and CEO, is able to exercise voting rights with respect to a majority of the voting power of our outstanding capital stock and therefore has the ability to control the outcome of matters submitted to our stockholders for approval, including the election of directors and any merger, consolidation, or sale of all or substantially all of our assets. This concentrated control could delay, defer, or prevent a change of control, merger, consolidation, or sale of all or substantially all of our assets that our other stockholders support, or conversely this concentrated control could result in the consummation of such a transaction that our other stockholders do not support. This concentrated control could also discourage a potential investor from acquiring our Class A common stock, which has limited voting power relative to the Class B common stock, and might harm the trading price of our Class A common stock. In addition, Mr. Zuckerberg has the ability to control the management and major strategic investments of our company as a result of his position as our CEO and his ability to control the election or replacement of our directors. In the event of his death, the shares of our capital stock that Mr. Zuckerberg owns will be transferred to the persons or entities that he has designated. As a board member and officer, Mr. Zuckerberg owes a fiduciary duty to our stockholders and must act in good faith in a manner he reasonably believes to be in the best interests of our

stockholders. As a stockholder, even a controlling stockholder, Mr. Zuckerberg is entitled to vote his shares, and shares over which he has voting control as governed by a voting agreement, in his own interests, which may not always be in the interests of our stockholders generally.

We plan to continue to make acquisitions, which could harm our financial condition or results of operations and may adversely affect the price of our common stock.

As part of our business strategy, we have made and intend to continue to make acquisitions to add specialized employees and complementary companies, products, or technologies. We may not be able to find suitable acquisition candidates, and we may not be able to complete acquisitions on favorable terms, if at all. In some cases, the costs of such acquisitions may be substantial, and there is no assurance that we will receive a favorable return on investment for our acquisitions.

We may pay substantial amounts of cash or incur debt to pay for acquisitions, which could adversely affect our liquidity. The incurrence of indebtedness would also result in increased fixed obligations and increased interest expense, and could also include covenants or other restrictions that would impede our ability to manage our operations. We may also issue equity securities to pay for acquisitions and we regularly grant RSUs to retain the employees of acquired companies, which could increase our expenses, adversely affect our financial results, and result in dilution to our stockholders. In addition, any acquisitions we announce could be viewed negatively by users, marketers, developers, or investors, which may adversely affect our business or the price of our Class A common stock.

We may also discover liabilities or deficiencies associated with the companies or assets we acquire that were not identified in advance, which may result in significant unanticipated costs. The effectiveness of our due diligence review and our ability to evaluate the results of such due diligence are dependent upon the accuracy and completeness of statements and disclosures made or actions taken by the companies we acquire or their representatives, as well as the limited amount of time in which acquisitions are executed. In addition, we may fail to accurately forecast the financial impact of an acquisition transaction, including tax and accounting charges. Acquisitions may also result in our recording of significant additional expenses to our results of operations and recording of substantial finite-lived intangible assets on our balance sheet upon closing. Any of these factors may adversely affect our financial condition or results of operations.

We may not be able to successfully integrate our acquisitions, and we may incur significant costs to integrate and support the companies we acquire.

The integration of acquisitions requires significant time and resources, and we may not manage these processes successfully. Our ability to successfully integrate complex acquisitions is unproven, particularly with respect to companies that have significant operations or that develop products where we do not have prior experience. For example, the technology and products we acquired from Oculus were relatively new to Facebook at the time of the acquisition, and we did not have significant experience with, or structure in place to support, such technology and products prior to the acquisition. We continue to make substantial investments of resources to support our acquisitions, which will result in significant ongoing operating expenses and may divert resources and management attention from other areas of our business. We cannot assure you that these investments will be successful. If we fail to successfully integrate the companies we acquire, we may not realize the benefits expected from the transaction and our business may be harmed.

If our goodwill or finite-lived intangible assets become impaired, we may be required to record a significant charge to earnings.

We review our finite-lived intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable, such as a decline in stock price and market capitalization. We test goodwill for impairment at least annually. If such goodwill or finite-lived intangible assets are deemed to be impaired, an impairment loss equal to the amount by which the carrying amount exceeds the fair value of the assets would be recognized. We may be required to record a significant charge in our financial statements during the period in which any impairment of our goodwill or finite-lived intangible assets is determined, which would negatively affect our results of operations.

Our business is dependent on our ability to maintain and scale our technical infrastructure, and any significant disruption in our service could damage our reputation, result in a potential loss of users and engagement, and adversely affect our financial results.

Our reputation and ability to attract, retain, and serve our users is dependent upon the reliable performance of our products and our underlying technical infrastructure. We have in the past experienced, and may in the future experience, interruptions in the availability or performance of our products from time to time. Our systems may not be adequately designed with the necessary reliability and redundancy to avoid performance delays or outages that could be harmful to our business. If our products are unavailable when users attempt to access them, or if they do not load as quickly as expected, users may not use our products as often in the future, or at all, and our ability to serve ads may be disrupted. As the amount and types of information shared on Facebook and our other products continue to grow and evolve, as the usage patterns of our global community continue to evolve, and as our internal operational demands

continue to grow, we will need an increasing amount of technical infrastructure, including network capacity and computing power, to continue to satisfy our needs. It is possible that we may fail to continue to effectively scale and grow our technical infrastructure to accommodate these increased demands, which may adversely affect our user engagement and advertising revenue growth. In addition, our business may be subject to interruptions, delays, or failures resulting from earthquakes, adverse weather conditions, other natural disasters, power loss, terrorism, geopolitical conflict, cyber-attacks, or other catastrophic events. If such an event were to occur, users may be subject to service disruptions or outages and we may not be able to recover our technical infrastructure and user data in a timely manner to restart or provide our services, which may adversely affect our financial results.

A substantial portion of our network infrastructure is provided by third parties. Any disruption or failure in the services we receive from these providers could harm our ability to handle existing or increased traffic and could significantly harm our business. Any financial or other difficulties these providers face may adversely affect our business, and we exercise little control over these providers, which increases our vulnerability to problems with the services they provide.

We could experience unforeseen difficulties in building and operating key portions of our technical infrastructure. We have designed and built our own data centers and key portions of our technical infrastructure through which we serve our products, and we plan to continue to significantly expand the size of our infrastructure primarily through data centers and other projects. The infrastructure expansion we are undertaking is complex and involves projects in multiple locations, and unanticipated delays in the completion of these projects, including due to any shortage of labor necessary in building portions of such projects, or availability of components, may lead to increased project costs, operational inefficiencies, or interruptions in the delivery or degradation of the quality of our products. In addition, there may be issues related to this infrastructure that are not identified during the testing phases of design and implementation, which may only become evident after we have started to fully utilize the underlying equipment, that could further degrade the user experience or increase our costs.

Our products and internal systems rely on software that is highly technical, and if it contains undetected errors or vulnerabilities, our business could be adversely affected.

Our products and internal systems rely on software, including software developed or maintained internally and/or by third parties, that is highly technical and complex. In addition, our products and internal systems depend on the ability of such software to store, retrieve, process, and manage immense amounts of data. The software on which we rely has contained, and will in the future contain, undetected errors, bugs, or vulnerabilities. Some errors may only be discovered after the code has been released for external or internal use. For example, in September 2018, we announced our discovery of a third-party cyber-attack that exploited a vulnerability in Facebook's code to steal user access tokens and access certain profile information from user accounts on Facebook. Errors, vulnerabilities, or other design defects within the software on which we rely have in the past, and may in the future, result in a negative experience for users and marketers who use our products, delay product introductions or enhancements, result in targeting, measurement, or billing errors, compromise our ability to protect the data of our users and/or our intellectual property or lead to reductions in our ability to provide some or all of our services. In addition, any errors, bugs, vulnerabilities, or defects discovered in the software on which we rely, and any associated degradations or interruptions of service, could result in damage to our reputation, loss of users, loss of revenue, or liability for damages, any of which could adversely affect our business and financial results.

Technologies have been developed that can block the display of our ads, which could adversely affect our financial results.

Technologies have been developed, and will likely continue to be developed, that can block the display of our ads or block our ad measurement tools, particularly for advertising displayed on personal computers. We generate substantially all of our revenue from advertising, including revenue resulting from the display of ads on personal computers. Revenue generated from the display of ads on personal computers has been impacted by these technologies from time to time. As a result, these technologies have had an adverse effect on our financial results and, if such technologies continue to proliferate, in particular with respect to mobile platforms, our future financial results may be harmed.

Real or perceived inaccuracies in our user and other metrics may harm our reputation and negatively affect our business.

The numbers for our key metrics, which include our DAUs, MAUs, and average revenue per user (ARPU), are calculated using internal company data based on the activity of user accounts. While these numbers are based on what we believe to be reasonable estimates of our user base for the applicable period of measurement, there are inherent challenges in measuring usage of our products across large online and mobile populations around the world. In addition, we are continually seeking to improve our estimates of our user base, and such estimates may change due to improvements or changes in our methodology.

We regularly evaluate these metrics to estimate the number of "duplicate" and "false" accounts among our MAUs. A duplicate account is one that a user maintains in addition to his or her principal account. We divide "false" accounts into two categories: (1) user-misclassified accounts, where users have created personal profiles for a business, organization, or non-human entity such as a pet (such entities are permitted on Facebook using a Page rather than a personal profile under our terms of service); and (2) undesirable accounts, which represent user profiles that we determine are intended to be used for purposes that violate our terms of service, such as spamming. The estimates of

duplicate and false accounts are based on an internal review of a limited sample of accounts, and we apply significant judgment in making this determination. For example, to identify duplicate accounts we use data signals such as similar IP addresses or user names, and to identify false accounts we look for names that appear to be fake or other behavior that appears inauthentic to the reviewers. Our estimates may change as our methodologies evolve, including through the application of new data signals or technologies, which may allow us to identify previously undetected duplicate or false accounts and may improve our ability to evaluate a broader population of our users. Duplicate and false accounts are very difficult to measure at our scale, and it is possible that the actual number of duplicate and false accounts may vary significantly from our estimates.

In the fourth quarter of 2018, we estimate that duplicate accounts may have represented approximately 11% of our worldwide MAUs. We believe the percentage of duplicate accounts is meaningfully higher in developing markets such as the Philippines and Vietnam, as compared to more developed markets. In the fourth quarter of 2018, we estimate that false accounts may have represented approximately 5% of our worldwide MAUs. Our estimation of false accounts can vary as a result of episodic spikes in the creation

of such accounts, which we have seen originate more frequently in specific countries such as Indonesia and Vietnam. From time to time, we may make product changes or take other actions to reduce the number of duplicate or false accounts among our users, which may also reduce our DAU and MAU estimates in a particular period.

Our data limitations may affect our understanding of certain details of our business. For example, while user-provided data indicates a decline in usage among younger users, this age data is unreliable because a disproportionate number of our younger users register with an inaccurate age. Accordingly, our understanding of usage by age group may not be complete.

In addition, our data regarding the geographic location of our users is estimated based on a number of factors, such as the user's IP address and self-disclosed location. These factors may not always accurately reflect the user's actual location. For example, a user may appear to be accessing Facebook from the location of the proxy server that the user connects to rather than from the user's actual location. The methodologies used to measure user metrics may also be susceptible to algorithm or other technical errors. Our estimates for revenue by user location and revenue by user device are also affected by these factors. We regularly review our processes for calculating these metrics, and from time to time we may discover inaccuracies in our metrics or make adjustments to improve their accuracy, including adjustments that may result in the recalculation of our historical metrics. We believe that any such inaccuracies or adjustments are immaterial unless otherwise stated. We intend to disclose our estimates of the number of duplicate and false accounts among our MAUs on an annual basis. In addition, our DAU and MAU estimates will differ from estimates published by third parties due to differences in methodology.

In addition, from time to time we provide, or rely on, certain other metrics, including those relating to the reach and effectiveness of our ads. All of our metrics are subject to software bugs, inconsistencies in our systems, and human error. If marketers, developers, or investors do not perceive our metrics to be accurate, or if we discover material inaccuracies in our metrics, we may be subject to liability, our reputation may be harmed, and marketers and developers may be less willing to allocate their budgets or resources to Facebook, which could negatively affect our business and financial results.

We cannot assure you that we will effectively manage our growth.

Our employee headcount and the scope and complexity of our business have increased significantly, with the number of employees increasing to 35,587 as of December 31, 2018 from 25,105 as of December 31, 2017, and we expect such headcount growth to continue for the foreseeable future. In addition, we plan to continue to hire a number of employees and contractors in order to address various safety, security, and content review initiatives. The growth and expansion of our business and products create significant challenges for our management, operational, and financial resources, including managing multiple relationships with users, marketers, developers, and other third parties. As our operations and the number of our third-party relationships continue to grow, our information technology systems or our internal controls and procedures may not be adequate to support such growth. In addition, some members of our management do not have significant experience managing a large global business operation, so our management may not be able to manage such growth effectively. To effectively manage our growth, we must continue to improve our operational, financial, and management processes and systems and to effectively expand, train, and manage our personnel. As our organization continues to grow, and we are required to implement more complex organizational management structures, we may find it increasingly difficult to maintain the benefits of our corporate culture, including our ability to quickly develop and launch new and innovative products. This could negatively affect our business performance.

The loss of one or more of our key personnel, or our failure to attract and retain other highly qualified personnel in the future, could harm our business.

We currently depend on the continued services and performance of our key personnel, including Mark Zuckerberg and Sheryl K. Sandberg. Although we have entered into employment agreements with Mr. Zuckerberg and Ms. Sandberg, the agreements have no specific duration and constitute at-will employment. In addition, many of our key technologies and systems are custom-made for our business by our personnel. The loss of key personnel, including members of management as well as key engineering, product development, marketing, and sales personnel, could disrupt our operations and have an adverse effect on our business.

As we continue to grow, we cannot guarantee we will continue to attract and retain the personnel we need to maintain our competitive position. In particular, we intend to continue to hire a significant number of technical personnel in the foreseeable future, and we expect to continue to face significant competition from other companies in hiring such personnel, particularly in the San Francisco Bay Area, where our headquarters are located and where the cost of living is high. As we continue to mature, the incentives to attract, retain, and motivate employees provided by our equity awards or by future arrangements may not be as effective as in the past, and if we issue significant equity to attract additional employees or to retain our existing employees, we would incur substantial additional share-based compensation expense and the ownership of our existing stockholders would be further diluted. Our ability to attract, retain, and motivate employees may also be adversely affected by stock price volatility. As a result of these factors, it may be difficult for us to continue to retain and motivate our employees. If we do not succeed in attracting, hiring, and integrating excellent personnel, or retaining and motivating existing personnel, we may be unable to grow effectively.

We may not be able to continue to successfully maintain or grow usage of and engagement with mobile and web applications that integrate with Facebook and our other products.

We have made and are continuing to make investments to enable developers to build, grow, and monetize mobile and web applications that integrate with Facebook and our other products. Such existing and prospective developers may not be successful in building, growing, or monetizing mobile and/or web applications that create and maintain user engagement. Additionally, developers may choose to build on other platforms, including mobile platforms controlled by third parties, rather than building products that integrate with Facebook and our other products. We are continuously seeking to balance the distribution objectives of our developers with our desire to provide an optimal user experience, and we may not be successful in achieving a balance that continues to attract and retain such developers. For example, from time to time, we have taken actions to reduce the volume of communications from these developers to users on Facebook and our other products with the objective of enhancing the user experience, and such actions have reduced distribution from, user engagement with, and our monetization opportunities from, mobile and web applications integrated with our products. In addition, as part of our investment in safety and security, we are conducting investigations and audits of a large number of platform applications, and we also recently announced several product changes that restrict developer access to certain user data. In some instances, these actions, as well as other actions to enforce our policies applicable to developers, have adversely affected, or will adversely affect, our relationships with developers. If we are not successful in our efforts to maintain or grow the number of developers that choose to build products that integrate with Facebook and our other products or if we are unable to continue to build and maintain good relations with such developers, our user growth and user engagement and our financial results may be adversely affected.

Payment transactions may subject us to additional regulatory requirements and other risks that could be costly and difficult to comply with or that could harm our business.

Our users can purchase virtual and digital goods from developers that offer applications using our Payments infrastructure on the Facebook website. In addition, certain of our users can use our Payments infrastructure, including on Messenger, for other activities, such as sending money to other users and making donations to certain charitable organizations. We are subject to a variety of laws and regulations in the United States, Europe, and elsewhere, including those governing anti-money laundering and counter-terrorist financing, money transmission, gift cards and other prepaid access instruments, electronic funds transfer, charitable fundraising, and import and export restrictions. Depending on how our Payments product evolves, we may also be subject to other laws and regulations including those governing gambling, banking, and lending. In some jurisdictions, the application or interpretation of these laws and regulations is not clear. To increase flexibility in how our use of Payments may evolve and to mitigate regulatory uncertainty, we have received certain money transmitter licenses in the United States and an Electronic Money (E-Money) license that allows us to conduct certain regulated payment activities in the participating member countries of the European Economic Area, which will generally require us to demonstrate compliance with many domestic and foreign laws in these areas. Our efforts to comply with these laws and regulations could be costly and result in diversion of management time and effort and may still not guarantee compliance. In the event that we are found to be in violation of any such legal or regulatory requirements, we may be subject to monetary fines or other penalties such as a cease and desist order, or we may be required to make product changes, any of which could have an adverse effect on our business and financial results.

In addition, we may be subject to a variety of additional risks as a result of Payments transactions, including: increased costs and diversion of management time and effort and other resources to deal with bad transactions or customer disputes; potential fraudulent or otherwise illegal activity by users, developers, employees, or third parties; restrictions on the investment of consumer funds used to transact Payments; and additional disclosure and reporting requirements. We also intend to launch certain payments functionality on WhatsApp, which may subject us to many of the foregoing risks.

We have significant international operations and plan to continue expanding our operations abroad where we have more limited operating experience, and this may subject us to increased business and economic risks that could affect our financial results.

We have significant international operations and plan to continue the international expansion of our business operations and the translation of our products. We currently make Facebook available in more than 100 different languages, and we have offices or data centers in more than 30 different countries. We may enter new international markets where we have limited or no experience in marketing, selling, and deploying our products. Our products are generally available globally, but some or all of our products or functionality may not be available in certain markets due to legal and regulatory complexities. For example, Facebook and certain of our other products are not generally available in China. We also outsource certain operational functions to third-party vendors globally. If we fail to deploy, manage, or oversee our international operations successfully, our business may suffer. In addition, we are subject to a variety of risks inherent in doing business internationally, including:

- political, social, or economic instability;

- risks related to legal, regulatory, and other government scrutiny applicable to U.S. companies with sales and

- operations in foreign jurisdictions, including with respect to privacy, tax, law enforcement, content, trade compliance, intellectual

- property, and terrestrial infrastructure matters;
- potential damage to our brand and reputation due to compliance with local laws, including potential censorship or requirements to provide user information to local authorities;
- enhanced difficulty in reviewing content on our platform and enforcing our community standards across different languages and countries;
- fluctuations in currency exchange rates and compliance with currency controls;
- foreign exchange controls and tax and other regulations and orders that might prevent us from repatriating cash earned in countries outside the United States or otherwise limit our ability to move cash freely, and impede our ability to invest such cash efficiently;
- higher levels of credit risk and payment fraud;
- enhanced difficulties of integrating any foreign acquisitions;
- burdens of complying with a variety of foreign laws, including laws related to taxation, content removal, data localization, and regulatory oversight;
- reduced protection for intellectual property rights in some countries;
- difficulties in staffing, managing, and overseeing global operations and the increased travel, infrastructure, and legal compliance costs associated with multiple international locations;
- compliance with the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act, and similar laws in other jurisdictions;
- compliance with statutory equity requirements and management of tax consequences; and
- geopolitical events affecting us, our marketers or our industry, including trade disputes.

If we are unable to expand internationally and manage the complexity of our global operations successfully, our financial results could be adversely affected.

We face design, manufacturing, and supply chain risks that, if not properly managed, could adversely impact our financial results.

We face a number of risks related to design, manufacturing, and supply chain management with respect to our consumer hardware products. For example, the consumer hardware products we sell may have quality issues resulting from the design or manufacture of the products, or from the software used in the products. Sometimes, these issues may be caused by components we purchase from other manufacturers or suppliers. If the quality of our consumer hardware products does not meet our customers' expectations or such products are found to be defective, then our brand and financial results could be adversely affected.

We rely on third parties to manufacture and manage the logistics of transporting and distributing our consumer hardware products. We may experience supply shortages or other disruptions in logistics or the supply chain in the future that could result in shipping delays and negatively impact our operations. We could be negatively affected if we are not able to engage third parties with the necessary capabilities or capacity on reasonable terms, or if those we engage with fail to meet their obligations (whether due to financial difficulties or other reasons), or make adverse changes in the pricing or other material terms of such arrangements with them.

We also require the suppliers and business partners of our consumer hardware products to comply with laws and certain company policies regarding sourcing practices and standards on labor, health and safety, the environment, and business ethics, but we do not control them or their practices and standards. If any of them violates laws, fails to implement changes in accordance with newly enacted laws, or implements practices or standards regarded as unethical, corrupt, or non-compliant, we could experience supply chain disruptions, government action or fines, canceled orders, or damage to our reputation.

We may face inventory risk with respect to our consumer hardware products.

We may be exposed to inventory risks with respect to our consumer hardware products as a result of rapid changes in product cycles and pricing, unsafe or defective merchandise, changes in consumer demand and consumer spending patterns, changes in consumer tastes with respect to our consumer hardware products, and other factors. We endeavor to accurately predict these trends and avoid overstocking or understocking consumer hardware products we may sell. Demand for products, however, can change significantly between the time inventory or components are ordered and the date of sale. In addition, when we begin selling or manufacturing a new consumer hardware product, it may be

difficult to establish vendor relationships, determine appropriate product

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or component selection, and accurately forecast demand. The acquisition of certain types of inventory or components may require significant lead-time and prepayment and they may not be returnable. Any one of these factors may adversely affect our operating results.

We may have exposure to greater than anticipated tax liabilities.

Our tax obligations, including income and non-income taxes, are based in part on our corporate operating structure and intercompany arrangements, including the manner in which we operate our business, develop, value, manage, protect, and use our intellectual property, and the valuations of our intercompany transactions. The tax laws applicable to our business, including the laws of the United States and other jurisdictions, are subject to interpretation and certain jurisdictions are aggressively interpreting their laws in new ways in an effort to raise additional tax revenue from companies such as Facebook. We are subject to regular review and audit by U.S. federal, state, and foreign tax authorities. Tax authorities may disagree with certain positions we have taken, including our methodologies for valuing developed technology or intercompany arrangements, and any adverse outcome of such a review or audit could increase our worldwide effective tax rate, increase the amount of non-income taxes imposed on our business, and harm our financial position, results of operations, and cash flows. For example, in 2016 and 2018, the IRS issued formal assessments relating to transfer pricing with our foreign subsidiaries in conjunction with the examination of the 2010 through 2013 tax years. Although we disagree with the IRS's position and are contesting this issue, the ultimate resolution is uncertain and, if resolved in a manner unfavorable to us, may adversely affect our financial results.

The determination of our worldwide provision for income taxes and other tax liabilities requires significant judgment by management, and there are many transactions where the ultimate tax determination is uncertain. Our provision for income taxes is determined by the manner in which we operate our business, and any changes to such operations or laws applicable to such operations may affect our effective tax rate. Although we believe that our provision for income taxes and estimates of our non-income tax liabilities are reasonable, the ultimate settlement may differ from the amounts recorded in our financial statements and may materially affect our financial results in the period or periods for which such determination is made.

Our future income tax rates could be volatile and difficult to predict due to changes in jurisdictional profit split, changes in the amount and recognition of deferred tax assets and liabilities, or by changes in tax laws, regulations, or accounting principles.

Changes in tax laws or tax rulings could materially affect our financial position, results of operations, and cash flows. The tax regimes we are subject to or operate under, including income and non-income taxes, are unsettled and may be subject to significant change. Changes in tax laws or tax rulings, or changes in interpretations of existing laws, could materially affect our financial position, results of operations, and cash flows. For example, the 2017 Tax Cuts and Jobs Act (Tax Act) enacted in December 2017 had a significant impact on our tax obligations and effective tax rate for the fourth quarter of 2017, and the issuance of additional regulatory or accounting guidance related to the Tax Act could materially affect our tax obligations and effective tax rate in the period issued. In addition, the Ninth Circuit Court of Appeals is expected to issue a decision in *Altera Corp. v. Commissioner* regarding the treatment of share-based compensation expense in a cost sharing arrangement, which could have a material effect on our tax obligations and effective tax rate for the quarter in which the decision is issued. In addition, many countries in Europe, as well as a number of other countries and organizations, have recently proposed or recommended changes to existing tax laws or have enacted new laws that could significantly increase our tax obligations in many countries where we do business or require us to change the manner in which we operate our business.

The Organization for Economic Cooperation and Development has been working on a Base Erosion and Profit Shifting Project, and issued a report in 2015, an interim report in 2018, and is expected to continue to issue guidelines and proposals that may change various aspects of the existing framework under which our tax obligations are determined in many of the countries in which we do business. Similarly, the European Commission and several countries have issued proposals that would change various aspects of the current tax framework under which we are taxed. These proposals include changes to the existing framework to calculate income tax, as well as proposals to change or impose new types of non-income taxes, including taxes based on a percentage of revenue. For example, the United Kingdom, Spain, Italy, and France have each proposed taxes applicable to digital services, which includes business activities on social media platforms and online marketplaces, and would likely apply to our business.

The European Commission has conducted investigations in multiple countries focusing on whether local country tax rulings or tax legislation provides preferential tax treatment that violates European Union state aid rules and concluded that certain countries, including Ireland, have provided illegal state aid in certain cases. These investigations may result in changes to the tax treatment of our foreign operations.

Due to the large and expanding scale of our international business activities, many of these types of changes to the taxation of our activities described above could increase our worldwide effective tax rate, increase the amount of non-income taxes imposed on our business, and harm our financial position, results of operations, and cash flows. Such changes may also apply retroactively to our historical operations and result in taxes greater than the amounts estimated and recorded in our financial statements.

We cannot guarantee that our share repurchase program will be fully consummated or that it will enhance long-term stockholder value. Share repurchases could also increase the volatility of the trading price of our stock and will diminish our cash reserves.

Although our board of directors has authorized a share repurchase program that commenced in 2017 and does not have an expiration date, the program does not obligate us to repurchase any specific dollar amount or to acquire any specific number of shares of our Class A common stock. We cannot guarantee that the program will be fully consummated or that it will enhance long-term stockholder value. The program could affect the trading price of our stock and increase volatility, and any announcement of a termination of this program may result in a decrease in the trading price of our stock. In addition, this program will diminish our cash reserves.

Risks Related to Ownership of Our Class A Common Stock

The trading price of our Class A common stock has been and will likely continue to be volatile.

The trading price of our Class A common stock has been, and is likely to continue to be, volatile. Since shares of our Class A common stock were sold in our initial public offering in May 2012 at a price of \$38.00 per share, our stock price has ranged from \$17.55 to \$218.62 through December 31, 2018. In addition to the factors discussed in this Annual Report on Form 10-K, the trading price of our Class A common stock may fluctuate significantly in response to numerous factors, many of which are beyond our control, including:

- actual or anticipated fluctuations in our revenue and other operating results;
- the financial projections we may provide to the public, any changes in these projections or our failure to meet these projections;
- actions of securities analysts who initiate or maintain coverage of us, changes in financial estimates by any securities analysts who follow our company, or our failure to meet these estimates or the expectations of investors;
- additional shares of our stock being sold into the market by us, our existing stockholders, or in connection with acquisitions, or the anticipation of such sales;
- investor sentiment with respect to our competitors, our business partners, and our industry in general;
- announcements by us or our competitors of significant products or features, technical innovations, acquisitions, strategic partnerships, joint ventures, or capital commitments;
- announcements by us or estimates by third parties of actual or anticipated changes in the size of our user base, the level of user engagement, or the effectiveness of our ad products;
- changes in operating performance and stock market valuations of technology companies in our industry, including our developers and competitors;
- price and volume fluctuations in the overall stock market, including as a result of trends in the economy as a whole;
- the inclusion, exclusion, or deletion of our stock from any trading indices, such as the S&P 500 Index;
- media coverage of our business and financial performance;
- lawsuits threatened or filed against us, or developments in pending lawsuits;
- developments in anticipated or new legislation or regulatory actions, including interim or final rulings by tax, judicial, or regulatory bodies;
- trading activity in our share repurchase program; and
- other events or factors, including those resulting from war or incidents of terrorism, or responses to these events.

In addition, the stock markets have experienced extreme price and volume fluctuations that have affected and continue to affect the market prices of equity securities of many technology companies. Stock prices of many technology companies have fluctuated in a manner unrelated or disproportionate to the operating performance of those companies. We are currently subject to securities litigation in connection with our platform and user data practices and the misuse of certain data by a developer that shared such data with third parties in violation of our terms and policies, as well as the disclosure of our earnings results for the second quarter of 2018. We may experience more such litigation following future periods of volatility. Any securities litigation could subject us to substantial costs, divert resources and the attention of management from our business, and adversely affect our business.

We do not intend to pay cash dividends for the foreseeable future.

We have never declared or paid cash dividends on our capital stock. We currently intend to retain any future earnings to finance the operation and expansion of our business and fund our share repurchase program, and we do not expect to declare or pay any cash dividends in the foreseeable future. As a result, you may only receive a return on your investment in our Class A common stock if the trading price of your shares increases.

The dual class structure of our common stock and a voting agreement between certain stockholders have the effect of concentrating voting control with our CEO and certain other holders of our Class B common stock; this will limit or preclude your ability to influence corporate matters.

Our Class B common stock has ten votes per share and our Class A common stock has one vote per share.

Stockholders who hold shares of Class B common stock, including certain of our executive officers, employees, and directors and their affiliates, together hold a substantial majority of the voting power of our outstanding capital stock. Because of the ten-to-one voting ratio between our Class B and Class A common stock, the holders of our Class B common stock collectively control a majority of the combined voting power of our common stock and therefore are able to control all matters submitted to our stockholders for approval so long as the shares of Class B common stock represent at least 9.1% of all outstanding shares of our Class A and Class B common stock. This concentrated control will limit or preclude your ability to influence corporate matters for the foreseeable future.

Transfers by holders of Class B common stock will generally result in those shares converting to Class A common stock, subject to limited exceptions, such as certain transfers effected for estate planning or charitable purposes. The conversion of Class B common stock to Class A common stock will have the effect, over time, of increasing the relative voting power of those holders of Class B common stock who retain their shares in the long term. If, for example, Mr. Zuckerberg retains a significant portion of his holdings of Class B common stock for an extended period of time, he could, in the future, continue to control a majority of the combined voting power of our outstanding capital stock.

Our status as a "controlled company" could make our Class A common stock less attractive to some investors or otherwise harm our stock price.

Because we qualify as a "controlled company" under the corporate governance rules for Nasdaq-listed companies, we are not required to have a majority of our board of directors be independent, nor are we required to have a compensation committee or an independent nominating function. In light of our status as a controlled company, our board of directors determined not to have a separate and independent nominating function and chose to have the full board of directors be directly responsible for nominating members of our board, and in the future we could elect not to have a majority of our board of directors be independent or not to have a compensation committee. Accordingly, should the interests of our controlling stockholder differ from those of other stockholders, the other stockholders may not have the same protections afforded to stockholders of companies that are subject to all of the corporate governance rules for Nasdaq-listed companies. Our status as a controlled company could make our Class A common stock less attractive to some investors or otherwise harm our stock price.

Delaware law and provisions in our restated certificate of incorporation and bylaws could make a merger, tender offer, or proxy contest difficult, thereby depressing the trading price of our Class A common stock.

Our status as a Delaware corporation and the anti-takeover provisions of the Delaware General Corporation Law may discourage, delay, or prevent a change in control by prohibiting us from engaging in a business combination with an interested stockholder for a period of three years after the person becomes an interested stockholder, even if a change of control would be beneficial to our existing stockholders. In addition, our current restated certificate of incorporation and bylaws contain provisions that may make the acquisition of our company more difficult, including the following: until the first date on which the outstanding shares of our Class B common stock represent less than 35% of the combined voting power of our common stock, any transaction that would result in a change in control of our company requires the approval of a majority of our outstanding Class B common stock voting as a separate class;

we currently have a dual class common stock structure, which provides Mr. Zuckerberg with the ability to

- control the outcome of matters requiring stockholder approval, even if he owns significantly less than a majority of the shares of our outstanding Class A and Class B common stock;
-

when the outstanding shares of our Class B common stock represent less than a majority of the combined voting power of common stock, certain amendments to our restated certificate of incorporation or bylaws will require the approval of two-thirds of the combined vote of our then-outstanding shares of Class A and Class B common stock; when the outstanding shares of our Class B common stock represent less than a majority of the combined voting power of our common stock, vacancies on our board of directors will be able to be filled only by our board of directors and

not by stockholders;

when the outstanding shares of our Class B common stock represent less than a majority of the combined voting power of our common stock, our board of directors will be classified into three classes of directors with staggered three-year terms and directors will only be able to be removed from office for cause;

when the outstanding shares of our Class B common stock represent less than a majority of the combined voting power of our common stock, our stockholders will only be able to take action at a meeting of stockholders and not by written consent;

only our chairman, our chief executive officer, our president, or a majority of our board of directors are authorized to call a special meeting of stockholders;

- advance notice procedures apply for stockholders to nominate candidates for election as directors or to bring matters before an annual meeting of stockholders;

our restated certificate of incorporation authorizes undesignated preferred stock, the terms of which may be established, and shares of which may be issued, without stockholder approval; and

certain litigation against us can only be brought in Delaware.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters are located in Menlo Park, California. As of December 31, 2018, we owned and leased approximately six million square feet of office and building space for our corporate headquarters and in the surrounding areas, and approximately 89 acres of land to be developed to accommodate anticipated future growth. In addition, we leased offices around the world totaling approximately seven million square feet. We also own and lease data centers throughout the United States and in various locations internationally.

We believe that our facilities are adequate for our current needs.

Item 3. Legal Proceedings

Beginning on March 20, 2018, multiple putative class actions and derivative actions were filed in state and federal courts in the United States and elsewhere against us and certain of our directors and officers alleging violations of securities laws, breach of fiduciary duties, and other causes of action in connection with our platform and user data practices as well as the misuse of certain data by a developer that shared such data with third parties in violation of our terms and policies, and seeking unspecified damages and injunctive relief. Beginning on July 27, 2018, two putative class actions were filed in federal court in the United States against us and certain of our directors and officers alleging violations of securities laws in connection with the disclosure of our earnings results for the second quarter of 2018, and seeking unspecified damages. These two actions subsequently were transferred and consolidated in the U.S. District Court for the Northern District of California with the putative securities class action described above relating to our platform and user data practices. We believe these lawsuits are without merit, and we are vigorously defending them. In addition, our platform and user data practices, as well as the events surrounding the misuse of certain data by a developer, became the subject of U.S. Federal Trade Commission, Securities and Exchange Commission, state attorneys general, and other government inquiries in the United States, Europe, and other jurisdictions. Any such inquiries could subject us to substantial fines and costs, require us to change our business practices, divert resources and the attention of management from our business, or adversely affect our business.

Beginning on September 28, 2018, multiple putative class actions were filed in state and federal courts in the United States and elsewhere against us alleging violations of consumer protection laws and other causes of action in connection with a third-party cyber-attack that exploited a vulnerability in Facebook's code to steal user access tokens and access certain profile information from user accounts on Facebook, and seeking unspecified damages and injunctive relief. We believe these lawsuits are without merit, and we are vigorously defending them. In addition, the events surrounding this cyber-attack became the subject of Irish Data Protection Commission, U.S. Federal Trade Commission and other government inquiries in the United States, Europe, and other jurisdictions. Any such inquiries could subject us to substantial fines and costs, require us to change our business practices, divert resources and the attention of management from our business, or adversely affect our business.

In addition, from time to time, we are subject to litigation and other proceedings involving law enforcement and other regulatory agencies, including in particular in Brazil and Europe, in order to ascertain the precise scope of our legal obligations to comply with the requests of those agencies, including our obligation to disclose user information in particular circumstances. A number of such instances have resulted in the assessment of fines and penalties against us. We believe we have multiple legal grounds to satisfy these requests or prevail against associated fines and penalties, and we intend to vigorously defend such fines and penalties.

We are also party to various other legal proceedings, claims, and regulatory, tax or government inquiries and investigations that arise in the ordinary course of business, and we may in the future be subject to additional legal proceedings and disputes.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Market Information for Common Stock

Our Class A common stock has been listed on the Nasdaq Global Select Market under the symbol "FB" since May 18, 2012. Prior to that time, there was no public market for our stock.

Our Class B common stock is not listed on any stock exchange nor traded on any public market.

Holders of Record

As of December 31, 2018, there were 3,780 stockholders of record of our Class A common stock, and the closing price of our Class A common stock was \$131.09 per share as reported on the Nasdaq Global Select Market. Because many of our shares of Class A common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders. As of December 31, 2018, there were 41 stockholders of record of our Class B common stock.

Dividend Policy

We have never declared or paid any cash dividend on our common stock. We intend to retain any future earnings and do not expect to pay cash dividends in the foreseeable future.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The following table summarizes the share repurchase activity for the three months ended December 31, 2018:

	Total Number of Shares Purchased (1)	Average Price Paid Per Share (2)	Total Number of Shares Purchased as Part of Publicly Announced Programs (1)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs ⁽¹⁾
	(in thousands)		(in thousands)	(in millions)
October 1 - 31, 2018	—	\$—	—	\$ 3,544
November 1 - 30, 2018	—	\$—	—	\$ 3,544
December 1 - 31, 2018	25,708	\$137.87	25,708	\$ 9,000
	25,708		25,708	

In November 2016, our board of directors authorized a share repurchase program that commenced in January 2017 and does not have an expiration date. We completed repurchases under the original authorization to purchase up to \$6.0 billion of our Class A common stock during the second quarter of 2018. In April 2018, the authorization for the repurchase of our Class A common stock was increased by an additional \$9.0 billion, and we completed repurchases under this authorization during the fourth quarter of 2018. In December 2018, our board of directors authorized an additional \$9.0 billion of repurchases under this program, all of which remained available for future repurchases as of December 31, 2018. The timing and actual number of shares repurchased depend on a variety of factors, including price, general business and market conditions, and other investment opportunities, and shares may be repurchased through open market purchases or privately negotiated transactions, including through the use of trading plans intended to qualify under Rule 10b5-1 under the Exchange Act.

(2) Average price paid per share includes costs associated with the repurchases.

Recent Sale of Unregistered Securities and Use of Proceeds

Recent Sale of Unregistered Securities

None.

Stock Performance Graph

This performance graph shall not be deemed "soliciting material" or to be "filed" with the SEC for purposes of Section 18 of the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any filing of Facebook, Inc. under the Securities Act of 1933, as amended, or the Exchange Act.

The following graph shows a comparison of the cumulative total return for our Class A common stock, the Standard & Poor's 500 Stock Index (S&P 500 Index) and the Nasdaq Composite Index (Nasdaq Composite) for the five years ended December 31, 2018. The graph assumes that \$100 was invested at the market close on the last trading day for the fiscal year ended December 31, 2013 in the Class A common stock of Facebook, Inc., the S&P 500 Index and the Nasdaq Composite and data for the S&P 500 Index and the Nasdaq Composite assumes reinvestments of gross dividends. The stock price performance of the following graph is not necessarily indicative of future stock price performance.

Item 6. Selected Financial Data

You should read the following selected consolidated financial data in conjunction with Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and our consolidated financial statements and the related notes included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K.

The consolidated statements of income data for each of the years ended December 31, 2018, 2017, and 2016 and the consolidated balance sheets data as of December 31, 2018 and 2017 are derived from our audited consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K. The consolidated statements of income data for the years ended December 31, 2015 and 2014 and the consolidated balance sheets data as of December 31, 2016, 2015, and 2014 are derived from our audited consolidated financial statements, except as otherwise noted, that are not included in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of our results in any future period.

	Year Ended December 31,				
	2018	2017	2016	2015	2014
	(in millions, except per share data)				
Consolidated Statements of Income Data:					
Revenue	\$55,838	\$40,653	\$27,638	\$17,928	\$12,466
Total costs and expenses ⁽¹⁾	30,925	20,450	15,211	11,703	7,472
Income from operations	\$24,913	\$20,203	\$12,427	\$6,225	\$4,994
Income before provision for income taxes	\$25,361	\$20,594	\$12,518	\$6,194	\$4,910
Net income	\$22,112	\$15,934	\$10,217	\$3,688	\$2,940
Net income attributable to Class A and Class B common stockholders	\$22,111	\$15,920	\$10,188	\$3,669	\$2,925
Earnings per share attributable to Class A and Class B common stockholders:					
Basic	\$7.65	\$5.49	\$3.56	\$1.31	\$1.12
Diluted	\$7.57	\$5.39	\$3.49	\$1.29	\$1.10

(1) Total costs and expenses include \$4.15 billion, \$3.72 billion, \$3.22 billion, \$2.97 billion, and \$1.84 billion of share-based compensation for the years ended December 31, 2018, 2017, 2016, 2015, and 2014, respectively.

	As of December 31,				
	2018	2017	2016	2015	2014
	(in millions)				
Consolidated Balance Sheets Data:					
Cash, cash equivalents, and marketable securities	\$41,114	\$41,711	\$29,449	\$18,434	\$11,199
Working capital	\$43,463	\$44,803	\$31,526	\$19,727	\$11,966
Property and equipment, net	\$24,683	\$13,721	\$8,591	\$5,687	\$3,967
Total assets	\$97,334	\$84,524	\$64,961	\$49,407	\$39,966
Capital lease obligations	\$—	\$—	\$—	\$114	\$233
Total liabilities	\$13,207	\$10,177	\$5,767	\$5,189	\$3,870
Additional paid-in capital	\$42,906	\$40,584	\$38,227	\$34,886	\$30,225
Total stockholders' equity	\$84,127	\$74,347	\$59,194	\$44,218	\$36,096

Free Cash Flow

In addition to other financial measures presented in accordance with U.S. generally accepted accounting principles (GAAP), we monitor free cash flow (FCF) as a non-GAAP measure to manage our business, make planning decisions, evaluate our performance, and allocate resources. We define FCF as net cash provided by operating activities reduced by net purchases of property and equipment.

We believe that FCF is one of the key financial indicators of our business performance over the long term and provides useful information regarding how cash provided by operating activities compares to the property and equipment investments required to maintain and grow our business.

We have chosen our definition for FCF because we believe that this methodology can provide useful supplemental information to help investors better understand underlying trends in our business. We use FCF in discussions with our senior management and board of directors.

FCF has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for analysis of other GAAP financial measures, such as net cash provided by operating activities. FCF is not intended to represent our residual cash flow available for discretionary expenses. Some of the limitations of FCF are:

• FCF does not reflect our future contractual commitments; and

• other companies in our industry present similarly titled measures differently than we do, limiting their usefulness as comparative measures.

Management compensates for the inherent limitations associated with using the FCF measure through disclosure of such limitations, presentation of our financial statements in accordance with GAAP, and reconciliation of FCF to the most directly comparable GAAP measure, net cash provided by operating activities, as presented below.

The following is a reconciliation of FCF to the most comparable GAAP measure, net cash provided by operating activities:

	Year Ended December 31,				
	2018	2017	2016	2015	2014
	(in millions)				
Net cash provided by operating activities	\$29,274	\$24,216	\$16,108	\$10,320	\$7,326
Purchases of property and equipment, net	(13,915)	(6,733)	(4,491)	(2,523)	(1,831)
Free cash flow	\$15,359	\$17,483	\$11,617	\$7,797	\$5,495

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read the following discussion of our financial condition and results of operations in conjunction with our consolidated financial statements and the related notes included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K. In addition to our historical consolidated financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, and beliefs. Our actual results could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in Part I, Item 1A, "Risk Factors." For a discussion of limitations in the measurement of certain of our user metrics, see the section entitled "Limitations of Key Metrics and Other Data" in this Annual Report on Form 10-K.

Certain revenue information in the section entitled "—Revenue—Foreign Exchange Impact on Revenue" is presented on a constant currency basis. This information is a non-GAAP financial measure. To calculate revenue on a constant currency basis, we translated revenue for the full year 2018 using 2017 monthly exchange rates for our settlement currencies other than the U.S. dollar. This non-GAAP financial measure is not intended to be considered in isolation or as a substitute for, or superior to, financial information prepared and presented in accordance with GAAP. This measure may be different from non-GAAP financial measures used by other companies, limiting its usefulness for comparison purposes. Moreover, presentation of revenue on a constant currency basis is provided for year-over-year comparison purposes, and investors should be cautioned that the effect of changing foreign currency exchange rates has an actual effect on our operating results. We believe this non-GAAP financial measure provides investors with useful supplemental information about the financial performance of our business, enables comparison of financial results between periods where certain items may vary independent of business performance, and allows for greater transparency with respect to key metrics used by management in operating our business.

Executive Overview of Full Year 2018 Results

Our key user metrics and financial results for 2018 are as follows:

User growth:

• Daily active users (DAUs) were 1.52 billion on average for December 2018, an increase of 9% year-over-year.

• Monthly active users (MAUs) were 2.32 billion as of December 31, 2018, an increase of 9% year-over-year.

Financial results:

• Revenue was \$55.84 billion, up 37% year-over-year, and ad revenue was \$55.01 billion, up 38% year-over-year.

• Total costs and expenses were \$30.93 billion.

• Income from operations was \$24.91 billion.

• Net income was \$22.11 billion with diluted earnings per share of \$7.57.

• Capital expenditures were \$13.92 billion.

• Effective tax rate was 13%.

• Cash and cash equivalents, and marketable securities were \$41.11 billion as of December 31, 2018.

• Headcount was 35,587 as of December 31, 2018, an increase of 42% year-over-year.

In 2018, we continued to focus on our main revenue growth priorities: (i) helping marketers use our products to connect with consumers where they are and (ii) making our ads more relevant and effective.

We continued to invest, based on our roadmap, in: (i) our most developed ecosystems, Facebook and Instagram, (ii) driving growth and building ecosystems around our products that already have significant user bases, such as Messenger and WhatsApp, as well as continuing to grow features like Stories, and (iii) long-term technology initiatives, such as connectivity, artificial intelligence, and augmented and virtual reality, that we believe will further our mission to give people the power to build community and bring the world closer together. We intend to continue to invest based on this roadmap and we anticipate that additional investments in the following areas will continue to drive significant year-over-year expense growth in 2019: (i) expanding our data center capacity, network infrastructure, and office facilities as well as scaling our headcount to support our growth, and (ii) investments in safety and security, marketing, video content, and our long-term technology initiatives. Expense growth exceeded revenue growth in 2018, which we anticipate will continue in 2019.

Trends in Our User Metrics

The numbers for our key metrics, our DAUs, MAUs, and average revenue per user (ARPU), do not include Instagram, WhatsApp, or Oculus users unless they would otherwise qualify as such users, respectively, based on their other activities on Facebook. In addition, other user engagement metrics do not include Instagram, WhatsApp, or Oculus unless otherwise specifically stated.

Trends in the number of users affect our revenue and financial results by influencing the number of ads we are able to show, the value of our ads to marketers, the volume of Payments transactions, as well as our expenses and capital expenditures. Substantially all of our daily and monthly active users (as defined below) access Facebook on mobile devices.

Daily Active Users (DAUs). We define a daily active user as a registered Facebook user who logged in and visited Facebook through our website or a mobile device, or used our Messenger application (and is also a registered Facebook user), on a given day. We view DAUs, and DAUs as a percentage of MAUs, as measures of user engagement on Facebook.

Note: For purposes of reporting DAUs, MAUs, and ARPU by geographic region, Europe includes all users in Russia and Turkey and Rest of World includes all users in Africa, Latin America, and the Middle East.

Worldwide DAUs increased 9% to 1.52 billion on average during December 2018 from 1.40 billion during December 2017. Users in India, Indonesia, and the Philippines represented key sources of growth in DAUs during December 2018, relative to the same period in 2017.

Monthly Active Users (MAUs). We define a monthly active user as a registered Facebook user who logged in and visited Facebook through our website or a mobile device, or used our Messenger application (and is also a registered Facebook user), in the last 30 days as of the date of measurement. MAUs are a measure of the size of our global active user community on Facebook.

As of December 31, 2018, we had 2.32 billion MAUs, an increase of 9% from December 31, 2017. Users in India, Indonesia, and the Philippines represented key sources of growth in 2018, relative to the same period in 2017.

Trends in Our Monetization by User Geography

We calculate our revenue by user geography based on our estimate of the geography in which ad impressions are delivered, virtual and digital goods are purchased, or consumer hardware devices are shipped. We define ARPU as our total revenue in a given geography during a given quarter, divided by the average of the number of MAUs in the geography at the beginning and end of the quarter. While ARPU includes all sources of revenue, the number of MAUs used in this calculation only includes users of Facebook and Messenger as described in the definition of MAU above. Revenue from users who are not also Facebook or Messenger MAUs was not material. The geography of our users affects our revenue and financial results because we currently monetize users in different geographies at different average rates. Our revenue and ARPU in regions such as United States & Canada and Europe are relatively higher primarily due to the size and maturity of those online and mobile advertising markets. For example, ARPU in 2018 in the United States & Canada region was more than ten times higher than in the Asia-Pacific region.

Note: Our revenue by user geography in the charts above is geographically apportioned based on our estimation of the geographic location of our users when they perform a revenue-generating activity. This allocation differs from our revenue disaggregated by geography disclosure in our consolidated financial statements where revenue is geographically apportioned based on the location of the customer.

For 2018, worldwide ARPU was \$24.96, an increase of 24% from 2017. Over this period, ARPU increased by 34% in Europe, 33% in United States & Canada, 21% in Rest of World, and 20% in Asia-Pacific. In addition, user growth was more rapid in geographies with relatively lower ARPU, such as Asia-Pacific and Rest of World. We expect that user growth in the future will be primarily concentrated in those regions where ARPU is relatively lower, such that worldwide ARPU may continue to increase at a slower rate relative to ARPU in any geographic region, or potentially decrease even if ARPU increases in each geographic region.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with U.S. generally accepted accounting principles (GAAP). The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenue, costs and expenses, and related disclosures. We evaluate our estimates and assumptions on an ongoing basis. Our estimates are based on historical experience and various other assumptions that we believe to be reasonable under the circumstances. Our actual results could differ from these estimates under different assumptions or conditions.

An accounting policy is deemed to be critical if it requires an accounting estimate to be made based on assumptions about matters that are highly uncertain at the time the estimate is made, if different estimates reasonably could have been used, or if changes in the estimate that are reasonably possible could materially impact the financial statements. We believe that the assumptions and estimates associated with income taxes, loss contingencies, and business combinations and valuation of goodwill and other acquired intangible assets have the greatest potential impact on our consolidated financial statements. Therefore, we consider these to be our critical accounting policies and estimates. For further information on all of our significant accounting policies, see Note 1—Summary of Significant Accounting Policies in the accompanying notes to consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K.

Income Taxes

We are subject to income taxes in the United States and numerous foreign jurisdictions. Significant judgment is required in determining our provision for income taxes and income tax assets and liabilities, including evaluating uncertainties in the application of accounting principles and complex tax laws.

We record a provision for income taxes for the anticipated tax consequences of the reported results of operations using the asset and liability method. Under this method, we recognize deferred income tax assets and liabilities for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, as well as for loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using the tax rates that are expected to apply to taxable income for the years in which those tax assets and liabilities are expected to be realized or settled. We recognize the deferred income tax effects of a change in tax rates in the period of the enactment. We record a valuation allowance to reduce our deferred tax assets to the net amount that we believe is more likely than not to be realized.

We recognize tax benefits from uncertain tax positions only if we believe that it is more likely than not that the tax position will be sustained on examination by the taxing authorities based on the technical merits of the position. These uncertain tax positions include our estimates for transfer pricing that have been developed based upon analyses of appropriate arms-length prices. Similarly, our estimates related to uncertain tax positions concerning research tax credits are based on an assessment of whether our available documentation corroborating the nature of our activities supporting the tax credits will be sufficient. Although we believe that we have adequately reserved for our uncertain tax positions (including net interest and penalties), we can provide no assurance that the final tax outcome of these matters will not be materially different. We make adjustments to these reserves in accordance with the income tax accounting guidance when facts and circumstances change, such as the closing of a tax audit or the refinement of an estimate. To the extent that the final tax outcome of these matters is different from the amounts recorded, such differences will affect the provision for income taxes in the period in which such determination is made, and could have a material impact on our financial condition and operating results.

On December 22, 2017, the 2017 Tax Cuts and Jobs Act (Tax Act) was enacted into law and the new legislation contains several key tax provisions that affected us, including a one-time mandatory transition tax on accumulated foreign earnings and a reduction of the corporate income tax rate to 21% effective January 1, 2018, among others. We are required to recognize the effect of the tax law changes in the period of enactment, such as determining the transition tax, remeasuring our U.S. deferred tax assets and liabilities as well as reassessing the net realizability of our deferred tax assets and liabilities. In December 2017, the SEC staff issued Staff Accounting Bulletin No. 118, Income Tax Accounting Implications of the Tax Cuts and Jobs Act (SAB 118), which allowed us to record provisional amounts during a measurement period not to extend beyond one year of the enactment date. As a result, we previously provided a provisional estimate of the effect of the Tax Act in our financial statements. In the fourth quarter of 2018,

we completed our analysis to determine the effect of the Tax Act and recorded immaterial adjustments as of December 31, 2018.

Loss Contingencies

We are involved in legal proceedings, claims, and regulatory, tax or government inquiries and investigations that arise in the ordinary course of business. Certain of these matters include speculative claims for substantial or indeterminate amounts of damages. We record a liability when we believe that it is both probable that a loss has been incurred and the amount can be reasonably estimated. If we determine that a loss is reasonably possible and the loss or range of loss can be estimated, we disclose the possible loss in the accompanying notes to the consolidated financial statements. We review the developments in our contingencies that could affect the amount of the provisions that have been previously recorded, and the matters and related reasonably possible losses disclosed. We make adjustments to our provisions and changes to our disclosures

accordingly to reflect the impact of negotiations, settlements, rulings, advice of legal counsel, and updated information. Significant judgment is required to determine both the probability and the estimated amount of loss. The outcome of these matters is inherently uncertain. Therefore, if one or more of these matters were resolved against us for amounts in excess of management's expectations, our results of operations and financial condition, including in a particular reporting period in which any such outcome becomes probable and estimable, could be materially adversely affected. See Note 9—Commitments and Contingencies and Note 12—Income Taxes of the accompanying notes to our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" and Part I, Item 3, "Legal Proceedings" of this Annual Report on Form 10-K for additional information regarding these contingencies.

Business Combinations and Valuation of Goodwill and Other Acquired Intangible Assets

We allocate the fair value of purchase consideration to the tangible assets acquired, liabilities assumed, and intangible assets acquired based on their estimated fair values. The excess of the fair value of purchase consideration over the fair values of these identifiable assets and liabilities is recorded as goodwill. Such valuations require management to make significant estimates and assumptions, especially with respect to intangible assets. Significant estimates in valuing certain intangible assets include, but are not limited to, future expected cash flows from acquired users, acquired technology, and trade names from a market participant perspective, useful lives, and discount rates.

Management's estimates of fair value are based upon assumptions believed to be reasonable, but which are inherently uncertain and unpredictable and, as a result, actual results may differ from estimates. During the measurement period, which is not to exceed one year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed, with the corresponding offset to goodwill. Upon the conclusion of the measurement period, any subsequent adjustments are recorded to earnings.

We review goodwill for impairment at least annually or more frequently if events or changes in circumstances would more likely than not reduce the fair value of our single reporting unit below its carrying value. As of December 31, 2018, no impairment of goodwill has been identified.

Acquired finite-lived intangible assets are amortized over their estimated useful lives. We evaluate the recoverability of our intangible assets for possible impairment whenever events or circumstances indicate that the carrying amount of such assets may not be recoverable. The evaluation is performed at the lowest level for which identifiable cash flows are largely independent of the cash flows of other assets and liabilities. Recoverability of these assets is measured by a comparison of the carrying amounts to the future undiscounted cash flows the assets are expected to generate. If such review indicates that the carrying amount of property and equipment and intangible assets is not recoverable, the carrying amount of such assets is reduced to fair value. We have not recorded any significant impairment charges during the years presented.

In addition to the recoverability assessment, we routinely review the remaining estimated useful lives of our finite-lived intangible assets. If we reduce the estimated useful life assumption for any asset, the remaining unamortized balance would be amortized over the revised estimated useful life.

Components of Results of Operations

Revenue

Advertising. We generate substantially all of our revenue from advertising. Our advertising revenue is generated by displaying ad products on Facebook, Instagram, Messenger, and third-party affiliated websites or mobile applications. Marketers pay for ad products either directly or through their relationships with advertising agencies or resellers, based on the number of impressions delivered or the number of actions, such as clicks, taken by users.

We recognize revenue from the display of impression-based ads in the contracted period in which the impressions are delivered. Impressions are considered delivered when an ad is displayed to a user. We recognize revenue from the delivery of action-based ads in the period in which a user takes the action the marketer contracted for. The number of ads we show is subject to methodological changes as we continue to evolve our ads business and the structure of our ads products. We calculate price per ad as total ad revenue divided by the number of ads delivered, representing the effective price paid per impression by a marketer regardless of their desired objective such as impression or action. For advertising revenue arrangements where we are not the principal, we recognize revenue on a net basis.

Payments and other fees. Payments revenue is comprised of the net fee we receive from developers using our Payments infrastructure. Our other fees revenue consists primarily of revenue from the delivery of consumer hardware devices, as well as revenue from various other sources.

Cost of Revenue and Operating Expenses

Cost of revenue. Our cost of revenue consists primarily of expenses associated with the delivery and distribution of our products. These include expenses related to the operation of our data centers, such as facility and server equipment depreciation, salaries, benefits, and share-based compensation for employees on our operations teams, and energy and bandwidth costs. Cost of revenue also includes costs associated with partner arrangements, including traffic acquisition and content acquisition costs, credit card and other transaction fees related to processing customer transactions, and cost of consumer hardware device inventory sold.

Research and development. Research and development expenses consist primarily of share-based compensation, salaries, and benefits for employees on our engineering and technical teams who are responsible for building new products as well as improving existing products. We expense all of our research and development costs as they are incurred.

Marketing and sales. Our marketing and sales expenses consist of salaries, share-based compensation, and benefits for our employees engaged in sales, sales support, marketing, business development, and customer service functions. Our marketing and sales expenses also include marketing and promotional expenditures, and professional services such as content reviewers.

General and administrative. The majority of our general and administrative expenses consist of salaries, benefits, and share-based compensation for certain of our executives as well as our legal, finance, human resources, corporate communications and policy, and other administrative employees. In addition, general and administrative expenses include legal-related costs and professional services.

Results of Operations

The following tables set forth our consolidated statements of income data:

	Year Ended December 31,		
	2018	2017	2016
	(in millions)		
Consolidated Statements of Income Data:			
Revenue	\$55,838	\$40,653	\$27,638
Costs and expenses:			
Cost of revenue	9,355	5,454	3,789
Research and development	10,273	7,754	5,919
Marketing and sales	7,846	4,725	3,772
General and administrative	3,451	2,517	1,731
Total costs and expenses	30,925	20,450	15,211
Income from operations	24,913	20,203	12,427
Interest and other income (expense), net	448	391	91
Income before provision for income taxes	25,361	20,594	12,518
Provision for income taxes	3,249	4,660	2,301
Net income	\$22,112	\$15,934	\$10,217
Share-based compensation expense included in costs and expenses:			

	Year Ended		
	December 31,		
	2018	2017	2016
	(in millions)		
Cost of revenue	\$284	\$178	\$113
Research and development	3,022	2,820	2,494
Marketing and sales	511	436	368
General and administrative	335	289	243
Total share-based compensation expense	\$4,152	\$3,723	\$3,218

The following tables set forth our consolidated statements of income data (as a percentage of revenue):

	Year Ended		
	December 31,		
	2018	2017	2016
Consolidated Statements of Income Data:			
Revenue	100 %	100 %	100 %
Costs and expenses:			
Cost of revenue	17	13	14
Research and development	18	19	21
Marketing and sales	14	12	14
General and administrative	6	6	6
Total costs and expenses	55	50	55
Income from operations	45	50	45
Interest and other income (expense), net	1	1	—
Income before provision for income taxes	45	51	45
Provision for income taxes	6	11	8
Net income	40 %	39 %	37 %

Share-based compensation expense included in costs and expenses (as a percentage of revenue):

	Year Ended December 31,		
	2018	2017	2016
Cost of revenue	1 %	— %	— %
Research and development	5	7	9
Marketing and sales	1	1	1
General and administrative	1	1	1
Total share-based compensation expense	7 %	9 %	12 %

Revenue

	Year Ended December 31,			2018 vs 2017 % Change	2017 vs 2016 % Change
	2018	2017	2016		
	(in millions)				
Advertising	\$55,013	\$39,942	\$26,885	38 %	49 %
Payments and other fees	825	711	753	16 %	(6)%
Total revenue	\$55,838	\$40,653	\$27,638	37 %	47 %

2018 Compared to 2017. Revenue in 2018 increased \$15.19 billion, or 37%, compared to 2017. The increase was mostly due to an increase in advertising revenue.

The most important factor driving advertising revenue growth was an increase in revenue from ads on mobile devices. For 2018, we estimate that mobile advertising revenue represented approximately 92% of total advertising revenue, as compared with approximately 88% in 2017. The increase in advertising revenue for 2018 was due to increases in the number of ads delivered and the average price per ad. In 2018 compared to 2017, the number of ads delivered increased by 22%, as compared with approximately 15% in 2017, and the average price per ad increased by 13%, as compared with approximately 29% in 2017.

The increase in the ads delivered was driven by an increase in users and their engagement, and an increase in the number and frequency of ads displayed across our products. The increase in average price per ad was driven by an increase in demand for our ad inventory. Factors contributing to the increase in demand for our ad inventory include an increase in spend from existing marketers and an increase in the number of marketers actively advertising on our platform as well as the quality, relevance, and performance of those ads. We anticipate that future advertising revenue growth will be driven by a combination of price and the number of ads displayed.

Advertising spending is traditionally seasonally strong in the fourth quarter of each year. We believe that this seasonality in advertising spending affects our quarterly results, which generally reflect significant growth in advertising revenue between the third and fourth quarters and a decline in advertising spending between the fourth and subsequent first quarters. For instance, our advertising revenue increased 23%, 26%, and 27% between the third and fourth quarters of 2018, 2017, and 2016, respectively, while advertising revenue for both the first quarters of 2018 and 2017 declined 8% and 9% compared to the fourth quarters of 2017 and 2016, respectively.

2017 Compared to 2016. Revenue in 2017 increased \$13.02 billion, or 47%, compared to 2016. The increase was mostly due to an increase in advertising revenue.

The most important factor driving advertising revenue growth was an increase in revenue from ads on mobile devices. For 2017, we estimate that mobile advertising revenue represented approximately 88% of total advertising revenue, as compared with approximately 83% in 2016. Factors that influenced our advertising revenue growth in 2017 included (i) an increase in average price per ad, (ii) an increase in users and their engagement, and (iii) an increase in the number and frequency of ads displayed on mobile devices.

In 2017 compared to 2016, the average price per ad increased by 29%, as compared with approximately 5% in 2016, and the number of ads delivered increased by 15%, as compared with approximately 50% in 2016. The increase in

average price per ad was driven by an increase in demand for our ad inventory; factors contributing to this include an increase in spend from existing marketers and an increase in the number of marketers actively advertising on our platform as well as the quality, relevance, and performance of those ads. The increase in the ads delivered was driven by an increase in users and their engagement and an increase in the number and frequency of ads displayed on News Feed, partially offset by increasing user engagement with video content and other product

changes.

No customer represented 10% or more of total revenue during the years ended December 31, 2018, 2017, and 2016.

Foreign Exchange Impact on Revenue

The general weakening of the U.S. dollar relative to certain foreign currencies in the full year 2018 compared to the same period in 2017, and in the full year 2017 compared to the same period in 2016, had a favorable impact on our revenue. If we had translated revenue for the full year 2018 using the prior year's monthly exchange rates for our settlement currencies other than the U.S. dollar, our total revenue and advertising revenue would have been \$55.44 billion and \$54.61 billion, respectively. If we had translated revenue for the full year 2017 using 2016 monthly exchange rates for our settlement currencies other than the U.S. dollar, our total revenue and advertising revenue would have been \$40.36 billion and \$39.65 billion, respectively. Using these constant rates, both total revenue and advertising revenue would have been \$401 million lower than actual revenue and advertising revenue for the full year 2018, and \$293 million and \$292 million lower than actual revenue and advertising revenue, respectively, for the full year 2017.

Cost of revenue

	Year Ended December 31,			2018 vs	2017 vs
	2018	2017	2016	2017 %	2016 %
				Change	Change
	(dollars in millions)				
Cost of revenue	\$9,355	\$5,454	\$3,789	72 %	44 %
Percentage of revenue	17 %	13 %	14 %		

2018 Compared to 2017. Cost of revenue in 2018 increased \$3.90 billion, or 72%, compared to 2017. The increase was mostly due to an increase in operational expenses related to our data centers and technical infrastructure and higher costs associated with partnership agreements, including traffic acquisition and content acquisition costs.

2017 Compared to 2016. Cost of revenue in 2017 increased \$1.67 billion, or 44%, compared to 2016. The majority of the increase was due to an increase in operational expenses related to our data centers and technical infrastructure and, to a lesser extent, higher costs associated with partnership agreements, including content acquisition costs, and ads payment processing.

In 2019, we anticipate that the cost of revenue will increase as we continue to expand our data center capacity and technical infrastructure to support user growth, increased user engagement, and the delivery of new products and services and, to a lesser extent, due to higher costs associated with ads payment processing and various partnership agreements.

Research and development

	Year Ended December 31,			2018 vs	2017 vs
	2018	2017	2016	2017 %	2016 %
				Change	Change
	(dollars in millions)				
Research and development	\$10,273	\$7,754	\$5,919	32 %	31 %
Percentage of revenue	18 %	19 %	21 %		

2018 Compared to 2017. Research and development expenses in 2018 increased \$2.52 billion, or 32%, compared to 2017. The majority of the increase was due to an increase in payroll and benefits expense as a result of a 43% growth in employee headcount from December 31, 2017 to December 31, 2018 in engineering and other technical functions, and, to a lesser extent, an increase in professional service expenses. Payroll and benefits expense growth was less than headcount growth partially due to a \$473 million decrease in share-based compensation related to the acquisitions completed in 2014.

2017 Compared to 2016. Research and development expenses in 2017 increased \$1.84 billion, or 31%, compared to 2016. The majority of the increase was due to an increase in payroll and benefits as a result of a 49% growth in employee headcount from December 31, 2016 to December 31, 2017 in engineering and other technical functions, partially offset by a \$262 million decrease in share-based compensation related to the acquisitions completed in 2014.

In 2019, we plan to continue to hire software engineers and other technical employees, and to increase our investment to support our research and development initiatives. We expect payroll and related expenses growth to be more consistent with headcount growth as share-based compensation related to the acquisitions completed in 2014 are now substantially recognized.

Marketing and sales

	Year Ended December 31,			2018 vs	2017 vs
	2018	2017	2016	2017 %	2016 %
				Change	Change
	(dollars in millions)				
Marketing and sales	\$7,846	\$4,725	\$3,772	66 %	25 %
Percentage of revenue	14 %	12 %	14 %		

2018 Compared to 2017. Marketing and sales expenses in 2018 increased \$3.12 billion, or 66%, compared to 2017. The increase was mostly driven by marketing, community operations, and payroll and benefits expenses. Our payroll and benefits expenses increased as a result of a 33% increase in employee headcount from December 31, 2017 to December 31, 2018 in our marketing and sales functions.

2017 Compared to 2016. Marketing and sales expenses in 2017 increased \$953 million, or 25%, compared to 2016. The majority of the increase was due to increases in payroll and benefits expenses as a result of a 35% increase in employee headcount from December 31, 2016 to December 31, 2017 in our marketing and sales functions, and increases in our consulting and other professional service fees.

In 2019, we plan to continue the hiring of marketing and sales employees to support our marketing, sales, and partnership efforts and to increase our investment in community operations to support our security efforts.

General and administrative

	Year Ended December 31,			2018 vs	2017 vs
	2018	2017	2016	2017 %	2016 %
				Change	Change
	(dollars in millions)				
General and administrative	\$3,451	\$2,517	\$1,731	37 %	45 %
Percentage of revenue	6 %	6 %	6 %		

2018 Compared to 2017. General and administrative expenses in 2018 increased \$934 million, or 37%, compared to 2017. The increase was primarily due to increases in payroll and benefits expenses as a result of a 32% increase in employee headcount from December 31, 2017 to December 31, 2018 in general and administrative functions.

2017 Compared to 2016. General and administrative expenses in 2017 increased \$786 million, or 45%, compared to 2016. The majority of the increase was due to an increase in payroll and benefits expenses as a result of a 58% increase in employee headcount from December 31, 2016 to December 31, 2017 in general and administrative functions, and to a lesser extent, higher legal-related costs.

In 2019, we plan to continue to increase general and administrative expenses to support overall company growth.

Interest and other income (expense), net

	Year Ended December 31,				2017 vs 2016 %
	2018	2017	2016	2018 vs 2017 % Change	Change
	(in millions)				
Interest income, net	\$ 652	\$ 392	\$ 166	66%	136%
Other income (expense), net	(204)	(1)	(75)	NM	99%
Interest and other income (expense), net	\$ 448	\$ 391	\$ 91	15%	NM

2018 Compared to 2017. Interest and other income, net in 2018 increased \$57 million compared to 2017. The increase in 2018 was due to an increase in interest income driven by higher interest rates, partially offset by an increase in other expense as a result of foreign exchange impact occurring from the periodic re-measurement of our foreign currency balances.

2017 Compared to 2016. Interest and other income, net in 2017 increased \$300 million compared to 2016. The majority of the increase in 2017 was due to an increase in interest income driven by higher invested cash balances and interest rates. In addition, foreign exchange impact resulting from the periodic re-measurement of our foreign currency assets and liabilities also contributed to the increase in 2017.

Provision for income taxes

	Year Ended December 31,			2018 vs	2017 vs
	2018	2017	2016	2017 %	2016 %
				Change	Change
	(dollars in millions)				
Provision for income taxes	\$3,249	\$4,660	\$2,301	(30)%	103 %
Effective tax rate	13	% 23	% 18	%	

2018 Compared to 2017. Our provision for income taxes in 2018 decreased \$1.41 billion, or 30%, compared to 2017, primarily due to a one-time expense of approximately \$2.27 billion in 2017 resulting from the Tax Act, partially offset by an increase in income before provision for income taxes.

Our effective tax rate in 2018 decreased compared to 2017, primarily due to a one-time tax expense of approximately \$2.27 billion related to the Tax Act in 2017.

2017 Compared to 2016. Our provision for income taxes in 2017 increased \$2.36 billion, or 103%, compared to 2016, mostly due to the effects of the Tax Act that was enacted on December 22, 2017 and an increase in income before provision for income taxes, partially offset by an increase in excess tax benefits recognized from share-based compensation. As a result of the Tax Act, we recognized a one-time mandatory transition tax on accumulated foreign subsidiary earnings, remeasured our U.S. deferred tax assets and liabilities, and reassessed the net realizability of our deferred tax assets and liabilities, which increased our provision for income taxes in 2017 by \$2.27 billion.

Effective Tax Rate Items. Our effective tax rate in the future will depend upon the proportion of our income before provision for income taxes earned in the United States and in jurisdictions with a tax rate lower than the U.S. statutory rate, as well as a number of other factors, including excess tax benefits from share-based compensation, tax effects of integrating intellectual property from acquisitions, settlement of tax contingency items, tax effects of changes in our business, and the impact of changes in tax law.

The proportion of our income before provision for income taxes earned in jurisdictions with a tax rate lower than the U.S. statutory rate will depend upon the proportion of revenue and costs associated with the respective jurisdictions. The accounting for share-based compensation will increase or decrease our effective tax rate based upon the difference between our share-based compensation expense and the deductions taken on our tax return which depends upon the stock price at the time of employee award vesting. If our stock price remains constant to the January 28, 2019 price, we expect our effective tax rate for 2019 will be a few percentage points higher than our 2018 rate.

Integrating intellectual property from acquisitions into our business generally involves intercompany transactions that have the impact of increasing our provision for income taxes. Consequently, our provision for income taxes and our effective tax rate may initially increase in the period of an acquisition and integration. The magnitude of this impact will depend upon the specific type, size, and taxing jurisdictions of the intellectual property as well as the relative contribution to income in subsequent periods.

On July 27, 2015, the United States Tax Court (Tax Court) issued an opinion in Altera Corp v. Commissioner (Tax Court Opinion), which concluded that related parties in a cost sharing arrangement are not required to share expenses related to share-based compensation. The Tax Court Opinion was appealed by the Commissioner to the Ninth Circuit Court of Appeals (Ninth Circuit). On July 24, 2018, the Ninth Circuit issued an opinion (Ninth Circuit Opinion) that reversed the Tax Court Opinion. The Ninth Circuit Opinion was subsequently withdrawn and the case is being

reheard. Since the Ninth Circuit Opinion was withdrawn, we continue to treat our share-based compensation expense in accordance with the Tax Court Opinion. We also continue to monitor developments in this case and any impact the final opinion could have on our consolidated financial statements. Had the Ninth Circuit not withdrawn its opinion, our effective tax rate for 2018 would have been higher.

Unrecognized Tax Benefits. As of December 31, 2018, we had net unrecognized tax benefits of \$3.07 billion which were accrued as other liabilities. These unrecognized tax benefits were predominantly accrued for uncertainties related to transfer pricing with our foreign subsidiaries, which includes licensing of intellectual property, providing services and other transactions, as well as for uncertainties with our research tax credits. The ultimate settlement of the liabilities will depend upon resolution of tax audits, litigation, or events that would otherwise change the assessment of such items. Based upon the status of litigation described below, the current status of tax audits in various jurisdictions, and excluding the effects of the *Altera Corp v. Commissioner* case that we are monitoring, we do not anticipate a significant impact to such amounts within the next 12 months.

In July 2016, we received a Statutory Notice of Deficiency (Notice) from the IRS related to transfer pricing with our foreign subsidiaries in conjunction with the examination of the 2010 tax year. While the Notice applies only to the 2010 tax year, the IRS states that it will also apply its position for tax years subsequent to 2010, which, if the IRS prevails in its position, could result in an additional federal tax liability of an estimated, aggregate amount of up to approximately \$5.0 billion in excess of the amounts in our originally filed U.S. return, plus interest and any penalties asserted. We do not agree with the position of the IRS and have filed a petition in the Tax Court challenging the Notice. In March 2018, we received a second Notice from the IRS in conjunction with the examination of our 2011 through 2013 tax years. The IRS applied its position from the 2010 tax year to each of these years and also proposed new adjustments related to other transfer pricing with our foreign subsidiaries and certain tax credits that we claimed. If the IRS prevails in its position for these new adjustments, this could result in an additional federal tax liability of up to approximately \$680 million in excess of the amounts in our originally filed U.S. return, plus interest and any penalties asserted. We do not agree with the positions of the IRS in the second Notice and have filed a petition in the Tax Court challenging the second Notice. We have previously accrued an estimated unrecognized tax benefit consistent with the guidance in ASC 740 that is lower than the potential additional federal tax liability from the positions taken by the IRS in the two Notices. In addition, if the IRS prevails in its positions, related to transfer pricing with our foreign subsidiaries, the additional tax that we would owe would be partially offset by a reduction in the tax that we owe under the mandatory transition tax on accumulated foreign earnings from the Tax Act. As of December 31, 2018, we have not resolved these matters, and proceedings continue in Tax Court.

We believe that adequate amounts have been reserved in accordance with ASC 740 for any adjustments to the provision for income taxes or other tax items that may ultimately result from these examinations. The timing of the resolution, settlement, and closure of any audits is highly uncertain, and it is reasonably possible that the balance of gross unrecognized tax benefits could significantly change in the next 12 months. Given the number of years remaining that are subject to examination in various jurisdictions, we are unable to estimate the full range of possible adjustments to the balance of gross unrecognized tax benefits. If the taxing authorities prevail in the assessment of additional tax due, the assessed tax, interest, and penalties, if any, could have a material adverse effect on our financial position, results of operations, and cash flows.

Quarterly Results of Operations Data

The following tables set forth our unaudited quarterly consolidated statements of income data in dollars and as a percentage of total revenue for each of the eight quarters in the period ended December 31, 2018. We have prepared the quarterly consolidated statements of income data on a basis consistent with the audited consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. In the opinion of management, the financial information reflects all adjustments, consisting only of normal recurring adjustments, which we consider necessary for a fair presentation of this data. This information should be read in conjunction with the audited consolidated financial statements and related notes included in Part II, Item 8, "Financial Statements and Supplementary Data" in this Annual Report on Form 10-K. The results of historical periods are not necessarily indicative of the results of operations for any future period.

Three Months Ended

Dec 31, Sep 30, Jun 30, Mar 31, Dec 31, Sep 30, Jun 30, Mar 31,
2018 2018 2018 2018 2017 2017 2017 2017
(in millions, except per share amounts)

Consolidated Statements of Income Data:

Revenue:

Advertising	\$16,640	\$13,539	\$13,038	\$11,795	\$12,779	\$10,142	\$9,164	\$7,857
Payments and other fees	274	188	193	171	193	186	157	175
Total revenue	16,914	13,727	13,231	11,966	12,972	10,328	9,321	8,032

Costs and expenses:

Cost of revenue	2,796	2,418	2,214	1,927	1,611	1,448	1,237	1,159
Research and development	2,855	2,657	2,523	2,238	1,949	2,052	1,919	1,834
Marketing and sales	2,467	1,928	1,855	1,595	1,374	1,170	1,124	1,057
General and administrative	976	943	776	757	686	536	640	655
Total costs and expenses	9,094	7,946	7,368	6,517	5,620	5,206	4,920	4,705
Income from operations	7,820	5,781	5,863	5,449	7,352	5,122	4,401	3,327
Interest and other income (expense), net	151	131	5	161	110	114	87	81
Income before provision for income taxes	7,971	5,912	5,868	5,610	7,462	5,236	4,488	3,408
Provision for income taxes	1,089	775	762	622	3,194	529	594	344
Net income	\$6,882	\$5,137	\$5,106	\$4,988	\$4,268	\$4,707	\$3,894	\$3,064

Less: Net income attributable to participating securities — — — 1 2 3 4 5

Net income attributable to Class A and Class B common stockholders	\$6,882	\$5,137	\$5,106	\$4,987	\$4,266	\$4,704	\$3,890	\$3,059
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Earnings per share attributable to Class A and Class B common stockholders:

Basic	\$2.40	\$1.78	\$1.76	\$1.72	\$1.47	\$1.62	\$1.34	\$1.06
Diluted	\$2.38	\$1.76	\$1.74	\$1.69	\$1.44	\$1.59	\$1.32	\$1.04

Share-based compensation expense included in costs and expenses:

	Three Months Ended							
	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018	Mar 31, 2018	Dec 31, 2017	Sep 30, 2017	Jun 30, 2017	Mar 31, 2017
	(in millions)							
Cost of revenue	\$82	\$72	\$74	\$ 56	\$ 50	\$47	\$47	\$ 34
Research and development	675	748	881	718	587	776	787	670
Marketing and sales	130	133	139	109	106	114	120	96
General and administrative	84	87	92	72	71	73	78	67
Total share-based compensation expense	\$971	\$1,040	\$1,186	\$ 955	\$ 814	\$1,010	\$1,032	\$ 867

Three Months Ended
Dec 31, 2018, Sep 30, 2018, Jun 30, 2018, Mar 31, 2018, Dec 31, 2017, Sep 30, 2017, Jun 30, 2017, Mar 31, 2017
(as a percentage of total revenue)

Consolidated Statements of Income Data:

Revenue:

Advertising	98 %	99 %	99 %	99 %	99 %	98 %	98 %	98 %
Payments and other fees	2	1	1	1	1	2	2	2
Total revenue	100 %	100 %	100 %	100 %	100 %	100 %	100 %	100 %

Costs and expenses:

Cost of revenue	17	18	17	16	12	14	13	14
Research and development	17	19	19	19	15	20	21	23
Marketing and sales	15	14	14	13	11	11	12	13
General and administrative	6	7	6	6	5	5	7	8
Total costs and expenses	54	58	56	54	43	50	53	59
Income from operations	46	42	44	46	57	50	47	41
Interest and other income (expense), net	1	1	—	1	1	1	1	1
Income before provision for income taxes	47	43	44	47	58	51	48	42
Provision for income taxes	6	6	6	5	25	5	6	4
Net income	41 %	37 %	39 %	42 %	33 %	46 %	42 %	38 %

Less: Net income attributable to participating securities

Net income attributable to Class A and Class B common stockholders	41 %	37 %	39 %	42 %	33 %	46 %	42 %	38 %
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Share-based compensation expense included in costs and expenses:

	Three Months Ended							
	Dec 31, 2018	Sep 30, 2018	Jun 30, 2018	Mar 31, 2018	Dec 31, 2017	Sep 30, 2017	Jun 30, 2017	Mar 31, 2017
	(as a percentage of total revenue)							
Cost of revenue	— %	1 %	1 %	— %	— %	1 %	— %	— %
Research and development	4	5	7	6	5	8	8	8
Marketing and sales	1	1	1	1	1	1	1	1
General and administrative	—	1	1	1	1	1	1	1
Total share-based compensation expense	6 %	8 %	9 %	8 %	6 %	10 %	11 %	11 %

Liquidity and Capital Resources

	Year Ended December 31,		
	2018	2017	2016
	(in millions)		
Consolidated Statements of Cash Flows Data:			
Net cash provided by operating activities	\$29,274	\$24,216	\$16,108
Net cash used in investing activities	\$(11,603)	\$(20,118)	\$(11,792)
Net cash used in financing activities	\$(15,572)	\$(5,235)	\$(310)
Purchases of property and equipment, net	\$(13,915)	\$(6,733)	\$(4,491)
Depreciation and amortization	\$4,315	\$3,025	\$2,342
Share-based compensation	\$4,152	\$3,723	\$3,218

Our principal sources of liquidity are our cash and cash equivalents, marketable securities, and cash generated from operations. Cash and cash equivalents, and marketable securities consist mostly of cash on deposit with banks, investments in money market funds, and investments in U.S. government securities, U.S. government agency securities, and corporate debt securities. Cash and cash equivalents, and marketable securities were \$41.11 billion as of December 31, 2018, a decrease of \$597 million from December 31, 2017, mostly due to \$13.92 billion for purchases of property and equipment, \$12.88 billion for repurchases of our Class A common stock, and \$3.21 billion of taxes paid related to net share settlement of equity awards, offset by \$29.27 billion of cash generated from operations and a \$500 million increase in overdraft in cash pooling entities.

Cash paid for income taxes was \$3.76 billion for the year ended December 31, 2018. As of December 31, 2018, our federal net operating loss carryforward was \$7.88 billion, and we anticipate that none of this amount will be utilized to offset our federal taxable income in 2018. As of December 31, 2018, we had \$290 million of federal tax credit carryforward, of which none will be available to offset our federal tax liabilities in 2018. In addition, we are monitoring the Altera Corp. v. Commissioner case as it applies to our facts and circumstances as it could increase our cash paid for income taxes.

In May 2016, we entered into a \$2.0 billion senior unsecured revolving credit facility, and any amounts outstanding under the facility will be due and payable on May 20, 2021. As of December 31, 2018, no amounts had been drawn down and we were in compliance with the covenants under this credit facility.

Our board of directors has authorized a share repurchase program that commenced in 2017 and does not have an expiration date. During the second quarter of 2018, we completed repurchases under the original authorization to purchase up to \$6.0 billion of our Class A common stock. In April 2018, the authorization for the repurchase of our Class A common stock was increased by an additional \$9.0 billion, and we completed repurchases under this authorization during the fourth quarter of 2018. In December 2018, our board of directors authorized an additional \$9.0 billion of repurchases under this program. During the year ended December 31, 2018, we repurchased and subsequently retired 79 million shares of our Class A common stock for \$12.93 billion. As of December 31, 2018, \$9.0 billion remained available and authorized for repurchases.

In 2018, we paid \$3.21 billion of taxes related to the net share settlement of equity awards.

In 2018, we established a multi-currency notional cash pool for certain of our entities with a third-party bank provider. Actual cash balances are not physically converted and are not commingled between participating legal entities. As part of the notional cash pool agreement, the bank extends overdraft credit to our participating entities as needed, provided that the overall notionally pooled balance of all accounts in the pool at the end of each day is at least zero. In the unlikely event of a default by our collective entities participating in the pool, any overdraft balances incurred would be guaranteed by Facebook, Inc. See Note 9—Commitments and Contingencies of the accompanying notes to our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" of this Annual Report on Form 10-K for additional information regarding our notional cash pooling arrangement.

As of December 31, 2018, \$16.28 billion of the \$41.11 billion in cash and cash equivalents and marketable securities was held by our foreign subsidiaries. The Tax Act imposed a mandatory transition tax on accumulated foreign earnings and eliminated U.S. taxes on foreign subsidiary distributions. As a result, earnings in foreign jurisdictions are available for distribution to the U.S. without incremental U.S. taxes.

We currently anticipate that our available funds, credit facility, and cash flow from operations will be sufficient to meet our operational cash needs for the foreseeable future.

Cash Provided by Operating Activities

Cash flow from operating activities during 2018 mostly consisted of net income, adjusted for certain non-cash items, such as total depreciation and amortization of \$4.32 billion and share-based compensation expense of \$4.15 billion. The increase in cash flow from operating activities during 2018 compared to 2017 was mostly due to an increase in net income, adjusted for certain non-cash items, such as depreciation and amortization, deferred income tax and share-based compensation expense. Due to the enactment of the Tax Act in 2017, we recorded a higher tax liability in 2017, which partially offset the increase in cash flow from operating activities in 2018.

Cash flow from operating activities during 2017 mostly consisted of net income, adjusted for certain non-cash items, such as share-based compensation expense of \$3.72 billion and total depreciation and amortization of \$3.03 billion. The increase in cash flow from operating activities during 2017 compared to 2016 was mostly due to an increase in net income, adjusted for certain non-cash items, such as depreciation and amortization and share-based compensation expense. Due to the enactment of the Tax Act in 2017, we recorded a provisional tax liability of \$2.9 billion relating to the one-time mandatory transition tax on our accumulated foreign earnings, which also contributed to the increase in 2017 compared to 2016.

Cash flow from operating activities during 2016 mostly consisted of net income, adjusted for certain non-cash items, such as share-based compensation expense of \$3.22 billion and total depreciation and amortization of \$2.34 billion. The increase in cash flow from operating activities during 2016 compared to 2015, was mostly due to an increase in net income, including the impact of ASU 2016-09 adoption, as adjusted for depreciation and amortization, deferred income taxes, and share-based compensation expense.

Cash Used in Investing Activities

Cash used in investing activities during 2018 mostly resulted from \$13.92 billion of capital expenditures as we continued to invest in data centers, servers, network infrastructure, and office buildings, offset by \$2.47 billion of net sales and maturities of marketable securities. The decrease in cash used in investing activities during 2018 compared to 2017 was mostly due to a decrease in the net purchases of marketable securities, partially offset by an increase in capital expenditures.

Cash used in investing activities during 2017 mostly resulted from \$13.25 billion for net purchases of marketable securities and \$6.73 billion for capital expenditures as we continued to invest in servers, data centers, office buildings, and network infrastructure. The increase in cash used in investing activities during 2017 compared to 2016 was due to increases in net purchases of marketable securities and capital expenditures.

Cash used in investing activities during 2016 mostly resulted from \$7.19 billion for net purchases of marketable securities and \$4.49 billion for capital expenditures as we continued to invest in data centers, servers, office buildings, and network infrastructure. The increase in cash used in investing activities during 2016 compared to 2015 was mostly due to increases in capital expenditures and net purchases of marketable securities.

We anticipate making capital expenditures in 2019 of approximately \$18 billion to \$20 billion.

Cash Used in Financing Activities

Cash used in financing activities during 2018 consisted of \$12.88 billion paid for repurchases of our Class A common stock, and \$3.21 billion of taxes paid related to net share settlement of equity awards, offset by a \$500 million overdraft in cash pooling entities. The increase in cash used in financing activities during 2018 compared to 2017 was mostly due to an increase in repurchases of our Class A common stock, partially offset by an increase in overdraft balances in cash pooling entities.

Cash used in financing activities during 2017 mostly consisted of \$3.25 billion of taxes paid related to net share settlement of equity awards, and \$1.98 billion paid for repurchases of our Class A common stock. The increase in cash used in financing activities during 2017 compared to 2016 was mostly due to taxes paid related to net share settlement of equity awards and repurchases of our Class A common stock that commenced in 2017.

Cash used in financing activities during 2016 mostly consisted of principal payments on capital lease and other financing obligations. The increase in cash used in financing activities was due to full repayment of our capital lease and other financing obligations in 2016.

Off-Balance Sheet Arrangements

We did not have any off-balance sheet arrangements as of December 31, 2018.

Contractual Obligations

Our principal commitments consist of obligations under operating leases, which include among others, certain of our offices, data centers, land, and colocation leases, as well as contractual commitments related to network infrastructure and data center operations. The following table summarizes our commitments to settle contractual obligations in cash as of December 31, 2018 (in millions):

	Total	Payment Due by Period			
		2019	2020-2021	2022-2023	Thereafter
Operating lease obligations	\$ 14,651	\$ 698	\$ 2,001	\$ 2,102	\$ 9,850
Transition tax payable	1,587	—	—	324	1,263
Other contractual commitments ⁽¹⁾	6,173	3,377	1,135	238	1,423
Total contractual obligations	\$ 22,411	\$ 4,075	\$ 3,136	\$ 2,664	\$ 12,536

⁽¹⁾ Other contractual commitments primarily relate to network infrastructure and our data center operations.

As part of the normal course of the business, we may enter into multi-year agreements to purchase certain network components that do not specify a fixed or minimum price commitment or to purchase renewable energy that do not specify a fixed or minimum volume commitment. These agreements are generally entered into in order to secure either volume or price. Using projected market prices or expected volume consumption, the total estimated spend is approximately \$6.0 billion. The ultimate spend under these agreements may vary and will be based on prevailing market prices or actual volume purchased.

In addition, our other liabilities include \$3.07 billion related to net uncertain tax positions as of December 31, 2018. Due to uncertainties in the timing of the completion of tax audits, the timing of the resolution of these positions is uncertain and we are unable to make a reasonably reliable estimate of the timing of payments in individual years beyond 12 months. As a result, this amount is not included in the above contractual obligations table.

Contingencies

We are involved in legal proceedings, claims, and regulatory, tax or government inquiries and investigations. We record a provision for a liability when we believe that it is both probable that a liability has been incurred, and that the amount can be reasonably estimated. If we determine that a loss is reasonably possible and the loss or range of loss can be estimated, we disclose the possible loss in the accompanying notes to the consolidated financial statements. Significant judgment is required to determine both probability and the estimated amount of loss. Such matters are inherently unpredictable and subject to significant uncertainties, some of which are beyond our control. Should any of these estimates and assumptions change or prove to be incorrect, it could have a material impact on our results of operations, financial position, and cash flows.

See Note 9—Commitments and Contingencies and Note 12—Income Taxes of the accompanying notes to our consolidated financial statements included in Part II, Item 8, "Financial Statements and Supplementary Data" and Part I, Item 3, "Legal Proceedings" of this Annual Report on Form 10-K for additional information regarding contingencies.

Recently Issued Accounting Pronouncements

In February 2016, the FASB issued Accounting Standards Update No. 2016-02, Leases (Topic 842) (ASU 2016-02), as amended, which generally requires lessees to recognize operating and financing lease liabilities and corresponding right-of-use assets on the balance sheet and to provide enhanced disclosures surrounding the amount, timing and uncertainty of cash flows arising from leasing arrangements. We will adopt the new standard effective January 1, 2019 on a modified retrospective basis and will not restate comparative periods. We will elect the package of practical expedients permitted under the transition guidance, which allows us to carryforward our historical lease classification, our assessment on whether a contract is or contains a lease, and our initial direct costs for any leases that exist prior to adoption of the new standard. We will also elect to combine lease and non-lease components and to keep leases with an initial term of 12 months or less off the balance sheet and recognize the associated lease payments in the consolidated statements of income on a straight-line basis over the lease term. We estimate approximately \$6 billion would be recognized as total right-of-use assets and total lease liabilities on our consolidated balance sheet as of January 1, 2019. Other than disclosed, we do not expect the new standard to have a material impact on our remaining consolidated financial statements.

In January 2017, the FASB issued Accounting Standards Update No. 2017-04, Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment (ASU 2017-04), which eliminates step two from the goodwill impairment test. Under ASU 2017-04, an entity should recognize an impairment charge for the amount by which the carrying amount of a reporting unit exceeds its fair value up to the amount of goodwill allocated to that reporting unit. This guidance will be effective for us in the first quarter of 2020 on a prospective basis, and early adoption is permitted. We do not expect the standard to have a material impact on our consolidated financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to market risks, including changes to foreign currency exchange rates, interest rates, and inflation.

Foreign Currency Exchange Risk

We have foreign currency risks related to our revenue and operating expenses denominated in currencies other than the U.S. dollar, primarily the Euro. In general, we are a net receiver of currencies other than the U.S. dollar.

Accordingly, changes in exchange rates, and in particular a strengthening of the U.S. dollar, have in the past, and may in the future, negatively affect our revenue and other operating results as expressed in U.S. dollars.

We have experienced and will continue to experience fluctuations in our net income as a result of transaction gains or losses related to revaluing certain current asset and current liability balances that are denominated in currencies other than the functional currency of the entities in which they are recorded. At this time we have not entered into, but in the future we may enter into, derivatives or other financial instruments in an attempt to hedge our foreign currency exchange risk. It is difficult to predict the effect hedging activities would have on our results of operations. We recognized foreign currency losses of \$213 million, \$6 million, and \$76 million in 2018, 2017, and 2016, respectively.

Interest Rate Sensitivity

Our exposure to changes in interest rates relates primarily to interest earned and market value on our cash and cash equivalents, and marketable securities.

Our cash and cash equivalents and marketable securities consist of cash, certificates of deposit, time deposits, money market funds, U.S. government securities, U.S. government agency securities, and corporate debt securities. Our investment policy and strategy are focused on preservation of capital and supporting our liquidity requirements.

Changes in U.S. interest rates affect the interest earned on our cash and cash equivalents and marketable securities, and the market value of those securities. A hypothetical 100 basis point increase in interest rates would have resulted in a decrease of \$468 million and \$611 million in the market value of our available-for-sale debt securities as of December 31, 2018 and December 31, 2017, respectively. Any realized gains or losses resulting from such interest rate changes would only occur if we sold the investments prior to maturity.

Item 8. Financial Statements and Supplementary Data

FACEBOOK, INC.

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The supplementary financial information required by this Item 8, is included in Part II, Item 7 under the caption "Quarterly Results of Operations Data," which is incorporated herein by reference.

Report of Independent Registered Public Accounting Firm
To the Stockholders and the Board of Directors of Facebook, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Facebook, Inc. (the Company) as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated January 31, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB. We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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 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 financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2007.
San Francisco, California
January 31, 2019

Report of Independent Registered Public Accounting Firm
To the Stockholders and the Board of Directors of Facebook, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Facebook, Inc.'s internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Facebook, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2018, and the related notes and our report dated January 31, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the 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 audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) 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 (3) 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.

/s/ Ernst & Young LLP

San Francisco, California
January 31, 2019

FACEBOOK, INC.

CONSOLIDATED BALANCE SHEETS

(In millions, except for number of shares and par value)

	December 31,	
	2018	2017
Assets		
Current assets:		
Cash and cash equivalents	\$ 10,019	\$ 8,079
Marketable securities	31,095	33,632
Accounts receivable, net of allowances of \$229 and \$189 as of December 31, 2018 and 2017, respectively	7,587	5,832
Prepaid expenses and other current assets	1,779	1,020
Total current assets	50,480	48,563
Property and equipment, net	24,683	13,721
Intangible assets, net	1,294	1,884
Goodwill	18,301	18,221
Other assets	2,576	2,135
Total assets	\$97,334	\$84,524
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$ 820	\$ 380
Partners payable	541	390
Accrued expenses and other current liabilities	5,509	2,892
Deferred revenue and deposits	147	98
Total current liabilities	7,017	3,760
Other liabilities	6,190	6,417
Total liabilities	13,207	10,177
Commitments and contingencies		
Stockholders' equity:		
Common stock, \$0.000006 par value; 5,000 million Class A shares authorized, 2,385 million and 2,397 million shares issued and outstanding, as of December 31, 2018 and December 31, 2017, respectively; 4,141 million Class B shares authorized, 469 million and 509 million shares issued and outstanding, as of December 31, 2018 and December 31, 2017, respectively.	—	—
Additional paid-in capital	42,906	40,584
Accumulated other comprehensive loss	(760)	(227)
Retained earnings	41,981	33,990
Total stockholders' equity	84,127	74,347
Total liabilities and stockholders' equity	\$97,334	\$84,524
See Accompanying Notes to Consolidated Financial Statements.		

FACEBOOK, INC.
CONSOLIDATED STATEMENTS OF INCOME
(In millions, except per share amounts)

	Year Ended December 31,		
	2018	2017	2016
Revenue	\$55,838	\$40,653	\$27,638
Costs and expenses:			
Cost of revenue	9,355	5,454	3,789
Research and development	10,273	7,754	5,919
Marketing and sales	7,846	4,725	3,772
General and administrative	3,451	2,517	1,731
Total costs and expenses	30,925	20,450	15,211
Income from operations	24,913	20,203	12,427
Interest and other income (expense), net	448	391	91
Income before provision for income taxes	25,361	20,594	12,518
Provision for income taxes	3,249	4,660	2,301
Net income	\$22,112	\$15,934	\$10,217
Less: Net income attributable to participating securities	1	14	29
Net income attributable to Class A and Class B common stockholders	\$22,111	\$15,920	\$10,188
Earnings per share attributable to Class A and Class B common stockholders:			
Basic	\$7.65	\$5.49	\$3.56
Diluted	\$7.57	\$5.39	\$3.49
Weighted average shares used to compute earnings per share attributable to Class A and Class B common stockholders:			
Basic	2,890	2,901	2,863
Diluted	2,921	2,956	2,925
Share-based compensation expense included in costs and expenses:			
Cost of revenue	\$284	\$178	\$113
Research and development	3,022	2,820	2,494
Marketing and sales	511	436	368
General and administrative	335	289	243
Total share-based compensation expense	\$4,152	\$3,723	\$3,218
See Accompanying Notes to Consolidated Financial Statements.			

FACEBOOK, INC.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(In millions)

	Year Ended December 31,		
	2018	2017	2016
Net income	\$22,112	\$15,934	\$10,217
Other comprehensive income (loss):			
Change in foreign currency translation adjustment, net of tax	(450)	566	(152)
Change in unrealized gain/loss on available-for-sale investments and other, net of tax	(52)	(90)	(96)
Comprehensive income	\$21,610	\$16,410	\$9,969
See Accompanying Notes to Consolidated Financial Statements.			

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FACEBOOK, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(In millions)

	Class A and Class B Common Stock Shares	Par Value	Additional Paid-In Capital	Accumulated Other Comprehensive Loss	Retained Earnings	Total Stockholders' Equity
Balances at December 31, 2015	2,845	\$	—\$ 34,886	\$ (455)	\$ 9,787	\$ 44,218
Impact of the adoption of new accounting pronouncement	—	—	39	—	1,666	1,705
Issuance of common stock for cash upon exercise of stock options	3	—	16	—	—	16
Issuance of common stock related to acquisitions	1	—	74	—	—	74
Issuance of common stock for settlement of RSUs	43	—	—	—	—	—
Shares withheld related to net share settlement	—	—	(6)	—	—	(6)
Share-based compensation, related to employee share-based awards	—	—	3,218	—	—	3,218
Other comprehensive loss	—	—	—	(248)	—	(248)
Net income	—	—	—	—	10,217	10,217
Balances at December 31, 2016	2,892	—	38,227	(703)	21,670	59,194
Issuance of common stock for cash upon exercise of stock options	3	—	13	—	—	13
Issuance of common stock related to acquisitions	2	—	323	—	—	323
Issuance of common stock for settlement of RSUs	43	—	—	—	—	—
Shares withheld related to net share settlement	(21)	—	(1,702)	—	(1,544)	(3,246)
Share-based compensation, related to employee share-based awards	—	—	3,723	—	—	3,723
Share repurchases	(13)	—	—	—	(2,070)	(2,070)
Other comprehensive income	—	—	—	476	—	476
Net income	—	—	—	—	15,934	15,934
Balances at December 31, 2017	2,906	—	40,584	(227)	33,990	74,347
Impact of the adoption of new accounting pronouncements	—	—	—	(31)	172	141
Issuance of common stock for cash upon exercise of stock options	2	—	15	—	—	15
Issuance of common stock for settlement of RSUs	44	—	—	—	—	—
Shares withheld related to net share settlement	(19)	—	(1,845)	—	(1,363)	(3,208)
Share-based compensation, related to employee share-based awards	—	—	4,152	—	—	4,152
Share repurchases	(79)	—	—	—	(12,930)	(12,930)
Other comprehensive loss	—	—	—	(502)	—	(502)
Net income	—	—	—	—	22,112	22,112
Balances at December 31, 2018	2,854	\$	—\$ 42,906	\$ (760)	\$ 41,981	\$ 84,127

See Accompanying Notes to Consolidated Financial Statements.

FACEBOOK, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Year Ended December 31, 2018	2017	2016
Cash flows from operating activities			
Net income	\$ 22,112	\$ 15,934	\$ 10,217
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	4,315	3,025	2,342
Share-based compensation	4,152	3,723	3,218
Deferred income taxes	286	(377)	(457)
Other	(64)	24	30
Changes in assets and liabilities:			
Accounts receivable	(1,892)	(1,609)	(1,489)
Prepaid expenses and other current assets	(690)	(192)	(159)
Other assets	(159)	154	14
Accounts payable	221	43	14
Partners payable	157	95	67
Accrued expenses and other current liabilities	1,417	309	1,014
Deferred revenue and deposits	53	4	35
Other liabilities	(634)	3,083	1,262
Net cash provided by operating activities	29,274	24,216	16,108
Cash flows from investing activities			
Purchases of property and equipment, net	(13,915)	(6,733)	(4,491)
Purchases of marketable securities	(14,656)	(25,682)	(22,341)
Sales of marketable securities	12,358	9,444	13,894

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Maturities of marketable securities	4,772		2,988		1,261	
Acquisitions of businesses, net of cash acquired, and purchases of intangible assets	(137)	(122)	(123)
Other investing activities, net	(25)	(13)	8	
Net cash used in investing activities	(11,603)	(20,118)	(11,792)
Cash flows from financing activities						
Taxes paid related to net share settlement of equity awards	(3,208)	(3,246)	(6)
Principal payments on capital lease and other financing obligations	—		—		(312)
Repurchases of Class A common stock	(12,879)	(1,976)	—	
Net change in overdraft in cash pooling entities	500		—		—	
Other financing activities, net	15		(13)	8	
Net cash used in financing activities	(15,572)	(5,235)		