

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, 2019

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

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

Securities registered pursuant to Section 12(g) of the Act: None

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 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 the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

| | | | |
|-------------------------|-------------------------------------|---------------------------|--------------------------|
| Large accelerated filer | <input checked="" type="checkbox"/> | Accelerated filer | <input type="checkbox"/> |
| Non-accelerated filer | <input type="checkbox"/> | Smaller reporting company | <input type="checkbox"/> |
| | | Emerging growth company | <input type="checkbox"/> |

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 28, 2019, the last business day of the registrant's most recently completed second fiscal quarter, was \$478 billion based upon the closing price reported for such date on the Nasdaq Global Select Market. On January 23, 2020, the registrant had 2,405,745,740 shares of Class A common stock and 444,704,919 shares of Class B common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the 2020 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, 2019.

Facebook, Inc.
Form 10-K

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NOTE ABOUT FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements. 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. The term "Family" refers to our Facebook, Instagram, Messenger, and WhatsApp products. For references to accessing Facebook or our other products on the "web" or via a "website," such terms refer to accessing such products on personal computers. For references to accessing Facebook or our other products on "mobile," such term refers to accessing such products via a mobile application or via a mobile-optimized version of our websites 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 are calculated using internal company data based on the activity of user accounts. We have historically reported the numbers of our daily active users (DAUs), monthly active users (MAUs), and average revenue per user (ARPU) (collectively, our "Facebook metrics") based on user activity only on Facebook and Messenger and not on our other products. Beginning with this Annual Report on Form 10-K, we also are reporting our estimates of the numbers of our daily active people (DAP), monthly active people (MAP), and average revenue per person (ARPP) (collectively, our "Family metrics") based on the activity of users who visited at least one of Facebook, Instagram, Messenger, and WhatsApp (collectively, our "Family" of products) during the applicable period of measurement. We believe our Family metrics better reflect the size of our community and the fact that many people are using more than one of our products. As a result, over time we intend to report our Family metrics as our key metrics in place of DAUs, MAUs, and ARPU in our periodic reports filed with the Securities and Exchange Commission.

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. The methodologies used to measure these metrics require significant judgment and are also susceptible to algorithm or other technical errors. 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 review our processes for calculating these metrics, and from time to time we discover inaccuracies in our metrics or make adjustments to improve their accuracy, which can result in adjustments to our historical metrics. Our ability to recalculate our historical metrics may be impacted by data limitations or other factors that require us to apply different methodologies for such adjustments. We generally do not intend to update previously disclosed Family metrics for any such inaccuracies or adjustments that are within the error margins disclosed below.

In addition, our Facebook metrics and Family metrics estimates will differ from estimates published by third parties due to differences in methodology.

Facebook Metrics

We regularly evaluate our Facebook 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) violating accounts, which represent user profiles that we believe are intended to be used for purposes that violate our terms of service, such as bots and spam. 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 identical IP addresses and similar 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. Any loss of access to data signals we use in this process, whether as a result of our own product decisions, actions by third-party browser or mobile platforms, regulatory or legislative requirements, or other factors, also may impact the stability or accuracy of our estimates of duplicate and false accounts. Our estimates also may change as our methodologies evolve, including through the application of new data signals or technologies or product changes that 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 2019, we estimated 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 2019, we estimated 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 disable certain user accounts, 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. We intend to disclose our estimates of the number of duplicate and false accounts among our MAUs on an annual basis.

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

Family Metrics

Many people in our community have user accounts on more than one of our products, and some people have multiple user accounts within an individual product. Accordingly, for our Family metrics, we do not seek to count the total number of user accounts across our products because we believe that would not reflect the actual size of our community. Rather, our Family metrics represent our estimates of the number of unique people using at least one of Facebook, Instagram, Messenger, and WhatsApp. We do not require people to use a common identifier or link their accounts to use multiple products in our Family, and therefore must seek to attribute multiple user accounts within and across products to individual people. To calculate these metrics, we rely upon complex techniques, algorithms and machine learning models that seek to count the individual people behind user accounts, including by matching multiple user accounts within an individual product and across multiple products when we believe they are attributable to a single person, and counting such group of accounts as one person. These techniques and models require significant judgment, are subject to data and other limitations discussed below, and inherently are subject to statistical variances and uncertainties. We estimate the potential error in our Family metrics primarily based on user survey data, which itself is subject to error as well. While we expect the error margin for our Family metrics to vary from period to period, we estimate that such margin generally will be approximately 3% of our worldwide MAP. At our scale, it is very difficult to attribute multiple user accounts within and across products to individual people, and it is possible that the actual numbers of unique people using our products may vary significantly from our estimates, potentially beyond our estimated error margins. As a result, it is also possible that our Family metrics may indicate changes or trends in user numbers that do not match actual changes or trends.

To calculate our estimates of Family DAP and MAP, we currently use a series of machine learning models that are developed based on internal reviews of limited samples of user accounts and calibrated against user survey data. We apply significant judgment in designing these models and calculating these estimates. For example, to match user accounts within individual products and across multiple products, we use data signals such as similar device information, IP addresses, and user names. We also calibrate our models against data from periodic user surveys of varying sizes and frequency across our products, which are inherently subject to error. In addition, our data limitations may affect our understanding of certain details of our business and increase the risk of error for our Family metrics estimates. Our techniques and models rely on a variety of data signals from different products, and we rely on more limited data signals for some products compared to others. For example, as a result of limited visibility into encrypted products, we have fewer data signals from WhatsApp user accounts and primarily rely on phone numbers and device information to match WhatsApp user accounts with accounts on our other products. Similarly, although Messenger Kids users are included in our Family metrics, we do not seek to match their accounts with accounts on our other applications for purposes of calculating DAP and MAP. Any loss of access to data signals we use in our process for calculating Family metrics, whether as a result of our own product decisions, actions by third-party browser or mobile platforms, regulatory or legislative requirements, or other factors, also may impact the stability or accuracy of our reported Family metrics. Our estimates of Family metrics also may change as our methodologies evolve, including through the application of new data signals or technologies, product changes, or other improvements in our user surveys, algorithms, or machine learning that may improve our ability to match accounts within and across our products or otherwise evaluate the broad population of our users. In addition, such evolution may allow us to identify previously undetected violating accounts (as defined below).

We regularly evaluate our Family metrics to estimate the percentage of our MAP consisting solely of "violating" accounts. We define "violating" accounts as accounts which we believe are intended to be used for purposes that violate our terms of service, including bots and spam. In the fourth quarter of 2019, we estimated that approximately 3% of our worldwide MAP consisted solely of violating accounts. Such estimation is based on an internal review of a limited sample of accounts, and we apply significant judgment in making this determination. For example, we look for account information and behaviors associated with Facebook and Instagram accounts that appear to be inauthentic to the reviewers, but we have limited visibility into WhatsApp user activity due to encryption. In addition, if we believe an individual person has one or more violating accounts, we do not include such person in our violating accounts estimation as long as we believe they have one account that does not constitute a violating account. From time to time, we disable certain user accounts, make product changes, or take other actions to reduce the number of violating accounts among our users, which may also reduce our DAP and MAP estimates in a particular period. We intend to disclose our estimates of the percentage of our MAP consisting solely of violating accounts on an annual basis. Violating accounts are very difficult to measure at our scale, and it is possible that the actual number of violating accounts may vary significantly from our estimates.

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The numbers of Family DAP and MAP discussed in this Annual Report on Form 10-K, as well as ARPP, do not include users on our other products, unless they would otherwise qualify as DAP or MAP, respectively, based on their other activities on our Family products.

User Geography

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 our metrics are also susceptible to algorithm or other technical errors, and our estimates for revenue by user location and revenue by user device are also affected by these factors.

PART I

Item 1. Business

Overview

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

We build useful and engaging products that enable people to connect and share with friends and family through mobile devices, personal computers, virtual reality headsets, and in-home devices. 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 family members and 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, Stories, Marketplace, and Watch.
- **Instagram.** Instagram brings people closer to the people and things they love. It is a place where people can express themselves through photos, videos, and private messaging, including through Instagram Feed and Stories, and explore their interests in businesses, creators and niche communities.
- **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 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 heavily in other consumer hardware products and a number of longer-term initiatives, such as augmented reality, artificial intelligence (AI), and connectivity efforts, to develop technologies that we believe will help us better serve our mission over the long run.

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 mobile devices and online. 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 and Snap in messaging and social media, Bytedance and Twitter in social media, and Amazon in advertising.
- Companies that provide regional social networks and messaging products, 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, privacy, 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 70 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

Historically, our communities have generally 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, anti-corruption law compliance, 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

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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. The Brazilian General Data Protection Law will impose requirements similar to GDPR on products and services offered to users in Brazil, effective in August 2020. The California Consumer Privacy Act, which took effect in January 2020, also establishes certain transparency rules and creates new data privacy rights for users. 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 or limitations 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, requests for information, 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, including the modified consent order we entered into in July 2019 with the U.S. Federal Trade Commission (FTC) which is pending federal court approval and which, among other matters, will require us to implement a comprehensive expansion of our privacy program. 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 remedies), interrupt or require us to change our business practices in a manner materially adverse to our business, divert resources and the attention of management from our business, or subject us to other remedies that adversely affect our business.

Employees

As of December 31, 2019, we had 44,942 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 Reports 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 we expect that the size of our active user base will fluctuate or decline in one or more markets from time to time, 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 can 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;

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- 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 have implemented or 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 products;
- 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, internet shutdowns, or other actions by governments that 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.

From time to time, certain of these factors have negatively affected user retention, growth, and engagement to varying degrees. 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,

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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 will continue to implement, changes to our user data practices. Some of these changes reduce our ability to effectively target 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 can 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, target, or measure the effectiveness of 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 legislative, regulatory, or other legal developments relating to advertising, including developments that may impact our ability to deliver, target, or measure the effectiveness of advertising;
- 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 potential legal liability, 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, California Consumer Privacy Act (CCPA), or other similar changes that we implemented in the United States and around the world (for example, we have seen an increasing number of users opt out of certain types of ad targeting in Europe following adoption of the GDPR), or other product changes or controls we have implemented or 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;

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- 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.

From time to time, certain of these factors have adversely affected our advertising revenue to varying degrees. The occurrence of any of these or other factors in the future 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 advertising revenue is dependent on targeting and measurement tools that incorporate data signals from user activity on websites and services that we do not control, and changes to the regulatory environment, third-party mobile operating systems and browsers, and our own products have impacted, and we expect will continue to impact, the availability of such signals, which will adversely affect our advertising revenue.

We rely on data signals from user activity on websites and services that we do not control in order to deliver relevant and effective ads to our users. Our advertising revenue is dependent on targeting and measurement tools that incorporate these signals, and any changes in our ability to use such signals will adversely affect our business. For example, legislative and regulatory changes, such as the GDPR and CCPA, have impacted, and we expect will continue to impact, our ability to use such signals in our ad products. In addition, mobile operating system and browser providers, such as Apple and Google, have announced product changes as well as future plans to limit the ability of application developers to use these signals to target and measure advertising on their platforms. Similarly, we have implemented, and may continue to implement, product changes that give users the ability to limit our use of such data signals to improve ads and other experiences on our products and services, including our Off-Facebook Activity tool and our worldwide offering of product changes we implemented in connection with the GDPR. These developments have limited our ability to target and measure the effectiveness of ads on our platform, and any additional loss of such signals in the future will adversely affect our targeting and measurement capabilities and negatively impact our advertising revenue.

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 update or 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 previously 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, and we expect that any similar changes to its, Google's, or other browser or mobile platforms will further limit our ability to target and measure the effectiveness of ads and impact 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 mobile devices and online. 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 and Snap in messaging and social media, Bytedance and Twitter in social media, and Amazon in advertising. We also compete with companies that provide regional social networks and messaging products, 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, our 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;

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- 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 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, and it is possible that the Chinese government could take action that reduces or eliminates our China-based advertising revenue, whether as a result of the trade dispute with the United States, in response to content issues, or otherwise, or take other action against us, such as imposing taxes or other penalties, which could adversely affect our financial results. 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. We continue to incur substantial costs, and we may not be successful in generating profits, in connection with these efforts. 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 to support increasing usage of such products. We have historically monetized messaging in only a limited fashion, and we may not be successful in our efforts to generate meaningful revenue or profits from messaging over the long term. In addition, we have announced plans to implement end-to-end encryption across our messaging services, as well as facilitate interoperability between these platforms, which plans have drawn governmental and regulatory scrutiny in multiple jurisdictions. If our 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 will continue to implement, changes to our user data practices. Some of these changes reduce our ability to effectively target ads, which has to some extent adversely affected, and will continue to adversely affect, our advertising business. For example, our Off-Facebook Activity tool enables users to place limits on our storage and use of information about their interactions with advertisers' apps and websites, which will reduce our ability to deliver the most relevant and effective ads to our users. Similarly, from time to time we update our News Feed ranking algorithm to optimize the user experience, and these changes have had, and may in the future 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 products, from time to time these efforts have reduced, and may in the future 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, encryption, content, advertising, and other issues, including actions or decisions in connection with elections, which may adversely affect our reputation and

brands. For example, 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 has occurred in the past and 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 or objectionable ends, including, for example, any such actions around the 2020 U.S. presidential election or other elections around the world. Maintaining and enhancing our brands will 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, improper access to or disclosure of our data or user data, other hacking and phishing attacks on our systems, or other cyber incidents 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. Our products and services involve the collection, storage, processing, and transmission of a large amount of data. 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, modification, disclosure, destruction, or other 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, the types and volume of personal data on our systems, and the evolving nature of our products and services (including our efforts involving new and emerging technologies), we believe that we are a particularly attractive target for such breaches and attacks, including from highly sophisticated, state-sponsored, or otherwise well-funded actors. Our efforts to address undesirable activity on our platform also increase the risk of retaliatory attacks. Such breaches and 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, and to disable undesirable activities on our platform, may also be unsuccessful due to software bugs or other technical malfunctions; employee, contractor, or vendor error or malfeasance, including defects or vulnerabilities in our vendors' information technology systems or offerings; government surveillance; breaches of physical security of our facilities or technical infrastructure; 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, that we will be able to react in a timely manner, or that our remediation efforts will be successful. We experience cyber-attacks and other security incidents of varying degrees from time to time, and we may incur significant costs in protecting against or remediating such incidents.

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.

We are subject to a variety of laws and regulations in the United States and abroad relating to cybersecurity and data protection, as well as obligations under the modified consent order we entered into in July 2019 with the U.S. Federal Trade Commission (FTC), which is pending federal court approval. As a result, affected users or government authorities could initiate legal or regulatory actions against us in connection with any actual or perceived security breaches or improper access to or disclosure of data, which has occurred in the past and 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

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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 and other government inquiries. 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 efforts related to privacy, 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 privacy, 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, whether as a result of our data limitations, including our lack of visibility over our encrypted services, the scale of activity on our platform, or other factors, and we may be notified of such incidents or activity by the independent privacy assessor required under our consent order with the FTC, the media, or other third parties. Such incidents and activities have in the past, and may in the future, include the use of user data or our systems 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. We may also be unsuccessful in our efforts to enforce our policies or otherwise remediate any such incidents. Any of the foregoing developments 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 developments 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, advertising policies, 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 or objectionable 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. In addition, we may be subject to negative publicity if we are not successful in our efforts to prevent the illicit or objectionable use of our products or services in connection with the 2020 U.S. presidential election or other elections around the world. Any 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;

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- 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;
- changes to third-party policies that limit our ability to deliver, target, or measure the effectiveness of advertising;
- 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 privacy, 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;
- refunds or other concessions provided to advertisers;
- share-based compensation expense, including acquisition-related expense;

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- 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;
- trading activity in our share repurchase program;
- 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, and some of our investments have the effect of reducing 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 privacy, safety, security, and content review. In addition, from time to time we are subject to settlements, judgments, fines, or other monetary penalties in connection with legal and regulatory developments that may be material to our business. We are also continuing to increase our investments in new platforms and technologies. Some of these investments, particularly our significant investments in virtual and augmented reality, have generated only limited revenue and reduced our operating margin and profitability. 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 2019, excess tax benefits recognized from share-based compensation decreased our provision for income taxes by \$313 million and our effective tax rate

by one percentage point 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, anti-corruption law compliance, 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 a transfer framework for data transferred from the European Union to the United States, called the Privacy Shield, but this 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, including a pending legal challenge by a private party. 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 or the transfer frameworks are amended, 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 personal data breach notifications to our designated European privacy regulator, the Irish Data Protection Commission, and includes significant penalties for non-compliance with the notification obligation as well as other requirements of the regulation. The Brazilian General Data Protection Law will impose requirements similar to GDPR on products and services offered to users in Brazil, effective in August 2020.

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The California Consumer Privacy Act (CCPA), which took effect in January 2020, also establishes certain transparency rules and creates new data privacy rights for users, including more ability to control how their data is shared with third parties. These laws and regulations are evolving and subject to interpretation, and resulting limitations on our advertising services, or reductions of advertising by marketers, have to some extent adversely affected, and will continue to adversely affect, our advertising business. 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 or limitations 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 claims, inquiries, or investigations or any other government actions, have in the past led to, and may in the future lead to, unfavorable outcomes including increased compliance costs, delays or impediments in the development of new products, negative publicity and reputational harm, increased operating costs, diversion of management time and attention, and remedies that 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, requests for information, 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, competition, 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 FTC, 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. In July 2019, we entered into a settlement and modified consent order to resolve the FTC inquiry, which is pending federal court approval. Among other matters, our settlement with the FTC requires us to pay a penalty of \$5.0 billion and to significantly enhance our practices and processes for privacy compliance and oversight. Beginning in September 2018, we also became subject to Irish Data Protection Commission (IDPC) and other government inquiries 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. From time to time we also notify the IDPC, our designated European privacy regulator under the GDPR, of certain other personal data breaches and privacy issues, and are subject to inquiries and investigations regarding various aspects of our regulatory compliance.

In addition, competition authorities in the United States, Europe, and other jurisdictions have initiated formal and informal inquiries and investigations into many aspects of our business, including with respect to users and advertisers, as well as our industry. For example, in June 2019 we were informed by the FTC that it had opened an antitrust investigation of our company. In addition, beginning in the third quarter of 2019, we became the subject of antitrust inquiries and investigations by the U.S. Department of Justice, the U.S. House of Representatives, and state attorneys general. These inquiries and investigations concern, among other things, our business practices in the areas of social networking or social media services, digital advertising, and/or mobile or online applications, as well as past acquisitions.

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 remedies), interrupt or require us to change our business practices in a manner materially adverse to our business, result in negative publicity and reputational harm, divert resources and the attention of management from our business, or subject us to other remedies that adversely affect our business.

Compliance with our FTC consent order, the GDPR, the CCPA, and other regulatory and legislative privacy requirements will require significant operational resources and modifications to our business practices, and any compliance failures may have a material adverse effect on our business, reputation, and financial results.

We are engaged in ongoing privacy compliance and oversight efforts, including as a result of the modified consent order we entered into in July 2019 with the FTC, as well as our efforts to comply with the GDPR and other regulatory and legislative requirements around the world, including the CCPA. In particular, we have agreed with the FTC to implement a comprehensive expansion of our privacy program, including substantial management and board of directors oversight, stringent operational requirements and reporting obligations, and a process to regularly certify our compliance with the privacy program to the FTC, which will be challenging and costly to implement. We expect that these enhancements will result in both improved privacy compliance and oversight and the discovery of additional privacy issues, at least in the near-term, and we expect to continue to notify the FTC of such issues from time to time in accordance with our reporting obligations under the consent order. These compliance and oversight efforts will increase demand on our systems and resources, and will require significant investments, including investments in compliance processes, personnel, and technical infrastructure. In the near-term, we are reallocating resources internally to assist with these efforts, and this has had, and will continue to have, an adverse impact on our other business initiatives. In addition, these efforts will require substantial modifications to our business practices and make some practices such as product and ads development more difficult, time-consuming, and costly. As a result, we believe our ability to develop and launch new features, products, and services in a timely manner will be adversely affected. We also expect that our privacy compliance and oversight efforts will require significant time and attention from our management and board of directors. In addition, regulatory and legislative privacy requirements are constantly evolving and can be subject to significant change and uncertain interpretation. If we are unable to successfully implement and comply with the mandates of the FTC consent order, GDPR, CCPA, or other regulatory or legislative requirements, or if we are found to be in violation of the consent order or other requirements, we may be subject to regulatory or governmental investigations or lawsuits, which may result in significant monetary fines, judgments, or other penalties, and we may also be required to make additional changes to our business practices. Any of these events could have a material adverse effect on our business, reputation, and financial results.

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

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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, could result in less effective technology or practices or otherwise negatively affect the user experience, or may not be feasible. We have experienced unfavorable outcomes in such disputes and litigation in the past, and 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 have in the past, and may in the future, be subject to additional class action lawsuits based on advertiser claims, antitrust claims, 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, as well as the disclosure of our earnings results for the second quarter of 2018. We also recently agreed to settlements in principle to resolve certain lawsuits in connection with the "tag suggestions" facial recognition feature on Facebook 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 the remaining lawsuits are without merit and are vigorously defending them. However, the results of such lawsuits and claims cannot be predicted with certainty, and 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.

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 has occurred in the past and 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, and legislation regulating content on our platform may require us to change our products or business practices.

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, in April 2019, the European Union passed a directive expanding online platform liability for copyright infringement and regulating certain uses of news content online, which member states must implement by June 2021. 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, legislation in Germany has in the past, and may in the future, result in the imposition of fines for failure to comply with certain content removal, law enforcement cooperation, and disclosure obligations. Other countries, including Australia, France, Singapore, and the United Kingdom, are considering or have implemented similar legislation imposing penalties for failure to remove content or follow certain processes. Such legislation also has in the past, and may in the future, require us to change our products or business practices, increase our compliance costs, or otherwise impact our operations or our ability to provide services in certain geographies. For example, the European Copyright Directive requires certain online services to obtain authorizations for copyrighted content or to implement measures to prevent the availability of that content, which may require us to make substantial investments in compliance processes. If any of the foregoing 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 or may not operate with the reliability and redundancy necessary 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, any of which could adversely affect our business and financial performance. 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, other physical security threats, 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. 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, challenges in obtaining required government or regulatory approvals, or other geopolitical challenges or actions by governments, 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. Any of these events could adversely affect our business, reputation, or financial results.

Our products and internal systems rely on software and hardware that is highly technical, and if these systems contain errors, bugs, or vulnerabilities, or if we are unsuccessful in addressing or mitigating technical limitations in our systems, our business could be adversely affected.

Our products and internal systems rely on software and hardware, including software and hardware 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 and hardware to store, retrieve, process, and manage immense amounts of data. The software and hardware on which we rely has contained, and will in the future contain, errors, bugs, or vulnerabilities, and our systems are subject to certain technical limitations that may compromise our ability to meet our objectives. Some errors, bugs, or vulnerabilities inherently may be difficult to detect and 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, bugs, vulnerabilities, design defects, or technical limitations within the software and hardware on which we rely have in the past led to, and may in the future lead to, outcomes including a negative experience for users and marketers who use our products, compromised ability of our products to perform in a manner consistent with our terms, contracts, or policies, delayed product introductions or enhancements, targeting, measurement, or billing errors, compromised ability to protect the data of our users and/or our intellectual property, or reductions in our ability to provide some or all of our services. For example, we make commitments to our users as to how their data will be used within and across our products, and our systems are subject to errors, bugs and technical limitations that may prevent us from fulfilling these commitments reliably. If our systems contain bugs or errors or if we do not properly address or mitigate the technical limitations in our systems, we may fail to fulfill our commitments to our users and be subject to regulatory scrutiny or litigation that could harm our business and result in fines, damages, or other remedies. In addition, errors, bugs, vulnerabilities, or defects in the software and hardware on which we rely, and any associated degradations or interruptions of service, have in the past led to, and may in the future lead to, outcomes including damage to our reputation, loss of users, loss of marketers, loss of revenue, regulatory inquiries, 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 community and other metrics may harm our reputation and negatively affect our business.

The numbers for our key metrics, which include our Facebook metrics (DAUs, MAUs, and average revenue per user (ARPU)) and Family metrics (DAP, MAP, and average revenue per person (ARPP)), 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. The methodologies used to measure these metrics require significant judgment

and are also susceptible to algorithm or other technical errors. 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 review our processes for calculating these metrics, and from time to time we discover inaccuracies in our metrics or make adjustments to improve their accuracy, which can result in adjustments to our historical metrics. Our ability to recalculate our historical metrics may be impacted by data limitations or other factors that require us to apply different methodologies for such adjustments. We generally do not intend to update previously disclosed Family metrics for any such inaccuracies or adjustments that are within the error margins disclosed below.

In addition, our Facebook metrics and Family metrics estimates will differ from estimates published by third parties due to differences in methodology.

We regularly evaluate our Facebook 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) violating accounts, which represent user profiles that we believe are intended to be used for purposes that violate our terms of service, such as bots and spam. 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 identical IP addresses and similar 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. Any loss of access to data signals we use in this process, whether as a result of our own product decisions, actions by third-party browser or mobile platforms, regulatory or legislative requirements, or other factors, also may impact the stability or accuracy of our estimates of duplicate and false accounts. Our estimates also may change as our methodologies evolve, including through the application of new data signals or technologies or product changes that 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 2019, we estimated 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 2019, we estimated 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 disable certain user accounts, 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. We intend to disclose our estimates of the number of duplicate and false accounts among our MAUs on an annual basis.

Many people in our community have user accounts on more than one of our products, and some people have multiple user accounts within an individual product. Accordingly, for our Family metrics, we do not seek to count the total number of user accounts across our products because we believe that would not reflect the actual size of our community. Rather, our Family metrics represent our estimates of the number of unique people using at least one of Facebook, Instagram, Messenger, and WhatsApp. We do not require people to use a common identifier or link their accounts to use multiple products in our Family, and therefore must seek to attribute multiple user accounts within and across products to individual people. To calculate these metrics, we rely upon complex techniques, algorithms and machine learning models that seek to count the individual people behind user accounts, including by matching multiple user accounts within an individual product and across multiple products when we believe they are attributable to a single person, and counting such group of accounts as one person. These techniques and models require significant judgment, are subject to data and other limitations discussed below, and inherently are subject to statistical variances and uncertainties. We estimate the potential error in our Family metrics primarily based on user survey data, which itself is subject to error as well. While we expect the error margin for our Family metrics to vary from period to period, we estimate that such margin generally will be approximately 3% of our worldwide MAP. At our scale, it is very difficult to attribute multiple user accounts within and across products to individual people, and it is possible that the actual numbers of unique people using our products may vary significantly from our estimates, potentially beyond our estimated error margins. As a result, it is also possible that our Family metrics may indicate changes or trends in user numbers that do not match actual changes or trends.

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To calculate our estimates of Family DAP and MAP, we currently use a series of machine learning models that are developed based on internal reviews of limited samples of user accounts and calibrated against user survey data. We apply significant judgment in designing these models and calculating these estimates. For example, to match user accounts within individual products and across multiple products, we use data signals such as similar device information, IP addresses, and user names. We also calibrate our models against data from periodic user surveys of varying sizes and frequency across our products, which are inherently subject to error. In addition, our data limitations may affect our understanding of certain details of our business and increase the risk of error for our Family metrics estimates. Our techniques and models rely on a variety of data signals from different products, and we rely on more limited data signals for some products compared to others. For example, as a result of limited visibility into encrypted products, we have fewer data signals from WhatsApp user accounts and primarily rely on phone numbers and device information to match WhatsApp user accounts with accounts on our other products. Similarly, although Messenger Kids users are included in our Family metrics, we do not seek to match their accounts with accounts on our other applications for purposes of calculating DAP and MAP. Any loss of access to data signals we use in our process for calculating Family metrics, whether as a result of our own product decisions, actions by third-party browser or mobile platforms, regulatory or legislative requirements, or other factors, also may impact the stability or accuracy of our reported Family metrics. Our estimates of Family metrics also may change as our methodologies evolve, including through the application of new data signals or technologies, product changes, or other improvements in our user surveys, algorithms, or machine learning that may improve our ability to match accounts within and across our products or otherwise evaluate the broad population of our users. In addition, such evolution may allow us to identify previously undetected violating accounts (as defined below).

We regularly evaluate our Family metrics to estimate the percentage of our MAP consisting solely of "violating" accounts. We define "violating" accounts as accounts which we believe are intended to be used for purposes that violate our terms of service, including bots and spam. In the fourth quarter of 2019, we estimated that approximately 3% of our worldwide MAP consisted solely of violating accounts. Such estimation is based on an internal review of a limited sample of accounts, and we apply significant judgment in making this determination. For example, we look for account information and behaviors associated with Facebook and Instagram accounts that appear to be inauthentic to the reviewers, but we have limited visibility into WhatsApp user activity due to encryption. In addition, if we believe an individual person has one or more violating accounts, we do not include such person in our violating accounts estimation as long as we believe they have one account that does not constitute a violating account. From time to time, we disable certain user accounts, make product changes, or take other actions to reduce the number of violating accounts among our users, which may also reduce our DAP and MAP estimates in a particular period. We intend to disclose our estimates of the percentage of our MAP consisting solely of violating accounts on an annual basis. Violating accounts are very difficult to measure at our scale, and it is possible that the actual number of violating accounts may vary significantly from our estimates.

Other data limitations also 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 our metrics are also susceptible to algorithm or other technical errors, and our estimates for revenue by user location and revenue by user device are also affected by these factors.

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 or our other products, 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 44,942 as of December 31, 2019 from 35,587 as of December 31, 2018, 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 privacy, 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 challenges in hiring such personnel, particularly in the San Francisco Bay Area, where our headquarters are located, whether as a result of competition with other companies, challenges due to the high cost of living, facilities and infrastructure constraints, or other factors. 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 efforts related to privacy, safety, and security, we are conducting investigations and audits of a large number of platform applications, and we also have 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 and have announced plans to develop digital payments products and services, which may subject us to many of the foregoing risks and additional licensing requirements.

Our participation in the Libra Association will subject us to significant regulatory scrutiny and other risks that could adversely affect our business, reputation, or financial results.

In June 2019, we announced our participation in the Libra Association, which will oversee a proposed digital payments system powered by blockchain technology, and our plans for Calibra, a digital wallet for Libra which we expect to launch in Messenger, WhatsApp, and as a standalone application.

Libra is based on relatively new and unproven technology, and the laws and regulations surrounding blockchain-based payments are uncertain and evolving. Libra has drawn significant scrutiny from governments and regulators in multiple jurisdictions and we expect that scrutiny to continue. As a primary sponsor of the initiative, we are participating in responses to inquiries from governments and regulators, and adverse government or regulatory actions or negative publicity resulting from such participation may adversely affect our reputation and harm our business.

As this initiative evolves, we may be subject to a variety of laws and regulations in the United States and international jurisdictions, including those governing payments, financial services, anti-money laundering, counter-terrorism financing, economic sanctions, data protection, tax, and competition. In many jurisdictions, the application or interpretation of these laws and regulations is not clear, particularly with respect to evolving laws and regulations that are applied to blockchain and digital payments. These laws and regulations, as well as any associated inquiries or investigations, may delay or impede the launch of the Libra currency as well as the development of our products and services, increase our operating costs, require significant management time and attention, or otherwise harm our business.

In addition, market acceptance of such currency is subject to significant uncertainty. As such, there can be no assurance that Libra or our associated products and services will be made available in a timely manner, or at all. We do not have significant prior experience with blockchain-based payments technology, which may adversely affect our ability to successfully develop and market these products and services. We will also incur increased costs in connection with our participation in the Libra Association and the development and marketing of associated products and services, and our investments may not be successful. Any of these events could adversely affect our business, reputation, or financial results.

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, competition, consumer protection, 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. The manufacturing and sale of our consumer hardware products also may be negatively impacted by geopolitical challenges, trade disputes, or other actions by governments that subject us to supply shortages, increased costs, or supply chain disruptions.

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 face inventory risk with respect to our consumer hardware products.

We are 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 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, a three-judge panel from the Ninth Circuit Court of Appeals issued a decision in *Altera Corp. v. Commissioner* regarding the treatment of share-based compensation expense in a cost sharing arrangement, which had a material effect on our tax obligations and effective tax rate for the second quarter of 2019. As the taxpayer may appeal the decision to the Supreme Court of the United States, the final outcome of the case is uncertain and could have a material effect on our tax obligations and effective tax rate in future quarters. 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, several countries have proposed or enacted 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, 2019. 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 the future we could elect not to have a majority of our board of directors be independent or not to have a compensation committee or an independent nominating function. 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;

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- 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, 2019, we owned and leased approximately nine million square feet of office and building space for our corporate headquarters and in the surrounding areas, and approximately 90 acres of land to be developed to accommodate anticipated future growth.

In addition, we have offices in approximately 70 cities across North America, Latin America, Europe, the Middle East, Africa and Asia Pacific. We also own 15 data centers globally.

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. On September 25, 2019, the district court granted our motion to dismiss the consolidated putative securities class action, with leave to amend. On November 15, 2019, an amended complaint was filed in the consolidated putative securities class action. 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 (FTC), state attorneys general, and other government inquiries in the United States, Europe, and other jurisdictions. In July 2019, we entered into a settlement and modified consent order to resolve the FTC inquiry, which is pending federal court approval. Among other matters, our settlement with the FTC requires us to pay a penalty of \$5.0 billion and to significantly enhance our practices and processes for privacy compliance and oversight. Any other government inquiries regarding these matters could subject us to additional 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.

On April 1, 2015, a putative class action was filed against us in the U.S. District Court for the Northern District of California by Facebook users alleging that the "tag suggestions" facial recognition feature violates the Illinois Biometric Information Privacy Act, and seeking statutory damages and injunctive relief. On April 16, 2018, the district court certified a class of Illinois residents, and on May 14, 2018, the district court denied both parties' motions for summary judgment. On May 29, 2018, the U.S. Court of Appeals for the Ninth Circuit granted our petition for review of the class certification order and stayed the proceeding. On August 8, 2019, the Ninth Circuit affirmed the class certification order. On December 2, 2019, we filed a petition with the U.S. Supreme Court seeking review of the decision of the Ninth Circuit, which was denied. On January 15, 2020, the parties agreed to a settlement in principle to resolve the lawsuit, which will require a payment of \$550 million by us and is subject to approval by the court.

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. The actions filed in the United States were consolidated in the U.S. District Court for the Northern District of California. On November 26, 2019, the district court certified a class for injunctive relief purposes, but denied certification of a class for purposes of pursuing damages. On January 16, 2020, the parties agreed to a settlement in principle to resolve the lawsuit. We believe the remaining 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 (IDPC) and other government inquiries. 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.

From time to time we also notify the IDPC, our designated European privacy regulator under the General Data Protection Regulation, of certain other personal data breaches and privacy issues, and are subject to inquiries and investigations regarding various aspects of our regulatory compliance. Any such inquiries or investigations 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 inquiries and investigations, formal or informal, by competition authorities in the United States, Europe, and other jurisdictions. For example, in June 2019 we were informed by the FTC that it had opened an antitrust investigation of our company. In addition, beginning in the third quarter of 2019, we became the subject of antitrust investigations by the U.S. Department of Justice and state attorneys general. These investigations and inquiries concern, among other things, our business practices in the areas of social networking or social media services, digital advertising, and/or mobile or online applications, as well as past acquisitions. The result of such investigations or inquiries could subject us to substantial monetary remedies and costs, interrupt or require us to change our business practices, divert resources and the attention of management from our business, or subject us to other remedies that 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, 2019, there were 3,624 stockholders of record of our Class A common stock, and the closing price of our Class A common stock was \$205.25 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, 2019, there were 39 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, 2019:

| | 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, 2019 | 2,415 | \$ 184.42 | 2,415 | \$ 5,757 |
| November 1 - 30, 2019 | 2,100 | \$ 195.74 | 2,100 | \$ 5,346 |
| December 1 - 31, 2019 | 2,205 | \$ 202.02 | 2,205 | \$ 4,901 |
| | <u>6,720</u> | | <u>6,720</u> | |

(1) Our board of directors has authorized a share repurchase program of our Class A common stock, which commenced in January 2017 and does not have an expiration date. As of December 31, 2019, \$4.90 billion remained available and authorized for repurchases. In January 2020, an additional \$10.0 billion of repurchases was authorized under this program. 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***

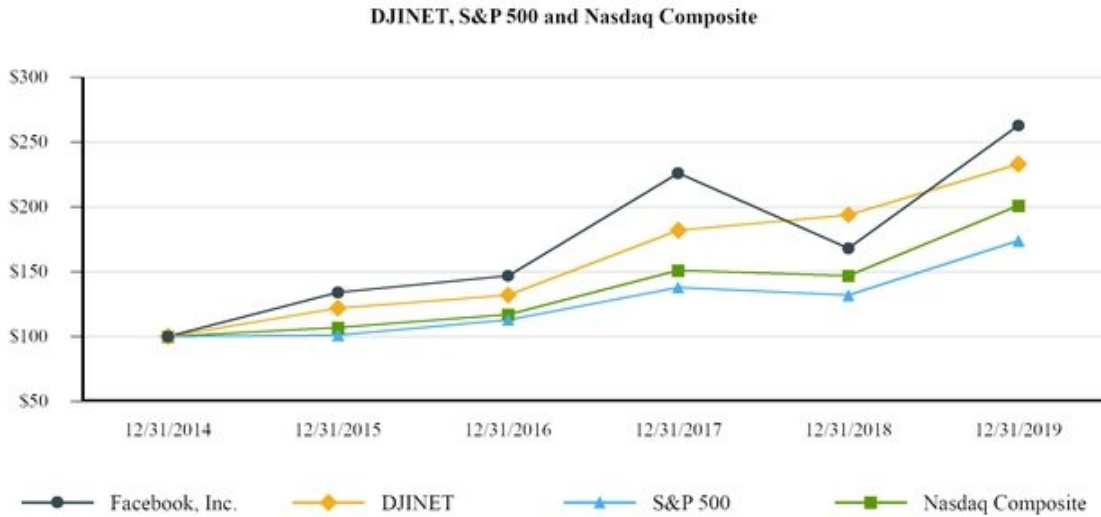
None.

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 Dow Jones Internet Composite Index (DJINET), the Standard & Poor's 500 Stock Index (S&P 500) and the Nasdaq Composite Index (Nasdaq Composite) for the five years ended December 31, 2019. The graph assumes that \$100 was invested at the market close on the last trading day for the fiscal year ended December 31, 2014 in the Class A common stock of Facebook, Inc., the DJINET, the S&P 500 and the Nasdaq Composite and data for the DJINET, the S&P 500 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.

Comparison of Five-Year Cumulative Total Return for Facebook, Inc.



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, 2019, 2018, and 2017 and the consolidated balance sheets data as of December 31, 2019 and 2018 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, 2016 and 2015 and the consolidated balance sheets data as of December 31, 2017, 2016, and 2015 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, | | | | |
|---|--------------------------------------|-----------|-----------|-----------|-----------|
| | 2019 | 2018 | 2017 | 2016 | 2015 |
| | (in millions, except per share data) | | | | |
| Consolidated Statements of Income Data: | | | | | |
| Revenue | \$ 70,697 | \$ 55,838 | \$ 40,653 | \$ 27,638 | \$ 17,928 |
| Total costs and expenses ⁽¹⁾ | \$ 46,711 | \$ 30,925 | \$ 20,450 | \$ 15,211 | \$ 11,703 |
| Income from operations | \$ 23,986 | \$ 24,913 | \$ 20,203 | \$ 12,427 | \$ 6,225 |
| Income before provision for income taxes | \$ 24,812 | \$ 25,361 | \$ 20,594 | \$ 12,518 | \$ 6,194 |
| Net income | \$ 18,485 | \$ 22,112 | \$ 15,934 | \$ 10,217 | \$ 3,688 |
| Net income attributable to Class A and Class B common stockholders | \$ 18,485 | \$ 22,111 | \$ 15,920 | \$ 10,188 | \$ 3,669 |
| Earnings per share attributable to Class A and Class B common stockholders: | | | | | |
| Basic | \$ 6.48 | \$ 7.65 | \$ 5.49 | \$ 3.56 | \$ 1.31 |
| Diluted | \$ 6.43 | \$ 7.57 | \$ 5.39 | \$ 3.49 | \$ 1.29 |

(1) Total costs and expenses include \$4.84 billion, \$4.15 billion, \$3.72 billion, \$3.22 billion, and \$2.97 billion of share-based compensation for the years ended December 31, 2019, 2018, 2017, 2016, and 2015, respectively.

| | As of December 31, | | | | |
|---|--------------------|-----------|-----------|-----------|-----------|
| | 2019 | 2018 | 2017 | 2016 | 2015 |
| | (in millions) | | | | |
| Consolidated Balance Sheets Data: | | | | | |
| Cash, cash equivalents, and marketable securities | \$ 54,855 | \$ 41,114 | \$ 41,711 | \$ 29,449 | \$ 18,434 |
| Working capital | \$ 51,172 | \$ 43,463 | \$ 44,803 | \$ 31,526 | \$ 19,727 |
| Property and equipment, net | \$ 35,323 | \$ 24,683 | \$ 13,721 | \$ 8,591 | \$ 5,687 |
| Total assets | \$ 133,376 | \$ 97,334 | \$ 84,524 | \$ 64,961 | \$ 49,407 |
| Operating lease liabilities ⁽¹⁾ | \$ 10,324 | \$ — | \$ — | \$ — | \$ — |
| Total liabilities | \$ 32,322 | \$ 13,207 | \$ 10,177 | \$ 5,767 | \$ 5,189 |
| Additional paid-in capital | \$ 45,851 | \$ 42,906 | \$ 40,584 | \$ 38,227 | \$ 34,886 |
| Total stockholders' equity | \$ 101,054 | \$ 84,127 | \$ 74,347 | \$ 59,194 | \$ 44,218 |

(1) On January 1, 2019, we adopted Accounting Standards Update No. 2016-02, *Leases (Topic 842)*. Prior period amounts have not been adjusted under the modified retrospective method.

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 and principal payments on finance leases.

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, | | | | |
|--|-------------------------|------------------|------------------|------------------|-----------------|
| | 2019 | 2018 | 2017 | 2016 | 2015 |
| | (in millions) | | | | |
| Net cash provided by operating activities | \$ 36,314 | \$ 29,274 | \$ 24,216 | \$ 16,108 | \$ 10,320 |
| Less: Purchases of property and equipment, net | (15,102) | (13,915) | (6,733) | (4,491) | (2,523) |
| Less: Principal payments on finance leases | (552) | — | — | — | — |
| Free cash flow | <u>\$ 20,660</u> | <u>\$ 15,359</u> | <u>\$ 17,483</u> | <u>\$ 11,617</u> | <u>\$ 7,797</u> |

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 community 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 2019 using 2018 monthly exchange rates for our settlement or billing 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 2019 Results

Our key community metrics and financial results for 2019 are as follows:

Community growth:

- Facebook daily active users (DAUs) were 1.66 billion on average for December 2019, an increase of 9% year-over-year.
- Facebook monthly active users (MAUs) were 2.50 billion as of December 31, 2019, an increase of 8% year-over-year.
- Family daily active people (DAP) was 2.26 billion on average for December 2019, an increase of 11% year-over-year.
- Family monthly active people (MAP) was 2.89 billion as of December 31, 2019, an increase of 9% year-over-year.

Financial results:

- Revenue was \$70.70 billion, up 27% year-over-year, and advertising revenue was \$69.66 billion, up 27% year-over-year.
- Total costs and expenses were \$46.71 billion.
- Income from operations was \$23.99 billion and operating margin was 34%.
- Net income was \$18.48 billion with diluted earnings per share of \$6.43.
- Capital expenditures, including principal payments on finance leases, were \$15.65 billion.
- Effective tax rate was 25.5%.
- Cash and cash equivalents and marketable securities were \$54.86 billion as of December 31, 2019.
- Headcount was 44,942 as of December 31, 2019, an increase of 26% year-over-year.

In 2019, 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.

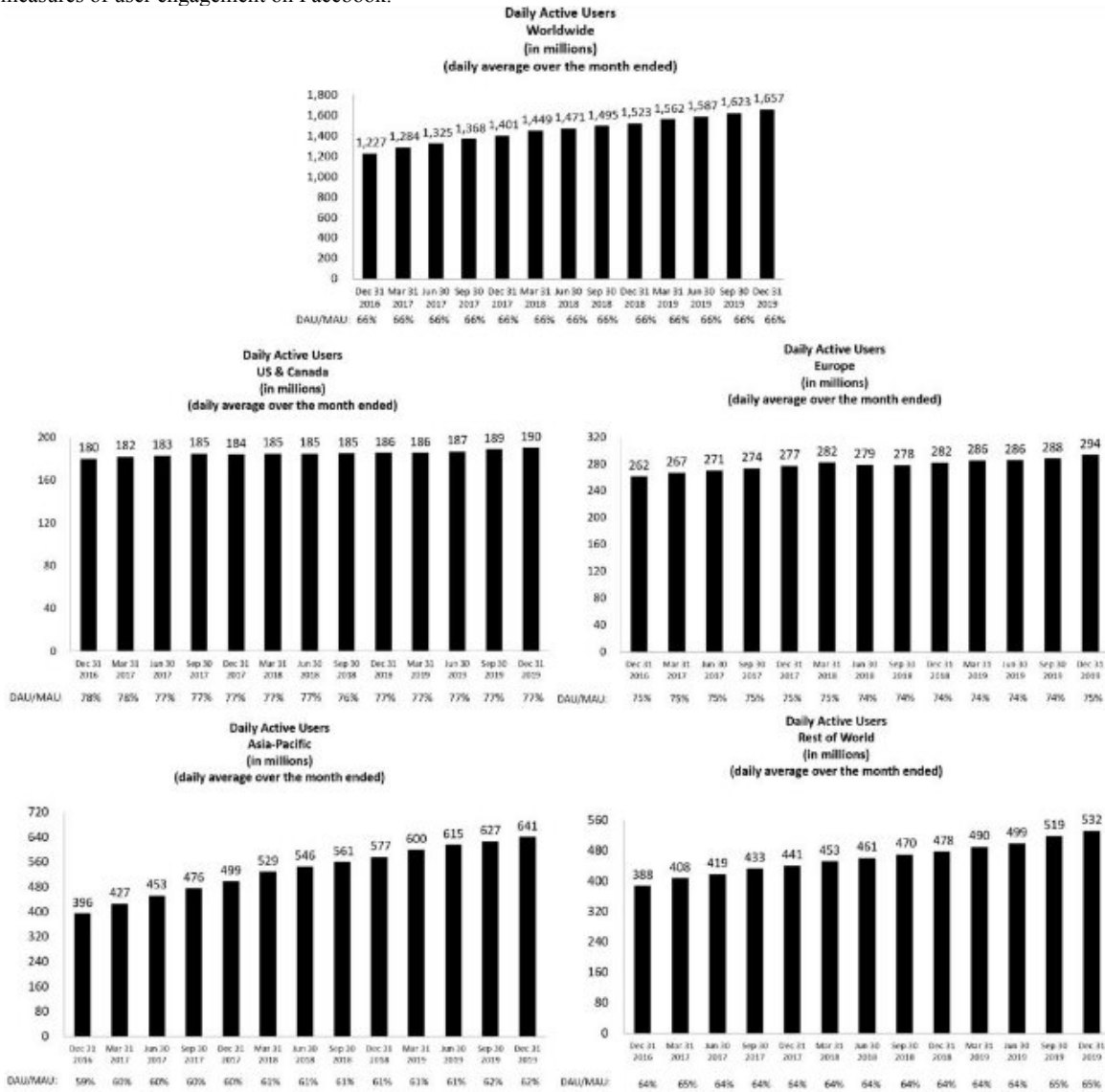
We invested based on the following company priorities that we believe will further our mission to give people the power to build community and bring the world closer together: (i) continue making progress on the major social issues facing the internet and our company, including privacy, safety, and security; (ii) build new experiences that meaningfully improve people's lives today and set the stage for even bigger improvements in the future; (iii) keep building our business by supporting the millions of businesses that rely on our services to grow and create jobs; and (iv) communicate more transparently about what we're doing and the role our services play in the world. We intend to continue to invest based on these priorities, and we anticipate that additional investments in our data center capacity, network infrastructure, and office facilities, as well as scaling our headcount to support our growth, will continue to drive expense growth in 2020.

Trends in Our Facebook User Metrics

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

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.

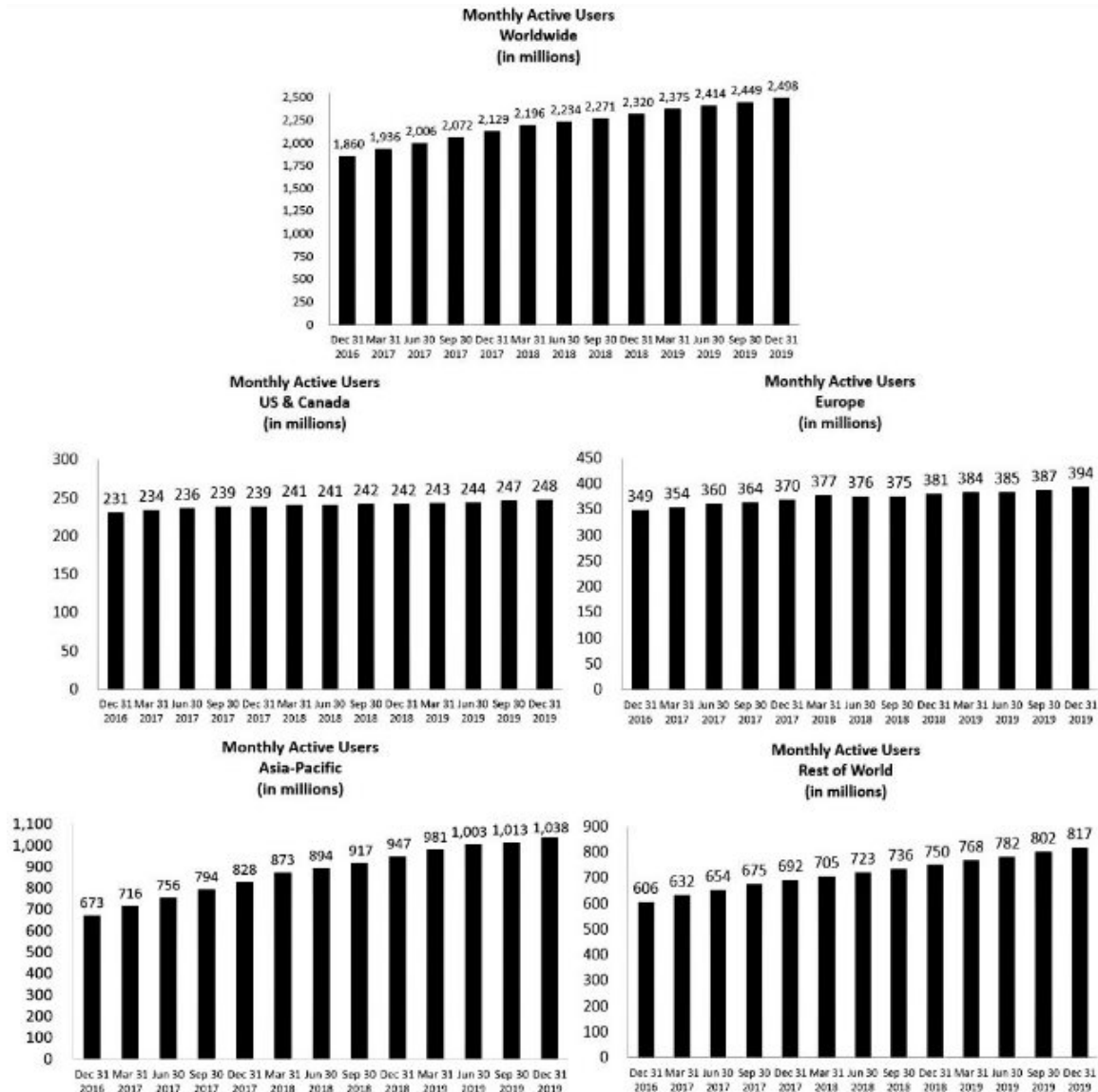
- Daily Active Users (DAUs).** We define a daily active user as a registered and logged-in Facebook user who visited Facebook through our website or a mobile device, or used our Messenger application (and is also a registered Facebook user), on a given day. We view DAUs, and DAUs as a percentage of MAUs, 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 1.66 billion on average during December 2019 from 1.52 billion during December 2018. Users in India, Indonesia, and the Philippines represented key sources of growth in DAUs during December 2019, relative to the same period in 2018.

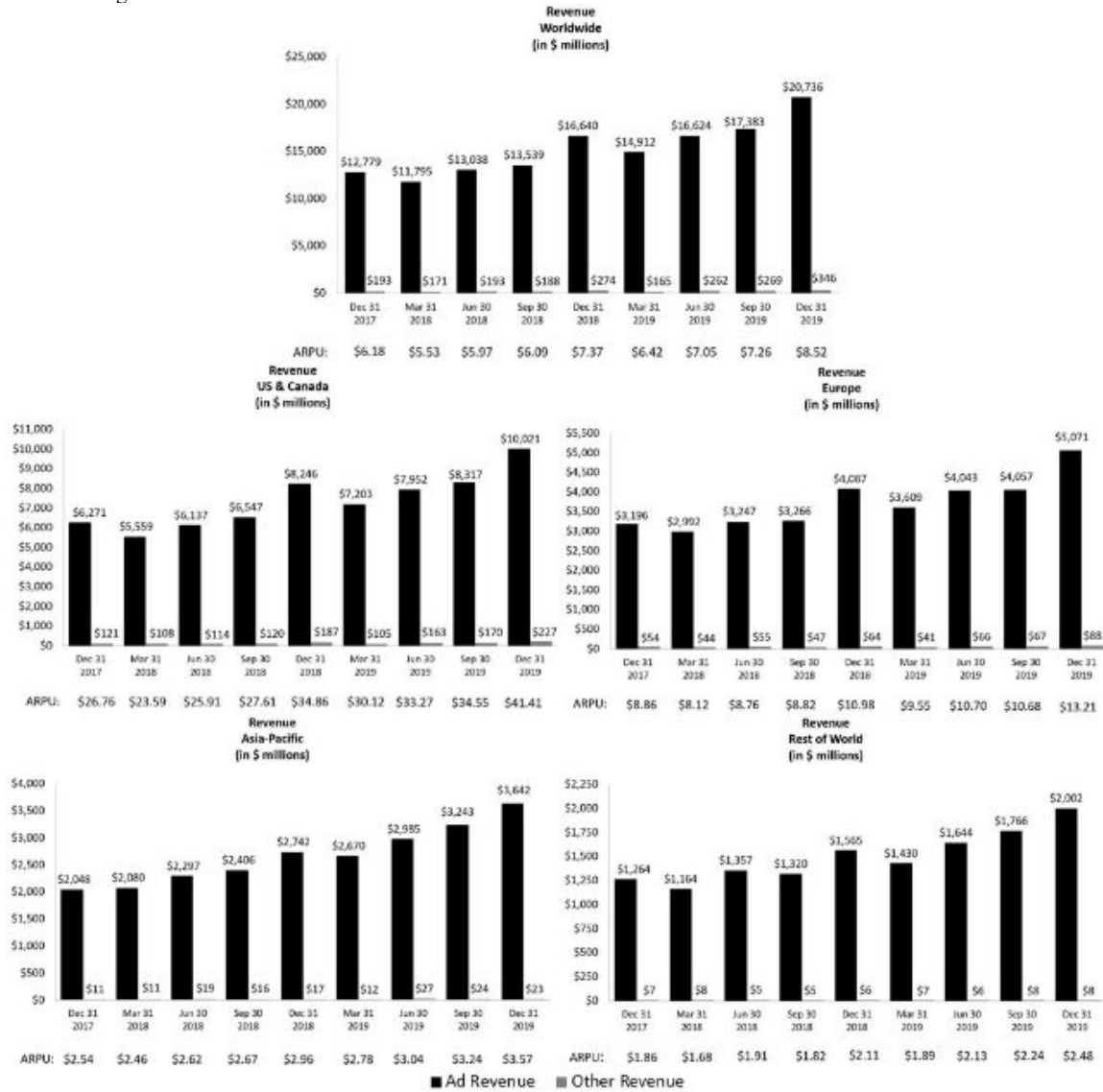
- Monthly Active Users (MAUs).** We define a monthly active user as a registered and logged-in Facebook user who visited Facebook through our website or a mobile device, or used our Messenger application (and is also a registered Facebook user), in the last 30 days as of the date of measurement. MAUs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



As of December 31, 2019, we had 2.50 billion MAUs, an increase of 8% from December 31, 2018. Users in India, Indonesia, and the Philippines represented key sources of growth in 2019, relative to the same period in 2018.

Trends in Our Monetization by Facebook User Geography

We calculate our revenue by Facebook 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. The share of 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 2019 in the United States & Canada region was more than 11 times higher than in the Asia-Pacific region.



Note: Our revenue by Facebook user geography in the charts above is geographically apportioned based on our estimation of the geographic location of our Facebook 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 billing address of the customer.

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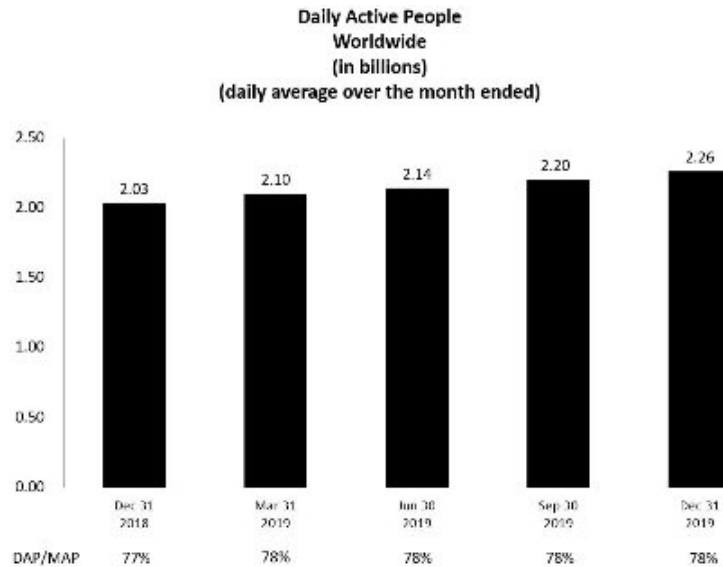
Our annual worldwide ARPU in 2019, which represents the sum of quarterly ARPU during such period, was \$29.25, an increase of 17% from 2018. Over this period, ARPU increased by 24% in the United States & Canada, 20% in Europe, 18% in Asia-Pacific, and 16% in Rest of World. In addition, user growth was 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.

Trends in Our Family Metrics

The numbers for our key Family metrics, our DAP, MAP, and average revenue per person (ARPP), do not include users on our other products unless they would otherwise qualify as MAP or DAP, respectively, based on their other activities on our Family products.

Trends in the number of people in our community 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 people (as defined below) access our Family products on mobile devices.

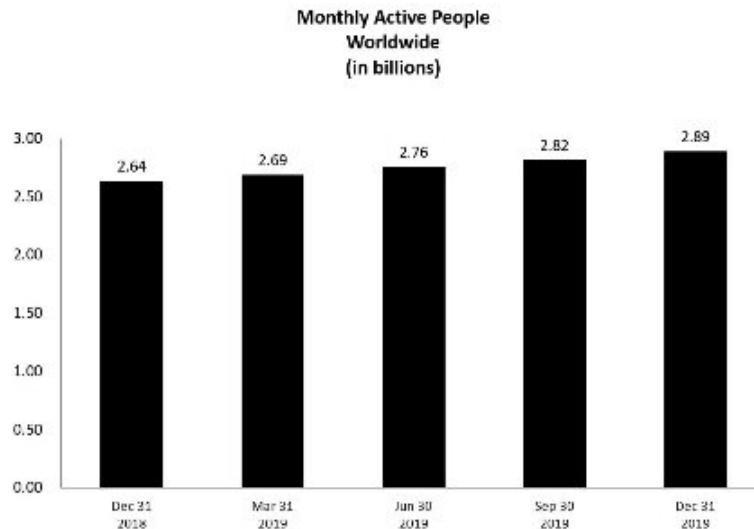
- **Daily Active People (DAP).** We define a daily active person as a registered and logged-in user of Facebook, Instagram, Messenger, and/or WhatsApp (collectively, our "Family" of products) who visited at least one of these Family products through a mobile device application or using a web or mobile browser on a given day. We do not require people to use a common identifier or link their accounts to use multiple products in our Family, and therefore must seek to attribute multiple user accounts within and across products to individual people. Our calculations of DAP rely upon complex techniques, algorithms, and machine learning models that seek to estimate the underlying number of unique people using one or more of these products, including by matching user accounts within an individual product and across multiple products when we believe they are attributable to a single person, and counting such group of accounts as one person. As these techniques and models require significant judgment, are developed based on internal reviews of limited samples of user accounts, and are calibrated against user survey data, there is necessarily some margin of error in our estimates. We view DAP, and DAP as a percentage of MAP, as measures of engagement across our products. For additional information, see the section entitled "Limitations of Key Metrics and Other Data" in this Annual Report on Form 10-K.



Note: We report the numbers of DAP and MAP as specific amounts, but these numbers are estimates of the numbers of unique people using our products and are subject to statistical variances and errors. While we expect the error margin for these estimates to vary from period to period, we estimate that such margin generally will be approximately 3% of our worldwide MAP. At our scale, it is very difficult to attribute multiple user accounts within and across products to individual people, and it is possible that the actual numbers of unique people using our products may vary significantly from our estimates, potentially beyond our estimated error margins. For additional information, see the section entitled "Limitations of Key Metrics and Other Data" in this Annual Report on Form 10-K.

Worldwide DAP increased 11% to 2.26 billion on average during December 2019 from 2.03 billion during December 2018.

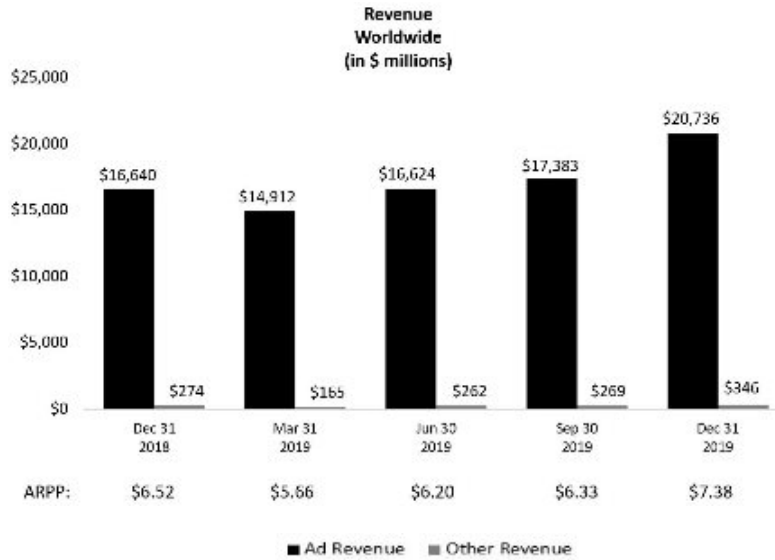
- **Monthly Active People (MAP).** We define a monthly active person as a registered and logged-in user of one or more Family products who visited at least one of these Family products through a mobile device application or using a web or mobile browser in the last 30 days as of the date of measurement. We do not require people to use a common identifier or link their accounts to use multiple products in our Family, and therefore must seek to attribute multiple user accounts within and across products to individual people. Our calculations of MAP rely upon complex techniques, algorithms, and machine learning models that seek to estimate the underlying number of unique people using one or more of these products, including by matching user accounts within an individual product and across multiple products when we believe they are attributable to a single person, and counting such group of accounts as one person. As these techniques and models require significant judgment, are developed based on internal reviews of limited samples of user accounts, and are calibrated against user survey data, there is necessarily some margin of error in our estimates. We view MAP as a measure of the size of our global active community of people using our products. For additional information, see the section entitled "Limitations of Key Metrics and Other Data" in this Annual Report on Form 10-K.



Note: We report the numbers of DAP and MAP as specific amounts, but these numbers are estimates of the numbers of unique people using our products and are subject to statistical variances and errors. While we expect the error margin for these estimates to vary from period to period, we estimate that such margin generally will be approximately 3% of our worldwide MAP. At our scale, it is very difficult to attribute multiple user accounts within and across products to individual people, and it is possible that the actual numbers of unique people using our products may vary significantly from our estimates, potentially beyond our estimated error margins. For additional information, see the section entitled "Limitations of Key Metrics and Other Data" in this Annual Report on Form 10-K.

As of December 31, 2019, we had 2.89 billion MAP, an increase of 9% from 2.64 billion as of December 31, 2018.

- Average Revenue Per Person (ARPP).** We define ARPP as our total revenue during a given quarter, divided by the average of the number of MAP at the beginning and end of the quarter. While ARPP includes all sources of revenue, the number of MAP used in this calculation only includes users of our Family products as described in the definition of MAP above. The share of revenue from users who are not also MAP was not material.



Our annual worldwide ARPP in 2019, which represents the sum of quarterly ARPP during such period, was \$25.57, an increase of 14% from 2018.

Critical Accounting Policies and Estimates

Our consolidated financial statements are prepared in accordance with U.S. 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 valuation of long-lived assets including goodwill and intangible assets and their associated estimated useful lives 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 consider all available evidence, both positive and negative, including historical levels of income, expectations and risks associated with estimates of future taxable income, and ongoing tax planning strategies in assessing the need for a valuation allowance.

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.

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 evaluate the associated developments on a regular basis and accrue 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 there is a reasonable possibility that we may incur a loss and the loss or range of loss can be estimated, we disclose the possible loss in the accompanying notes to the consolidated financial statements to the extent material.

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 of loss 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 11—Commitments and Contingencies and Note 14—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.

Valuation of Long-lived Assets including Goodwill, Intangible Assets and Estimated Useful Lives

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. Allocation of purchase consideration to identifiable assets and liabilities affects our amortization expense, as acquired finite-lived intangible assets are amortized over the useful life, whereas any indefinite lived intangible assets, including goodwill, are not amortized. 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, 2019, no impairment of goodwill has been identified.

Long-lived assets, including property and equipment and intangible assets are reviewed 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 from the use and eventual disposition. 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.

The useful lives of our long-lived assets including property and equipment and finite-lived intangible assets are determined by management when those assets are initially recognized and are routinely reviewed for the remaining estimated useful lives. The current estimate of useful lives represents our best estimate based on current facts and circumstances, but may differ from the actual useful lives due to changes in future circumstances such as changes to our business operations, changes in the planned use of assets, and technological advancements. When we change the estimated useful life assumption for any asset, the remaining carrying amount of the asset is accounted for prospectively and depreciated or amortized over the revised estimated useful life. Historically changes in useful lives have not resulted in material changes to our depreciation and amortization expense.

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.

Other revenue. Other revenue consists of revenue from the delivery of consumer hardware devices and net fees we receive from developers using our Payments infrastructure, 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 and technical infrastructure, 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 devices sold.

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

Marketing and sales. Marketing and sales expenses consist of salaries and benefits, and share-based compensation 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 to support our community and product operations.

General and administrative. General and administrative expenses consist of legal-related costs; salaries and 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; and professional services.

Results of Operations

In this section, we discuss the results of our operations for the year ended December 31, 2019 compared to the year ended December 31, 2018. For a discussion of the year ended December 31, 2018 compared to the year ended December 31, 2017, please refer to Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our Annual Report on Form 10-K for the year ended December 31, 2018.

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The following table sets forth our consolidated statements of income data:

| | Year Ended December 31, | | |
|--|-------------------------|-----------|-----------|
| | 2019 | 2018 | 2017 |
| | (in millions) | | |
| Revenue | \$ 70,697 | \$ 55,838 | \$ 40,653 |
| Costs and expenses: | | | |
| Cost of revenue | 12,770 | 9,355 | 5,454 |
| Research and development | 13,600 | 10,273 | 7,754 |
| Marketing and sales | 9,876 | 7,846 | 4,725 |
| General and administrative | 10,465 | 3,451 | 2,517 |
| Total costs and expenses | 46,711 | 30,925 | 20,450 |
| Income from operations | 23,986 | 24,913 | 20,203 |
| Interest and other income, net | 826 | 448 | 391 |
| Income before provision for income taxes | 24,812 | 25,361 | 20,594 |
| Provision for income taxes | 6,327 | 3,249 | 4,660 |
| Net income | \$ 18,485 | \$ 22,112 | \$ 15,934 |

The following table sets forth our consolidated statements of income data (as a percentage of revenue)⁽¹⁾:

| | Year Ended December 31, | | |
|--|-------------------------|-------|-------|
| | 2019 | 2018 | 2017 |
| Revenue | 100 % | 100 % | 100 % |
| Costs and expenses: | | | |
| Cost of revenue | 18 | 17 | 13 |
| Research and development | 19 | 18 | 19 |
| Marketing and sales | 14 | 14 | 12 |
| General and administrative | 15 | 6 | 6 |
| Total costs and expenses | 66 | 55 | 50 |
| Income from operations | 34 | 45 | 50 |
| Interest and other income, net | 1 | 1 | 1 |
| Income before provision for income taxes | 35 | 45 | 51 |
| Provision for income taxes | 9 | 6 | 11 |
| Net income | 26 % | 40 % | 39 % |

(1) Percentages have been rounded for presentation purposes and may differ from unrounded results.

Share-based compensation expense included in costs and expenses:

| | Year Ended December 31, | | |
|--|-------------------------|----------|----------|
| | 2019 | 2018 | 2017 |
| | (in millions) | | |
| Cost of revenue | \$ 377 | \$ 284 | \$ 178 |
| Research and development | 3,488 | 3,022 | 2,820 |
| Marketing and sales | 569 | 511 | 436 |
| General and administrative | 402 | 335 | 289 |
| Total share-based compensation expense | \$ 4,836 | \$ 4,152 | \$ 3,723 |

Share-based compensation expense included in costs and expenses (as a percentage of revenue)⁽¹⁾:

| | Year Ended December 31, | | |
|---|-------------------------|-----------|-----------|
| | 2019 | 2018 | 2017 |
| Cost of revenue | 1% | 1% | —% |
| Research and development | 5 | 5 | 7 |
| Marketing and sales | 1 | 1 | 1 |
| General and administrative | 1 | 1 | 1 |
| Total share-based compensation expense | 7% | 7% | 9% |

(1) Percentages have been rounded for presentation purposes and may differ from unrounded results.

Revenue

| | Year Ended December 31, | | | 2019 vs 2018 % Change | 2018 vs 2017 % Change |
|----------------------|-------------------------|------------------|------------------|-----------------------|-----------------------|
| | 2019 | 2018 | 2017 | | |
| | (in millions) | | | | |
| Advertising | \$ 69,655 | \$ 55,013 | \$ 39,942 | 27% | 38% |
| Other revenue | 1,042 | 825 | 711 | 26% | 16% |
| Total revenue | \$ 70,697 | \$ 55,838 | \$ 40,653 | 27% | 37% |

2019 Compared to 2018. Revenue in 2019 increased \$14.86 billion, or 27%, compared to 2018. The increase was almost entirely due to an increase in advertising revenue as a result of an increase in the number of ads delivered, partially offset by a slight decrease in the average price per ad.

In 2019, the number of ads delivered increased by 33%, as compared with approximately 22% in 2018. The increase in the ads delivered was driven by an increase in the number and frequency of ads displayed across our products, and an increase in users and their engagement. In 2019, the average price per ad decreased by 5%, as compared with an increase of approximately 13% in 2018. The decrease in average price per ad was primarily driven by an increasing proportion of the number of ads delivered as Stories ads and in geographies that monetize at lower rates. We anticipate that future advertising revenue growth will be determined by a combination of the number of ads delivered and price.

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 19%, 23%, and 26% between the third and fourth quarters of 2019, 2018, and 2017, respectively, while advertising revenue for both the first quarters of 2019 and 2018 declined 10% and 8% compared to the fourth quarters of 2018 and 2017, respectively.

No customer represented 10% or more of total revenue during the years ended December 31, 2019, 2018, and 2017.

Foreign Exchange Impact on Revenue

The general strengthening of the U.S. dollar relative to certain foreign currencies in the full year 2019 compared to the same period in 2018, had an unfavorable impact on revenue. If we had translated revenue for the full year 2019 using the prior year's monthly exchange rates for our settlement or billing currencies other than the U.S. dollar, our total revenue and advertising revenue would have been \$72.37 billion and \$71.32 billion, respectively. Using these constant rates, total revenue and advertising revenue would have been \$1.67 billion and \$1.66 billion, respectively, higher than actual total revenue and advertising revenue for the full year 2019, and \$16.53 billion and \$16.31 billion higher than actual total revenue and advertising revenue, respectively, for the full year 2018.

Cost of revenue

| | Year Ended December 31, | | | 2019 vs 2018 % Change | 2018 vs 2017 % Change |
|-----------------------|-------------------------|----------|----------|--------------------------|--------------------------|
| | 2019 | 2018 | 2017 | | |
| | (dollars in millions) | | | | |
| Cost of revenue | \$ 12,770 | \$ 9,355 | \$ 5,454 | 37% | 72 % |
| Percentage of revenue | 18 % | 17 % | 13 % | | |

2019 Compared to 2018. Cost of revenue in 2019 increased \$3.42 billion, or 37%, compared to 2018. The increase was mostly due to an increase in operational expenses related to our data centers and technical infrastructure, as well as higher cost of consumer hardware devices sold and traffic acquisition costs.

In 2020, 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 various partner arrangements.

Research and development

| | Year Ended December 31, | | | 2019 vs 2018 % Change | 2018 vs 2017 % Change |
|--------------------------|-------------------------|-----------|----------|--------------------------|--------------------------|
| | 2019 | 2018 | 2017 | | |
| | (dollars in millions) | | | | |
| Research and development | \$ 13,600 | \$ 10,273 | \$ 7,754 | 32% | 32% |
| Percentage of revenue | 19 % | 18 % | 19 % | | |

2019 Compared to 2018. Research and development expenses in 2019 increased \$3.33 billion, or 32%, compared to 2018. The increase was primarily due to increases in payroll and benefits expenses and facilities-related costs as a result of a 31% growth in employee headcount from December 31, 2018 to December 31, 2019 in engineering and other technical functions.

In 2020, we plan to continue to hire software engineers and other technical employees, and to increase our investment to support our research and development initiatives.

Marketing and sales

| | Year Ended December 31, | | | 2019 vs 2018 % Change | 2018 vs 2017 % Change |
|-----------------------|-------------------------|----------|----------|--------------------------|--------------------------|
| | 2019 | 2018 | 2017 | | |
| | (dollars in millions) | | | | |
| Marketing and sales | \$ 9,876 | \$ 7,846 | \$ 4,725 | 26% | 66 % |
| Percentage of revenue | 14 % | 14 % | 12 % | | |

2019 Compared to 2018. Marketing and sales expenses in 2019 increased \$2.03 billion, or 26%, compared to 2018. The increase was primarily driven by increases in marketing expenses, payroll and benefits expenses, and community and product operations expenses. Our payroll and benefits expenses increased as a result of a 23% increase in employee headcount from December 31, 2018 to December 31, 2019 in our marketing and sales functions.

In 2020, we anticipate that marketing expense will increase and 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 and product operations to support our security efforts.

General and administrative

| | Year Ended December 31, | | | 2019 vs 2018 % Change | 2018 vs 2017 % Change |
|---|-------------------------|-----------------|-----------------|--------------------------|--------------------------|
| | 2019 | 2018 | 2017 | | |
| | (dollars in millions) | | | | |
| Legal accrual related to FTC settlement | \$ 5,000 | \$ — | \$ — | NM | NM |
| Other general and administrative | 5,465 | 3,451 | 2,517 | 58% | 37% |
| General and administrative | <u>\$ 10,465</u> | <u>\$ 3,451</u> | <u>\$ 2,517</u> | 203% | 37% |
| Percentage of revenue | 15 % | 6 % | 6 % | | |

2019 Compared to 2018. General and administrative expenses in 2019 increased \$7.01 billion, or 203%, compared to 2018. The majority of the increase was due to the \$5.0 billion FTC settlement expense recorded in the first six months of 2019. In addition, other general and administrative expense increased in 2019 compared to 2018 primarily due to an increase in other legal-related costs and higher payroll and benefits expenses as a result of a 31% increase in employee headcount from December 31, 2018 to December 31, 2019 in our general and administrative functions.

In 2020, we plan to continue to increase general and administrative expenses to support overall company growth.

Interest and other income, net

| | Year Ended December 31, | | | 2019 vs 2018 % Change | 2018 vs 2017 % Change |
|--------------------------------|-------------------------|---------------|---------------|--------------------------|--------------------------|
| | 2019 | 2018 | 2017 | | |
| | (in millions) | | | | |
| Interest income, net | \$ 904 | \$ 652 | \$ 392 | 39% | 66% |
| Other income (expense), net | (78) | (204) | (1) | NM | NM |
| Interest and other income, net | <u>\$ 826</u> | <u>\$ 448</u> | <u>\$ 391</u> | 84% | 15% |

2019 Compared to 2018. Interest and other income, net in 2019 increased \$378 million compared to 2018. The increase was due to an increase in interest income driven by higher investment balances and interest rates and a decrease in other expense as a result of lower foreign exchange losses as compared to 2018 due to foreign currency transactions and re-measurement.

Provision for income taxes

| | Year Ended December 31, | | | 2019 vs 2018 % Change | 2018 vs 2017 % Change |
|----------------------------|-------------------------|----------|----------|--------------------------|--------------------------|
| | 2019 | 2018 | 2017 | | |
| | (dollars in millions) | | | | |
| Provision for income taxes | \$ 6,327 | \$ 3,249 | \$ 4,660 | 95% | (30)% |
| Effective tax rate | 25.5 % | 12.8 % | 22.6 % | | |

2019 Compared to 2018. Our provision for income taxes in 2019 increased \$3.08 billion, or 95%, compared to 2018, a majority of which is due to an increase in income taxes from the *Altera* Ninth Circuit Opinion discussed below, an increase in income from operations prior to the effect of the legal accrual related to the FTC settlement that is not expected to be tax-deductible, and a decrease in excess tax benefits recognized from share-based compensation.

Our effective tax rate in 2019 increased compared to 2018, primarily due to an increase in income taxes from the *Altera* Ninth Circuit Opinion, the legal accrual related to the FTC settlement that is not expected to be tax-deductible, and a decrease in excess tax benefits recognized from share-based compensation.

On July 27, 2015, the United States Tax Court issued a decision (Tax Court Decision) in *Altera Corp. v. Commissioner*, which concluded that related parties in a cost sharing arrangement are not required to share expenses related to share-based compensation. The Tax Court Decision was appealed by the Commissioner to the Ninth Circuit Court of Appeals (Ninth Circuit).

On June 7, 2019, the Ninth Circuit issued an opinion (*Altera Ninth Circuit Opinion*) that reversed the Tax Court Decision. Based on the *Altera Ninth Circuit Opinion*, we recorded a cumulative income tax expense of \$1.11 billion in the second quarter of 2019. On July 22, 2019, the taxpayer requested a rehearing before the full Ninth Circuit and the request was denied on November 12, 2019. The taxpayer has until February 10, 2020 to request a hearing before the Supreme Court of the United States. As a result, the final outcome of the case is uncertain. In November 2019, we made a \$1.64 billion payment related to this matter and recorded the payment to net against the tax liability included within other liabilities in our consolidated balance sheets. If the *Altera Ninth Circuit Opinion* is reversed, we would anticipate recording an income tax benefit at that time.

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 may 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 23, 2020 price, we expect our effective tax rate for 2020 will be in the high-teens. The range reflects expected effects from a transfer of intellectual property rights between Facebook entities that we anticipate implementing in 2020.

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.

Unrecognized Tax Benefits. As of December 31, 2019, we had net unrecognized tax benefits of \$3.74 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 and the current status of tax audits in various jurisdictions, we do not anticipate a material change 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 stated that it will also apply its position for tax years subsequent to 2010. We do not agree with the position of the IRS and have filed a petition in the Tax Court challenging the Notice. The case is scheduled for trial beginning in February 2020. On January 15, 2020, the IRS filed its Pretrial Memorandum in the case stating that it planned to assert at trial an adjustment that is higher than the adjustment stated in the Notice. The IRS did not provide any information about how it intends to apply the revised adjustment to future years. Based on the information provided, we believe that, if the IRS prevails in its updated position, this could result in an additional federal tax liability of an estimated, aggregate amount of up to approximately \$9.0 billion in excess of the amounts in our originally filed U.S. return, plus interest and any penalties asserted.

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. returns, 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, *Income Taxes*, that is lower than the potential additional federal tax liability from the positions taken by the IRS in the two Notices and its Pretrial Memorandum. 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 2017 Tax Cuts and Jobs Act (Tax Act). As of December 31, 2019, we have not resolved these matters and proceedings continue in the Tax Court.

We believe that adequate amounts have been reserved in accordance with ASC 740, *Income Taxes*, 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, 2019. 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, 2019 | Sep 30, 2019 | Jun 30, 2019 | Mar 31, 2019 | Dec 31, 2018 | Sep 30, 2018 | Jun 30, 2018 | Mar 31, 2018 |
| (in millions, except per share amounts) | | | | | | | | |
| Revenue: | | | | | | | | |
| Advertising | \$ 20,736 | \$ 17,383 | \$ 16,624 | \$ 14,912 | \$ 16,640 | \$ 13,539 | \$ 13,038 | \$ 11,795 |
| Other revenue | 346 | 269 | 262 | 165 | 274 | 188 | 193 | 171 |
| Total revenue | 21,082 | 17,652 | 16,886 | 15,077 | 16,914 | 13,727 | 13,231 | 11,966 |
| Costs and expenses: | | | | | | | | |
| Cost of revenue | 3,492 | 3,155 | 3,307 | 2,816 | 2,796 | 2,418 | 2,214 | 1,927 |
| Research and development | 3,877 | 3,548 | 3,315 | 2,860 | 2,855 | 2,657 | 2,523 | 2,238 |
| Marketing and sales | 3,026 | 2,416 | 2,414 | 2,020 | 2,467 | 1,928 | 1,855 | 1,595 |
| General and administrative | 1,829 | 1,348 | 3,224 | 4,064 | 976 | 943 | 776 | 757 |
| Total costs and expenses | 12,224 | 10,467 | 12,260 | 11,760 | 9,094 | 7,946 | 7,368 | 6,517 |
| Income from operations | 8,858 | 7,185 | 4,626 | 3,317 | 7,820 | 5,781 | 5,863 | 5,449 |
| Interest and other income, net | 311 | 144 | 206 | 165 | 151 | 131 | 5 | 161 |
| Income before provision for income taxes | 9,169 | 7,329 | 4,832 | 3,482 | 7,971 | 5,912 | 5,868 | 5,610 |
| Provision for income taxes | 1,820 | 1,238 | 2,216 | 1,053 | 1,089 | 775 | 762 | 622 |
| Net income | \$ 7,349 | \$ 6,091 | \$ 2,616 | \$ 2,429 | \$ 6,882 | \$ 5,137 | \$ 5,106 | \$ 4,988 |
| Less: Net income attributable to participating securities | — | — | — | — | — | — | — | (1) |
| Net income attributable to Class A and Class B common stockholders | \$ 7,349 | \$ 6,091 | \$ 2,616 | \$ 2,429 | \$ 6,882 | \$ 5,137 | \$ 5,106 | \$ 4,987 |
| Earnings per share attributable to Class A and Class B common stockholders: | | | | | | | | |
| Basic | \$ 2.58 | \$ 2.13 | \$ 0.92 | \$ 0.85 | \$ 2.40 | \$ 1.78 | \$ 1.76 | \$ 1.72 |
| Diluted | \$ 2.56 | \$ 2.12 | \$ 0.91 | \$ 0.85 | \$ 2.38 | \$ 1.76 | \$ 1.74 | \$ 1.69 |

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The following tables set forth our consolidated statements of income data (as a percentage of revenue)⁽¹⁾:

| | Three Months Ended | | | | | | | |
|--|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Dec 31, 2019 | Sep 30, 2019 | Jun 30, 2019 | Mar 31, 2019 | Dec 31, 2018 | Sep 30, 2018 | Jun 30, 2018 | Mar 31, 2018 |
| (as a percentage of revenue) | | | | | | | | |
| Revenue: | | | | | | | | |
| Advertising | 98 % | 98 % | 98 % | 99 % | 98 % | 99 % | 99 % | 99 % |
| Other revenue | 2 | 2 | 2 | 1 | 2 | 1 | 1 | 1 |
| Total revenue | 100 % | 100 % | 100 % | 100 % | 100 % | 100 % | 100 % | 100 % |
| Costs and expenses: | | | | | | | | |
| Cost of revenue | 17 | 18 | 20 | 19 | 17 | 18 | 17 | 16 |
| Research and development | 18 | 20 | 20 | 19 | 17 | 19 | 19 | 19 |
| Marketing and sales | 14 | 14 | 14 | 13 | 15 | 14 | 14 | 13 |
| General and administrative | 9 | 8 | 19 | 27 | 6 | 7 | 6 | 6 |
| Total costs and expenses | 58 | 59 | 73 | 78 | 54 | 58 | 56 | 54 |
| Income from operations | 42 | 41 | 27 | 22 | 46 | 42 | 44 | 46 |
| Interest and other income, net | 1 | 1 | 1 | 1 | 1 | 1 | — | 1 |
| Income before provision for income taxes | 43 | 42 | 29 | 23 | 47 | 43 | 44 | 47 |
| Provision for income taxes | 9 | 7 | 13 | 7 | 6 | 6 | 6 | 5 |
| Net income | 35 % | 35 % | 15 % | 16 % | 41 % | 37 % | 39 % | 42 % |
| Less: Net income attributable to participating securities | — | — | — | — | — | — | — | — |
| Net income attributable to Class A and Class B common stockholders | 35% | 35% | 15% | 16% | 41% | 37% | 39% | 42% |

(1) Percentages have been rounded for presentation purposes and may differ from unrounded results.

Share-based compensation expense included in costs and expenses:

| | Three Months Ended | | | | | | | |
|--|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Dec 31, 2019 | Sep 30, 2019 | Jun 30, 2019 | Mar 31, 2019 | Dec 31, 2018 | Sep 30, 2018 | Jun 30, 2018 | Mar 31, 2018 |
| | (in millions) | | | | | | | |
| Cost of revenue | \$ 90 | \$ 91 | \$ 109 | \$ 87 | \$ 82 | \$ 72 | \$ 74 | \$ 56 |
| Research and development | 931 | 907 | 927 | 723 | 675 | 748 | 881 | 718 |
| Marketing and sales | 147 | 148 | 160 | 113 | 130 | 133 | 139 | 109 |
| General and administrative | 105 | 103 | 107 | 87 | 84 | 87 | 92 | 72 |
| Total share-based compensation expense | \$ 1,273 | \$ 1,249 | \$ 1,303 | \$ 1,010 | \$ 971 | \$ 1,040 | \$ 1,186 | \$ 955 |

Share-based compensation expense included in costs and expenses (as a percentage of revenue)⁽¹⁾:

| | Three Months Ended | | | | | | | |
|--|------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| | Dec 31, 2019 | Sep 30, 2019 | Jun 30, 2019 | Mar 31, 2019 | Dec 31, 2018 | Sep 30, 2018 | Jun 30, 2018 | Mar 31, 2018 |
| | (as a percentage of revenue) | | | | | | | |
| Cost of revenue | —% | 1% | 1% | 1% | —% | 1% | 1% | —% |
| Research and development | 4 | 5 | 5 | 5 | 4 | 5 | 7 | 6 |
| Marketing and sales | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| General and administrative | — | 1 | 1 | 1 | — | 1 | 1 | 1 |
| Total share-based compensation expense | 6% | 7% | 8% | 7% | 6% | 8% | 9% | 8% |

(1) Percentages have been rounded for presentation purposes and may differ from unrounded results.

Liquidity and Capital Resources

| | Year Ended December 31, | | |
|---|-------------------------|-------------|-------------|
| | 2019 | 2018 | 2017 |
| | (in millions) | | |
| Consolidated Statements of Cash Flows Data: | | | |
| Net cash provided by operating activities | \$ 36,314 | \$ 29,274 | \$ 24,216 |
| Net cash used in investing activities | \$ (19,864) | \$ (11,603) | \$ (20,118) |
| Net cash used in financing activities | \$ (7,299) | \$ (15,572) | \$ (5,235) |
| Purchase of property and equipment and principal payments on finance leases | \$ 15,654 | \$ 13,915 | \$ 6,733 |
| Depreciation and amortization | \$ 5,741 | \$ 4,315 | \$ 3,025 |
| Share-based compensation | \$ 4,836 | \$ 4,152 | \$ 3,723 |

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 \$54.86 billion as of December 31, 2019, an increase of \$13.74 billion from December 31, 2018. The majority of the increase was due to \$36.31 billion of cash generated from operations, offset by \$15.65 billion for capital expenditures, including principal payments on finance leases, \$4.20 billion for repurchases of our Class A common stock, \$4.19 billion for net purchases of marketable securities, and \$2.34 billion of taxes paid related to net share settlement of equity awards.

Cash paid for income taxes was \$5.18 billion for the year ended December 31, 2019, of which \$1.64 billion was related to the *Altera* Ninth Circuit Opinion. As of December 31, 2019, our federal net operating loss carryforward was \$9.06 billion, and we anticipate that none of this amount will be utilized to offset our federal taxable income in 2019. As of December 31, 2019, we had \$357 million of federal tax credit carryforward, of which none will be available to offset our federal tax liabilities in 2019.

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, 2019, 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 of our Class A common stock, which commenced in January 2017 and does not have an expiration date. As of December 31, 2018, \$9.0 billion remained available and authorized for repurchases under this program. In 2019, we repurchased and subsequently retired 22 million shares of our Class A common stock for \$4.10 billion. As of December 31, 2019, \$4.90 billion remained available and authorized for repurchases. In January 2020, an additional \$10.0 billion of repurchases was authorized under this program.

As of December 31, 2019, \$19.01 billion of the \$54.86 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.

In July 2019, we entered into a settlement and modified consent order to resolve the inquiry of the FTC into our platform and user data practices, which is pending federal court approval. The settlement requires us to pay a penalty of \$5.0 billion, which is included in accrued expenses and other current liabilities on our consolidated balance sheet as of December 31, 2019.

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 2019 primarily consisted of net income adjusted for certain non-cash items, such as \$5.74 billion of depreciation and amortization and \$4.84 billion of share-based compensation expense. The increase in cash flow from operating activities during 2019 compared to 2018 was primarily due to higher net income prior to the effect of the \$5.0 billion FTC legal settlement accrual, an increase in taxes payable, as well as increases in the non-cash items discussed above.

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 Used in Investing Activities

Cash used in investing activities during 2019 mostly resulted from \$15.10 billion of net purchases of property and equipment as we continued to invest in data centers, servers, office buildings, and network infrastructure, and \$4.19 billion of net purchases of marketable securities. The increase in cash used in investing activities during 2019 compared to 2018 was mostly due to increases in net purchases of marketable securities and property and equipment.

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.

We anticipate making capital expenditures of approximately \$17 billion to \$19 billion in 2020.

Cash Used in Financing Activities

Cash used in financing activities during 2019 mostly consisted of \$4.20 billion cash used to settle repurchases of our Class A common stock, \$2.34 billion of taxes paid related to net share settlement of equity awards, and \$552 million of principal payments on finance leases. The decrease in cash used in financing activities during 2019 compared to 2018 was mostly due to a decrease in repurchases of our Class A common stock.

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 \$500 million in overdraft balances 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.

Off-Balance Sheet Arrangements

We did not have any off-balance sheet arrangements as of December 31, 2019.

Contractual Obligations

Our principal commitments consist primarily 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, 2019:

| | Payment Due by Period | | | | |
|--|-----------------------|-----------------|-----------------|-----------------|------------------|
| | Total | 2020 | 2021-2022 | 2023-2024 | Thereafter |
| | (in millions) | | | | |
| Operating lease obligations, including imputed interest ⁽¹⁾ | \$ 18,267 | \$ 1,085 | \$ 2,510 | \$ 2,577 | \$ 12,095 |
| Finance lease obligations, including imputed interest ⁽¹⁾ | 920 | 246 | 107 | 88 | 479 |
| Transition tax payable | 1,579 | — | — | 880 | 699 |
| Other contractual commitments ⁽²⁾ | 4,542 | 2,792 | 625 | 170 | 955 |
| Total contractual obligations | \$ 25,308 | \$ 4,123 | \$ 3,242 | \$ 3,715 | \$ 14,228 |

(1) Includes variable lease payments that were fixed subsequent to lease commencement or modification.

(2) The majority of other contractual commitments were related 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 \$4.99 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 also include \$3.74 billion related to net uncertain tax positions as of December 31, 2019. 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 there is a reasonable possibility that we may incur a loss and the loss or range of loss can be estimated, we disclose the possible loss in the accompanying notes to the consolidated financial statements to the extent material. 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 11—Commitments and Contingencies and Note 14—Income Taxes in the 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

For further information on recently issued accounting pronouncements, 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.

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. Accordingly, changes in exchange rates, and in particular a strengthening of the U.S. dollar, have negatively affected, and may continue to 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 monetary asset and 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. Foreign currency losses of \$105 million, \$213 million, and \$6 million were recognized in 2019, 2018, and 2017, respectively, as interest and other income, net in our consolidated statements of income.

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 investment grade 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 \$525 million and \$468 million in the market value of our available-for-sale debt securities as of December 31, 2019 and December 31, 2018, 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, 2019 and 2018, 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, 2019, 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, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, 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, 2019, 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 29, 2020 expressed an unqualified opinion thereon.

Adoption of ASU No. 2016-02

As discussed in Note 1 to the consolidated financial statements, the Company changed its method of accounting for leases in 2019 due to the adoption of Accounting Standards Update (ASU) No. 2016-02, Leases (Topic 842), and the related amendments.

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.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the Audit & Risk Oversight Committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Loss Contingencies

Description of the Matter

As described in Note 11 to the consolidated financial statements, the Company is party to various legal proceedings, claims, and regulatory, tax or government inquiries and investigations. The Company accrues a liability when it believes a loss is probable and the amount can be reasonably estimated. In addition, the Company believes it is reasonably possible that it will incur a loss in some of these cases, actions or inquiries described above, but that the amount of such losses or a range of possible losses cannot be reasonably estimated at this time.

Auditing the Company's accounting for, and disclosure of, loss contingencies related to the various legal proceedings was especially challenging due to the significant judgment required to evaluate management's assessments of the likelihood of a loss, and their estimate of the potential amount or range of such losses.

How We Addressed the Matter in Our Audit

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the identification and evaluation of these matters, including controls relating to the Company's assessment of the likelihood that a loss will be realized and their ability to reasonably estimate the potential range of possible losses.

To test the Company's assessment of the probability of incurrence of a loss, whether the loss was reasonably estimable, and the conclusion and disclosure that a range of possible losses cannot be reasonably estimated at this time, we read the minutes of the meetings of the board of directors and its committees, read the proceedings, claims, and regulatory, or government inquiries and investigations, or summaries as we deemed appropriate, requested and received internal and external legal counsel confirmation letters, met with internal and external legal counsel to discuss the nature of the various matters, and obtained a representation letter from the Company. We also evaluated the appropriateness of the related disclosures included in Note 11 to the consolidated financial statements.

Uncertain Tax Positions

Description of the Matter

As discussed in Note 14 to the consolidated financial statements, the Company has received certain notices from the Internal Revenue Service (IRS) related to transfer pricing agreements with the Company's foreign subsidiaries for certain periods examined. The IRS has stated that it will also apply its position to tax years subsequent to those examined. If the IRS prevails in its position, it could result in an additional federal tax liability, plus interest and any penalties asserted. The Company uses judgment to (1) determine whether a tax position's technical merits are more-likely-than-not to be sustained and (2) measure the amount of tax benefit that qualifies for recognition.

Auditing the Company's accounting for, and disclosure of, these uncertain tax positions was especially challenging due to the significant judgment required to assess management's evaluation of technical merits and the measurement of the tax position based on interpretations of tax laws and legal rulings.

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*How We Addressed the
Matter in Our Audit*

We obtained an understanding, evaluated the design and tested the operating effectiveness of controls over the Company's process to assess the technical merits of tax positions related to these transfer pricing agreements and to measure the benefit of those tax positions.

As part of our audit procedures over the Company's accounting for these positions, we involved our tax professionals to assist with our assessment of the technical merits of the Company's tax positions. This included assessing the Company's correspondence with the relevant tax authorities, evaluating income tax opinions or other third-party advice obtained by the Company, and requesting and receiving confirmation letters from third-party advisors. We also used our knowledge of, and experience with, the application of international and local income tax laws by the relevant income tax authorities to evaluate the Company's accounting for those tax positions. We analyzed the Company's assumptions and data used to determine the amount of the federal tax liability recognized and tested the mathematical accuracy of the underlying data and calculations. We also evaluated the appropriateness of the related disclosures included in Note 14 to the consolidated financial statements in relation to these matters.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 2007.
Redwood City, California
January 29, 2020

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, 2019, 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, 2019, 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, 2019 and 2018, 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, 2019, and the related notes and our report dated January 29, 2020 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

Redwood City, California
January 29, 2020

FACEBOOK, INC.
CONSOLIDATED BALANCE SHEETS
(In millions, except for number of shares and par value)

| | December 31, | |
|---|-------------------|------------------|
| | 2019 | 2018 |
| Assets | | |
| Current assets: | | |
| Cash and cash equivalents | \$ 19,079 | \$ 10,019 |
| Marketable securities | 35,776 | 31,095 |
| Accounts receivable, net of allowances of \$206 and \$229 as of December 31, 2019 and December 31, 2018, respectively | 9,518 | 7,587 |
| Prepaid expenses and other current assets | 1,852 | 1,779 |
| Total current assets | 66,225 | 50,480 |
| Property and equipment, net | 35,323 | 24,683 |
| Operating lease right-of-use assets, net | 9,460 | — |
| Intangible assets, net | 894 | 1,294 |
| Goodwill | 18,715 | 18,301 |
| Other assets | 2,759 | 2,576 |
| Total assets | \$ 133,376 | \$ 97,334 |
| Liabilities and stockholders' equity | | |
| Current liabilities: | | |
| Accounts payable | \$ 1,363 | \$ 820 |
| Partners payable | 886 | 541 |
| Operating lease liabilities, current | 800 | — |
| Accrued expenses and other current liabilities | 11,735 | 5,509 |
| Deferred revenue and deposits | 269 | 147 |
| Total current liabilities | 15,053 | 7,017 |
| Operating lease liabilities, non-current | 9,524 | — |
| Other liabilities | 7,745 | 6,190 |
| Total liabilities | 32,322 | 13,207 |
| Commitments and contingencies | | |
| Stockholders' equity: | | |
| Common stock, \$0.000006 par value; 5,000 million Class A shares authorized, 2,407 million and 2,385 million shares issued and outstanding, as of December 31, 2019 and December 31, 2018, respectively; 4,141 million Class B shares authorized, 445 million and 469 million shares issued and outstanding, as of December 31, 2019 and December 31, 2018, respectively. | — | — |
| Additional paid-in capital | 45,851 | 42,906 |
| Accumulated other comprehensive loss | (489) | (760) |
| Retained earnings | 55,692 | 41,981 |
| Total stockholders' equity | 101,054 | 84,127 |
| Total liabilities and stockholders' equity | \$ 133,376 | \$ 97,334 |

See Accompanying Notes to Consolidated Financial Statements.

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

| | Year Ended December 31, | | |
|--|-------------------------|------------------|------------------|
| | 2019 | 2018 | 2017 |
| Revenue | \$ 70,697 | \$ 55,838 | \$ 40,653 |
| Costs and expenses: | | | |
| Cost of revenue | 12,770 | 9,355 | 5,454 |
| Research and development | 13,600 | 10,273 | 7,754 |
| Marketing and sales | 9,876 | 7,846 | 4,725 |
| General and administrative | 10,465 | 3,451 | 2,517 |
| Total costs and expenses | 46,711 | 30,925 | 20,450 |
| Income from operations | 23,986 | 24,913 | 20,203 |
| Interest and other income, net | 826 | 448 | 391 |
| Income before provision for income taxes | 24,812 | 25,361 | 20,594 |
| Provision for income taxes | 6,327 | 3,249 | 4,660 |
| Net income | \$ 18,485 | \$ 22,112 | \$ 15,934 |
| Less: Net income attributable to participating securities | — | (1) | (14) |
| Net income attributable to Class A and Class B common stockholders | \$ 18,485 | \$ 22,111 | \$ 15,920 |
| Earnings per share attributable to Class A and Class B common stockholders: | | | |
| Basic | \$ 6.48 | \$ 7.65 | \$ 5.49 |
| Diluted | \$ 6.43 | \$ 7.57 | \$ 5.39 |
| Weighted-average shares used to compute earnings per share attributable to Class A and Class B common stockholders: | | | |
| Basic | 2,854 | 2,890 | 2,901 |
| Diluted | 2,876 | 2,921 | 2,956 |
| Share-based compensation expense included in costs and expenses: | | | |
| Cost of revenue | \$ 377 | \$ 284 | \$ 178 |
| Research and development | 3,488 | 3,022 | 2,820 |
| Marketing and sales | 569 | 511 | 436 |
| General and administrative | 402 | 335 | 289 |
| Total share-based compensation expense | \$ 4,836 | \$ 4,152 | \$ 3,723 |

See Accompanying Notes to Consolidated Financial Statements.

FACEBOOK, INC.
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

| | Year Ended December 31, | | |
|--|-------------------------|------------------|------------------|
| | 2019 | 2018 | 2017 |
| Net income | \$ 18,485 | \$ 22,112 | \$ 15,934 |
| Other comprehensive income (loss): | | | |
| Change in foreign currency translation adjustment, net of tax | (151) | (450) | 566 |
| Change in unrealized gain/loss on available-for-sale investments and other, net of tax | 422 | (52) | (90) |
| Comprehensive income | <u>\$ 18,756</u> | <u>\$ 21,610</u> | <u>\$ 16,410</u> |

See Accompanying Notes to Consolidated Financial Statements.

FACEBOOK, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In millions)

| | Class A and Class B Common Stock | | Additional Paid-In Capital | Accumulated Other Comprehensive Loss | Retained Earnings | Total Stockholders' Equity |
|--|-------------------------------------|-----------|----------------------------------|---|----------------------|----------------------------------|
| | Shares | Par Value | | | | |
| Balances at December 31, 2016 | 2,892 | \$ — | \$ 38,227 | \$ (703) | \$ 21,670 | \$ 59,194 |
| Issuance of common stock related to acquisitions | 2 | — | 323 | — | — | 323 |
| Issuance of common stock for cash upon exercise of stock options | 3 | — | 13 | — | — | 13 |
| 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 | — | — | 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 | — | — | 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 |
| Issuance of common stock for cash upon exercise of stock options | 1 | — | 15 | — | — | 15 |
| Issuance of common stock for settlement of RSUs | 32 | — | — | — | — | — |
| Shares withheld related to net share settlement and other | (13) | — | (1,906) | — | (675) | (2,581) |
| Share-based compensation | — | — | 4,836 | — | — | 4,836 |
| Share repurchases | (22) | — | — | — | (4,099) | (4,099) |
| Other comprehensive income | — | — | — | 271 | — | 271 |
| Net income | — | — | — | — | 18,485 | 18,485 |
| Balances at December 31, 2019 | 2,852 | \$ — | \$ 45,851 | \$ (489) | \$ 55,692 | \$ 101,054 |

See Accompanying Notes to Consolidated Financial Statements.

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

| | Year Ended December 31, | | |
|---|-------------------------|------------------|-----------------|
| | 2019 | 2018 | 2017 |
| Cash flows from operating activities | | | |
| Net income | \$ 18,485 | \$ 22,112 | \$ 15,934 |
| Adjustments to reconcile net income to net cash provided by operating activities: | | | |
| Depreciation and amortization | 5,741 | 4,315 | 3,025 |
| Share-based compensation | 4,836 | 4,152 | 3,723 |
| Deferred income taxes | (37) | 286 | (377) |
| Other | 39 | (64) | 24 |
| Changes in assets and liabilities: | | | |
| Accounts receivable | (1,961) | (1,892) | (1,609) |
| Prepaid expenses and other current assets | 47 | (690) | (192) |
| Other assets | 41 | (159) | 154 |
| Accounts payable | 113 | 221 | 43 |
| Partners payable | 348 | 157 | 95 |
| Accrued expenses and other current liabilities | 7,300 | 1,417 | 309 |
| Deferred revenue and deposits | 123 | 53 | 4 |
| Other liabilities | 1,239 | (634) | 3,083 |
| Net cash provided by operating activities | 36,314 | 29,274 | 24,216 |
| Cash flows from investing activities | | | |
| Purchases of property and equipment, net | (15,102) | (13,915) | (6,733) |
| Purchases of marketable securities | (23,910) | (14,656) | (25,682) |
| Sales of marketable securities | 9,565 | 12,358 | 9,444 |
| Maturities of marketable securities | 10,152 | 4,772 | 2,988 |
| Acquisitions of businesses, net of cash acquired, and purchases of intangible assets | (508) | (137) | (122) |
| Other investing activities, net | (61) | (25) | (13) |
| Net cash used in investing activities | (19,864) | (11,603) | (20,118) |
| Cash flows from financing activities | | | |
| Taxes paid related to net share settlement of equity awards | (2,337) | (3,208) | (3,246) |
| Repurchases of Class A common stock | (4,202) | (12,879) | (1,976) |
| Principal payments on finance leases | (552) | — | — |
| Net change in overdraft in cash pooling entities | (223) | 500 | — |
| Other financing activities, net | 15 | 15 | (13) |
| Net cash used in financing activities | (7,299) | (15,572) | (5,235) |
| Effect of exchange rate changes on cash, cash equivalents, and restricted cash | 4 | (179) | 232 |
| Net increase (decrease) in cash, cash equivalents, and restricted cash | 9,155 | 1,920 | (905) |
| Cash, cash equivalents, and restricted cash at beginning of the period | 10,124 | 8,204 | 9,109 |
| Cash, cash equivalents, and restricted cash at end of the period | \$ 19,279 | \$ 10,124 | \$ 8,204 |
| Reconciliation of cash, cash equivalents, and restricted cash to the consolidated balance sheets | | | |
| Cash and cash equivalents | \$ 19,079 | \$ 10,019 | \$ 8,079 |
| Restricted cash, included in prepaid expenses and other current assets | 8 | 10 | 18 |
| Restricted cash, included in other assets | 192 | 95 | 107 |
| Total cash, cash equivalents, and restricted cash | \$ 19,279 | \$ 10,124 | \$ 8,204 |

See Accompanying Notes to Consolidated Financial Statements.

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

| | Year Ended December 31, | | |
|--|-------------------------|----------|----------|
| | 2019 | 2018 | 2017 |
| Supplemental cash flow data | | | |
| Cash paid for income taxes, net | \$ 5,182 | \$ 3,762 | \$ 2,117 |
| Non-cash investing activities: | | | |
| Net change in prepaids and liabilities related to property and equipment | \$ (153) | \$ 918 | \$ 495 |
| Property and equipment in accounts payable and accrued liabilities | \$ 1,887 | \$ 1,955 | \$ 882 |

See Accompanying Notes to Consolidated Financial Statements.

FACEBOOK, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Summary of Significant Accounting Policies

Organization and Description of Business

Facebook was incorporated in Delaware in July 2004. Our mission is to give people the power to build community and bring the world closer together. We generate substantially all of our revenue from advertising.

Basis of Presentation

We prepared the consolidated financial statements in accordance with U.S. generally accepted accounting principles (GAAP). The consolidated financial statements include the accounts of Facebook, Inc., subsidiaries where we have controlling financial interests, and any variable interest entities for which we are deemed to be the primary beneficiary. All intercompany balances and transactions have been eliminated.

Use of Estimates

Conformity with GAAP requires the use of estimates and judgments that affect the reported amounts in the consolidated financial statements and accompanying notes. These estimates form the basis for judgments we make about the carrying values of our assets and liabilities, which are not readily apparent from other sources. We base our estimates and judgments on historical information and on various other assumptions that we believe are reasonable under the circumstances. GAAP requires us to make estimates and judgments in several areas, including, but not limited to, those related to income taxes, loss contingencies, fair value of acquired intangible assets and goodwill, collectability of accounts receivable, fair value of financial instruments, leases, useful lives of intangible assets and property and equipment, and revenue recognition. These estimates are based on management's knowledge about current events and expectations about actions we may undertake in the future. Actual results could differ materially from those estimates.

Revenue Recognition

Revenue is recognized when control of the promised goods or services is transferred to our customers, in an amount that reflects the consideration we expect to be entitled to in exchange for those goods or services.

We determine revenue recognition through the following steps:

- identification of the contract, or contracts, with a customer;
- identification of the performance obligations in the contract;
- determination of the transaction price;
- allocation of the transaction price to the performance obligations in the contract; and
- recognition of revenue when, or as, we satisfy a performance obligation.

Revenue excludes sales and usage-based taxes where it has been determined that we are acting as a pass-through agent.

Advertising

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 our 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 users. We recognize revenue from the delivery of action-based ads in the period in which a user takes the action the marketer contracted for. For advertising revenue arrangements where we are not the principal, we recognize revenue on a net basis.

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We may accept lower consideration than the amount promised per the contract for certain revenue transactions and certain customers may receive cash-based incentives or credits, which are accounted for as variable consideration when estimating the amount of revenue to recognize. We believe that there will not be significant changes to our estimates of variable consideration.

Other Revenue

Other revenue consists of revenue from the delivery of consumer hardware devices, net fees we receive from developers using our Payments infrastructure, as well as revenue from various other sources.

Deferred Revenue and Deposits

Deferred revenue mostly consists of billings and payments we receive from marketers in advance of revenue recognition. Deposits relate to unused balances held on behalf of our users who primarily use these balances to make purchases in games on our platform. Once this balance is utilized by a user, the majority of this amount would then be payable to the developer and the balance would be recognized as revenue. The increase in the deferred revenue balance for the year ended December 31, 2019 was driven by cash payments from customers in advance of satisfying our performance obligations, offset by revenue recognized that was included in the deferred revenue balance at the beginning of the period.

Our payment terms vary by the products or services offered. The term between billings and when payment is due is not significant. For certain products or services and customer types, we require payment before the products or services are delivered to the customer.

Practical Expedients and Exemptions

We generally expense sales commissions when incurred because the amortization period would have been one year or less. These costs are recorded within marketing and sales on our consolidated statements of income.

We do not disclose the value of unsatisfied performance obligations for (i) contracts with an original expected length of one year or less and (ii) contracts for which we recognize revenue at the amount to which we have the right to invoice for services performed.

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 and technical infrastructure, 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 devices sold.

Content acquisition costs

We license and pay to produce content in order to increase engagement on the platform. For licensed content, the capitalized amounts are limited to the greater of estimated net realizable value or cost on a per title basis. We expense the cost per title in cost of revenue on the consolidated statements of income when the title is accepted and available for viewing, and before the capitalization criteria are met. For original content, we expense costs associated with the production, including development costs and direct costs as incurred, unless those amounts are determined to be recoverable. Expensed original content costs are included in cost of revenue on the consolidated statements of income.

Content acquisition costs that meet the criteria for capitalization were not material to date.

Software Development Costs

Software development costs, including costs to develop software products or the software component of products to be sold, leased, or marketed to external users, are expensed before the software or technology reach technological feasibility, which is typically reached shortly before the release of such products.

Software development costs also include costs to develop software to be used solely to meet internal needs and applications used to deliver our services. These software development costs meet the criteria for capitalization once the preliminary project stage is complete and it is probable that the project will be completed and the software will be used to perform the function intended.

Development costs that meet the criteria for capitalization were not material to date.

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 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 consider all available evidence, both positive and negative, including historical levels of income, expectations and risks associated with estimates of future taxable income and ongoing tax planning strategies in assessing the need for a valuation allowance.

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 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.

Advertising Expense

Advertising costs are expensed when incurred and are included in marketing and sales expenses in the accompanying consolidated statements of income. We incurred advertising expenses of \$1.57 billion, \$1.10 billion, and \$324 million for the years ended December 31, 2019, 2018, and 2017, respectively.

Cash and Cash Equivalents, Marketable Securities, and Restricted Cash

Cash and cash equivalents consist of cash on deposit with banks and highly liquid investments with maturities of 90 days or less from the date of purchase.

We hold investments in marketable securities, consisting of U.S. government securities, U.S. government agency securities, and investment grade corporate debt securities. We classify our marketable securities as available-for-sale investments in our current assets because they represent investments of cash available for current operations. Our available-for-sale investments are carried at estimated fair value with any unrealized gains and losses, net of taxes, included in accumulated other comprehensive income (loss) in stockholders' equity. Unrealized losses are charged against interest and other income, net when a decline in fair value is determined to be other-than-temporary. We have not recorded any such impairment charge in the periods

presented. We determine realized gains or losses on sale of marketable securities on a specific identification method, and record such gains or losses as interest and other income, net.

We also maintain a multi-currency notional cash pool for our participating entities with a third-party bank provider. Actual cash balances are not physically converted and are not commingled between participating legal entities. We classify the overdraft balances within accrued expenses and other current liabilities on the accompanying consolidated balance sheets.

We classify certain restricted cash balances within prepaid expenses and other current assets and other assets on the accompanying consolidated balance sheets based upon the term of the remaining restrictions.

Fair Value of Financial Instruments

We apply fair value accounting for all financial assets and liabilities and non-financial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis. We define fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities, which are required to be recorded at fair value, we consider the principal or most advantageous market in which we would transact and the market-based risk measurements or assumptions that market participants would use in pricing the asset or liability, such as risks inherent in valuation techniques, transfer restrictions and credit risk. Fair value is estimated by applying the following hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

Level 1-Quoted prices in active markets for identical assets or liabilities.

Level 2-Observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3-Inputs that are generally unobservable and typically reflect management's estimate of assumptions that market participants would use in pricing the asset or liability.

Our valuation techniques used to measure the fair value of cash equivalents and marketable debt securities were derived from quoted market prices or alternative pricing sources and models utilizing observable market inputs.

Accounts Receivable and Allowances

Accounts receivable are recorded and carried at the original invoiced amount less an allowance for any potential uncollectible amounts. We make estimates for the allowance for doubtful accounts and allowance for unbilled receivables based upon our assessment of various factors, including historical experience, the age of the accounts receivable balances, credit quality of our customers, current economic conditions, and other factors that may affect our ability to collect from customers.

Property and Equipment

Property and equipment, which includes amounts recorded under finance leases, are stated at cost less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets or the remaining lease term, whichever is shorter.

The estimated useful lives of property and equipment are described below:

| Property and Equipment | Useful Life |
|---|---|
| Network equipment | Three to 20 years |
| Buildings | Three to 30 years |
| Computer software, office equipment and other | Two to five years |
| Finance lease right-of-use assets | Three to 20 years |
| Leasehold improvements | Lesser of estimated useful life or remaining lease term |

The useful lives of our property and equipment are determined by management when those assets are initially recognized and are routinely reviewed for the remaining estimated useful lives. Our current estimate of useful lives represents the best estimate of the useful lives based on current facts and circumstances, but may differ from the actual useful lives due to changes in future circumstances such as changes to our business operations, changes in the planned use of assets, and technological advancements. When we change the estimated useful life assumption for any asset, the remaining carrying amount of the asset is accounted for prospectively and depreciated or amortized over the revised estimated useful life. Historically changes in useful lives have not resulted in material changes to our depreciation and amortization expense.

Land and assets held within construction in progress are not depreciated. Construction in progress is related to the construction or development of property and equipment that have not yet been placed in service for their intended use.

The cost of maintenance and repairs is expensed as incurred. When assets are retired or otherwise disposed of, the cost and related accumulated depreciation are removed from their respective accounts, and any gain or loss on such sale or disposal is reflected in income from operations.

Lease Obligations

On January 1, 2019, we adopted Accounting Standards Update No. 2016-02, *Leases (Topic 842)* (ASU 2016-02) using the modified retrospective transition approach by applying the new standard to all leases existing at the date of initial application. Results and disclosure requirements for reporting periods beginning after January 1, 2019 are presented under *Topic 842*, while prior period amounts have not been adjusted and continue to be reported in accordance with our historical accounting under *Topic 840*.

We elected the package of practical expedients permitted under the transition guidance, which allowed us to carryforward our historical lease classification, our assessment on whether a contract was or contains a lease, and our initial direct costs for any leases that existed prior to January 1, 2019. We also elected to combine our 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. Additionally, for certain equipment leases, we apply a portfolio approach to effectively account for the operating lease right-of-use (ROU) assets and lease liabilities.

Upon adoption, we recognized total ROU assets of \$6.63 billion, with corresponding lease liabilities of \$6.35 billion on the consolidated balance sheets. This included \$761 million of pre-existing finance lease ROU assets previously reported in the network equipment within property and equipment, net. The ROU assets include adjustments for prepayments and accrued lease payments. The adoption did not impact our beginning retained earnings, or our prior year consolidated statements of income and statements of cash flows.

Under *Topic 842*, we determine if an arrangement is a lease at inception. ROU assets and lease liabilities are recognized at commencement date based on the present value of remaining lease payments over the lease term. For this purpose, we consider only payments that are fixed and determinable at the time of commencement. As most of our leases do not provide an implicit rate, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. Our incremental borrowing rate is a hypothetical rate based on our understanding of what our credit rating would be. The ROU asset also includes any lease payments made prior to commencement and is recorded net of any lease incentives received. Our lease terms may include options to extend or terminate the lease when it is reasonably certain that we will exercise such options. When determining the probability of exercising such options, we consider contract-based, asset-based, entity-based, and market-based factors. Our lease agreements may contain variable costs such as common area maintenance, insurance, real estate taxes or other costs. Variable lease costs are expensed as incurred on the consolidated statements of income. Our lease agreements generally do not contain any residual value guarantees or restrictive covenants.

Operating leases are included in operating lease ROU assets, operating lease liabilities, current and operating lease liabilities, non-current on our consolidated balance sheets. Finance leases are included in property and equipment, accrued expenses and other current liabilities, and other liabilities on our consolidated balance sheets.

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 evaluate the developments on a regular basis and accrue 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 there is a reasonable possibility that we may incur a loss and the loss or range of loss can be estimated, we disclose the possible loss in the notes to the consolidated financial statements to the extent material.

We review the developments in our contingencies that could affect the amount of the provisions that has been previously recorded, and the matters and related 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 of loss and the estimated amount of loss.

Business Combinations

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. Allocation of purchase consideration to identifiable assets and liabilities affects Company amortization expense, as acquired finite-lived intangible assets are amortized over the useful life, whereas any indefinite lived intangible assets, including goodwill, are not amortized. 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.

Long-lived Assets Including Goodwill and Other Acquired Intangibles Assets

We evaluate the recoverability of property and equipment and acquired finite-lived 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 from the use and eventual disposition. 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.

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, 2019, no impairment of goodwill has been identified.

Acquired finite-lived intangible assets are amortized on a straight-line basis over the estimated useful lives of the assets. We routinely review the remaining estimated useful lives of property and equipment and finite-lived intangible assets. If we change the estimated useful life assumption for any asset, the remaining unamortized balance is amortized or depreciated over the revised estimated useful life.

Foreign Currency

Generally, the functional currency of our international subsidiaries is the local currency. We translate the financial statements of these subsidiaries to U.S. dollars using month-end rates of exchange for assets and liabilities, and average rates of exchange for revenue, costs, and expenses. Translation gains and losses are recorded in accumulated other comprehensive loss as a component of stockholders' equity. As of December 31, 2019 and 2018, we had a cumulative translation loss, net of tax of \$617 million and \$466 million, respectively. Net losses resulting from foreign exchange transactions were \$105 million, \$213 million, and \$6 million for the years ended December 31, 2019, 2018, and 2017, respectively. These losses were recorded as interest and other income, net in our consolidated statements of income.

Credit Risk and Concentration

Our financial instruments that are potentially subject to concentrations of credit risk consist primarily of cash, cash equivalents, restricted cash, marketable securities, and accounts receivable. The majority of cash equivalents consists of money market funds, that primarily invest in U.S. government and agency securities. Marketable securities consist of investments in U.S. government securities, U.S. government agency securities, and investment grade corporate debt securities. Our investment portfolio in corporate debt securities is highly liquid and diversified among individual issuers.

Accounts receivable are typically unsecured and are derived from revenue earned from customers across different industries and countries. We generated 43% of our revenue for the years ended December 31, 2019 and 2018 and 44% of our revenue for the year ended December 31, 2017 from marketers and developers based in the United States, with the majority of revenue outside of the United States coming from customers located in western Europe, China, Canada, Brazil, and Australia.

We perform ongoing credit evaluations of our customers and generally do not require collateral. We maintain an allowance for estimated credit losses. Bad debt expense was not material during the years ended December 31, 2019, 2018, or 2017. In the event that accounts receivable collection cycles deteriorate, our operating results and financial position could be adversely affected.

No customer represented 10% or more of total revenue during the years ended December 31, 2019, 2018, and 2017.

Segments

Our chief operating decision-maker is our Chief Executive Officer who makes resource allocation decisions and assesses performance based on financial information presented on a consolidated basis. There are no segment managers who are held accountable by the chief operating decision-maker, or anyone else, for operations, operating results, and planning for levels or components below the consolidated unit level. Accordingly, we have determined that we have a single reportable segment and operating segment structure.

Recently Adopted Accounting Pronouncements

On January 1, 2019, we adopted *Topic 842*, as amended, which supersedes the lease accounting guidance under *Topic 840*, and generally requires lessees to recognize operating and financing lease liabilities and corresponding ROU assets on the balance sheet and to provide enhanced disclosures surrounding the amount, timing and uncertainty of cash flows arising from leasing arrangements. We adopted the new guidance using the modified retrospective transition approach by applying the new standard to all leases existing at the date of initial application and not restating comparative periods. The most significant impact was the recognition of ROU assets and lease liabilities for operating leases, while our accounting for finance leases remained substantially unchanged. For information regarding the impact of *Topic 842* adoption, see *Significant Accounting Policies - Leases* above and Note 7 - Leases.

On October 1, 2019, we early adopted Accounting Standards Update No. 2017-04, *Intangibles—Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment* (ASU 2017-04) using the prospective approach, 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 was effective beginning January 1, 2020, with early adoption permitted. The adoption of this new standard did not have a material impact on our consolidated financial statements.

On October 1, 2019, we early adopted Accounting Standards Update No. 2019-02, *Entertainment-Films-Other Assets-Film Costs (Subtopic 926-20) and Entertainment-Broadcasters-Intangibles-Goodwill and Other (Subtopic 920-350): Improvements to Accounting for Costs of Films and License Agreements for Program Materials* (ASU 2019-02) using the prospective approach, which eliminates certain revenue-related constraints on capitalization of inventory costs for episodic television that existed under prior guidance. In addition, the balance sheet classification requirements that existed in prior guidance for film production costs and programming inventory were eliminated. This guidance was effective beginning January 1, 2020, with early adoption permitted. The adoption of this new standard did not have a material impact on our consolidated financial statements.

Recent Accounting Pronouncements Not Yet Adopted

In June 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standard Update No. 2016-13, *Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (ASU 2016-13), which requires the measurement and recognition of expected credit losses for financial assets held at amortized cost. ASU 2016-13 replaces the existing incurred loss impairment model with a forward-looking expected credit loss model which will result in earlier recognition of credit losses. We will adopt the new standard effective January 1, 2020 and do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In August 2018, the FASB issued Accounting Standard Update No. 2018-13, *Changes to Disclosure Requirements for Fair Value Measurements (Topic 820)* (ASU 2018-13), which improved the effectiveness of disclosure requirements for recurring and nonrecurring fair value measurements. The standard removes, modifies, and adds certain disclosure requirements. We will adopt the new standard effective January 1, 2020 and do not expect the adoption of this guidance to have a material impact on our consolidated financial statements.

In December 2019, the FASB issued Accounting Standard Update No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* (ASU 2019-12), which simplifies the accounting for income taxes. This guidance will be effective for us in the first quarter of 2021 on a prospective basis, and early adoption is permitted. We are currently evaluating the impact of the new guidance on our consolidated financial statements.

Note 2. Revenue

Revenue disaggregated by revenue source consists of the following (in millions):

| | Year Ended December 31, | | |
|---------------|-------------------------|------------------|---------------------|
| | 2019 | 2018 | 2017 ⁽¹⁾ |
| Advertising | \$ 69,655 | \$ 55,013 | \$ 39,942 |
| Other revenue | 1,042 | 825 | 711 |
| Total revenue | <u>\$ 70,697</u> | <u>\$ 55,838</u> | <u>\$ 40,653</u> |

(1) Prior period amounts have not been adjusted under the modified retrospective method of the adoption of Topic 606.

Revenue disaggregated by geography, based on the billing address of our customers, consists of the following (in millions):

| | Year Ended December 31, | | |
|---|-------------------------|------------------|---------------------|
| | 2019 | 2018 | 2017 ⁽¹⁾ |
| Revenue: | | | |
| United States and Canada ⁽²⁾ | \$ 32,206 | \$ 25,727 | \$ 19,065 |
| Europe ⁽³⁾ | 16,826 | 13,631 | 10,126 |
| Asia-Pacific | 15,406 | 11,733 | 7,921 |
| Rest of World ⁽³⁾ | 6,259 | 4,747 | 3,541 |
| Total revenue | <u>\$ 70,697</u> | <u>\$ 55,838</u> | <u>\$ 40,653</u> |

(1) Prior period amounts have not been adjusted under the modified retrospective method of the adoption of Topic 606.

(2) United States revenue was \$30.23 billion, \$24.10 billion, and \$17.73 billion for the years ended December 31, 2019, 2018, and 2017.

(3) Europe includes Russia and Turkey, and Rest of World includes Africa, Latin America, and the Middle East.

Deferred revenue and deposits consists of the following (in millions):

| | December 31, | |
|-------------------------------------|--------------|--------|
| | 2019 | 2018 |
| Deferred revenue | \$ 234 | \$ 117 |
| Deposits | 35 | 30 |
| Total deferred revenue and deposits | \$ 269 | \$ 147 |

Note 3. Earnings per Share

We compute earnings per share (EPS) of Class A and Class B common stock using the two-class method required for participating securities. We consider restricted stock awards to be participating securities because holders of such shares have non-forfeitable dividend rights in the event of our declaration of a dividend for common shares.

Undistributed earnings allocated to participating securities are subtracted from net income in determining net income attributable to common stockholders. Basic EPS is computed by dividing net income attributable to common stockholders by the weighted-average number of shares of our Class A and Class B common stock outstanding, adjusted for outstanding shares that are subject to repurchase.

For the calculation of diluted EPS, net income attributable to common stockholders for basic EPS is adjusted by the effect of dilutive securities, including awards under our equity compensation plans. In 2018 and 2017, the calculation of diluted EPS also included the effect of inducement awards under separate non-plan restricted stock unit (RSU) award agreements.

In addition, the computation of the diluted EPS of Class A common stock assumes the conversion of our Class B common stock to Class A common stock, while the diluted EPS of Class B common stock does not assume the conversion of those shares to Class A common stock. Diluted EPS attributable to common stockholders is computed by dividing the resulting net income attributable to common stockholders by the weighted-average number of fully diluted common shares outstanding.

RSUs with anti-dilutive effect were excluded from the EPS calculation and they were not material for the years ended December 31, 2019, 2018, and 2017, respectively.

Basic and diluted EPS are the same for each class of common stock because they are entitled to the same liquidation and dividend rights.

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The numerators and denominators of the basic and diluted EPS computations for our common stock are calculated as follows (in millions, except per share amounts):

| | Year Ended December 31, | | | | | |
|---|-------------------------|----------|-----------|----------|-----------|----------|
| | 2019 | | 2018 | | 2017 | |
| | Class A | Class B | Class A | Class B | Class A | Class B |
| Basic EPS: | | | | | | |
| Numerator | | | | | | |
| Net income | \$ 15,569 | \$ 2,916 | \$ 18,411 | \$ 3,701 | \$ 13,034 | \$ 2,900 |
| Less: Net income attributable to participating securities | — | — | (1) | — | (12) | (2) |
| Net income attributable to common stockholders | \$ 15,569 | \$ 2,916 | \$ 18,410 | \$ 3,701 | \$ 13,022 | \$ 2,898 |
| Denominator | | | | | | |
| Weighted-average shares outstanding | 2,404 | 450 | 2,406 | 484 | 2,375 | 528 |
| Less: Shares subject to repurchase | — | — | — | — | (2) | — |
| Number of shares used for basic EPS computation | 2,404 | 450 | 2,406 | 484 | 2,373 | 528 |
| Basic EPS | \$ 6.48 | \$ 6.48 | \$ 7.65 | \$ 7.65 | \$ 5.49 | \$ 5.49 |
| Diluted EPS: | | | | | | |
| Numerator | | | | | | |
| Net income attributable to common stockholders | \$ 15,569 | \$ 2,916 | \$ 18,410 | \$ 3,701 | \$ 13,022 | \$ 2,898 |
| Reallocation of net income attributable to participating securities | — | — | 1 | — | 14 | — |
| Reallocation of net income as a result of conversion of Class B to Class A common stock | 2,916 | — | 3,701 | — | 2,898 | — |
| Reallocation of net income to Class B common stock | — | (18) | — | (16) | — | (13) |
| Net income attributable to common stockholders for diluted EPS | \$ 18,485 | \$ 2,898 | \$ 22,112 | \$ 3,685 | \$ 15,934 | \$ 2,885 |
| Denominator | | | | | | |
| Number of shares used for basic EPS computation | 2,404 | 450 | 2,406 | 484 | 2,373 | 528 |
| Conversion of Class B to Class A common stock | 450 | — | 484 | — | 528 | — |
| Weighted-average effect of dilutive RSUs and employee stock options | 22 | 1 | 31 | 3 | 53 | 7 |
| Shares subject to repurchase | — | — | — | — | 2 | — |
| Number of shares used for diluted EPS computation | 2,876 | 451 | 2,921 | 487 | 2,956 | 535 |
| Diluted EPS | \$ 6.43 | \$ 6.43 | \$ 7.57 | \$ 7.57 | \$ 5.39 | \$ 5.39 |

Note 4. Cash and Cash Equivalents and Marketable Securities

The following table sets forth the cash and cash equivalents and marketable securities (in millions):

| | December 31, | |
|---|--------------|-----------|
| | 2019 | 2018 |
| Cash and cash equivalents: | | |
| Cash | \$ 4,735 | \$ 2,713 |
| Money market funds | 12,787 | 6,792 |
| U.S. government securities | 815 | 90 |
| U.S. government agency securities | 444 | 54 |
| Certificate of deposits and time deposits | 217 | 369 |
| Corporate debt securities | 81 | 1 |
| Total cash and cash equivalents | 19,079 | 10,019 |
| Marketable securities: | | |
| U.S. government securities | 18,679 | 13,836 |
| U.S. government agency securities | 6,712 | 8,333 |
| Corporate debt securities | 10,385 | 8,926 |
| Total marketable securities | 35,776 | 31,095 |
| Total cash and cash equivalents and marketable securities | \$ 54,855 | \$ 41,114 |

The gross unrealized gains on our marketable securities were \$205 million and \$24 million as of December 31, 2019 and 2018, respectively. The gross unrealized losses on our marketable securities were \$24 million and \$357 million as of December 31, 2019 and 2018, respectively. In addition, gross unrealized losses that had been in a continuous loss position for 12 months or longer were \$17 million and \$332 million as of December 31, 2019 and 2018, respectively. As of December 31, 2019, we considered the unrealized losses on our marketable securities to be temporary in nature and did not consider any of our investments to be other-than-temporarily impaired.

The following table classifies our marketable securities by contractual maturities (in millions):

| | December 31, | |
|----------------------------------|--------------|-----------|
| | 2019 | 2018 |
| Due in one year | \$ 12,803 | \$ 9,746 |
| Due after one year to five years | 22,973 | 21,349 |
| Total | \$ 35,776 | \$ 31,095 |

Note 5. Fair Value Measurement

The following table summarizes our assets measured at fair value and the classification by level of input within the fair value hierarchy (in millions):

| Description | December 31, 2019 | Fair Value Measurement at Reporting Date Using | | |
|---|----------------------|---|---|---|
| | | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
| Cash equivalents: | | | | |
| Money market funds | \$ 12,787 | \$ 12,787 | \$ — | \$ — |
| U.S. government securities | 815 | 815 | — | — |
| U.S. government agency securities | 444 | 444 | — | — |
| Certificate of deposits and time deposits | 217 | — | 217 | — |
| Corporate debt securities | 81 | — | 81 | — |
| Marketable securities: | | | | |
| U.S. government securities | 18,679 | 18,679 | — | — |
| U.S. government agency securities | 6,712 | 6,712 | — | — |
| Corporate debt securities | 10,385 | — | 10,385 | — |
| Total cash equivalents and marketable securities | \$ 50,120 | \$ 39,437 | \$ 10,683 | \$ — |

| Description | December 31, 2018 | Fair Value Measurement at Reporting Date Using | | |
|---|----------------------|---|---|---|
| | | Quoted Prices in Active Markets for Identical Assets (Level 1) | Significant Other Observable Inputs (Level 2) | Significant Unobservable Inputs (Level 3) |
| Cash equivalents: | | | | |
| Money market funds | \$ 6,792 | \$ 6,792 | \$ — | \$ — |
| U.S. government securities | 90 | 90 | — | — |
| U.S. government agency securities | 54 | 54 | — | — |
| Certificate of deposits and time deposits | 369 | — | 369 | — |
| Corporate debt securities | 1 | — | 1 | — |
| Marketable securities: | | | | |
| U.S. government securities | 13,836 | 13,836 | — | — |
| U.S. government agency securities | 8,333 | 8,333 | — | — |
| Corporate debt securities | 8,926 | — | 8,926 | — |
| Total cash equivalents and marketable securities | \$ 38,401 | \$ 29,105 | \$ 9,296 | \$ — |

We classify our cash equivalents and marketable securities within Level 1 or Level 2 because we use quoted market prices or alternative pricing sources and models utilizing market observable inputs to determine their fair value.

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Note 6. Property and Equipment

Property and equipment, net consists of the following (in millions):

| | December 31, | |
|---|--------------|-----------|
| | 2019 | 2018 |
| Land | \$ 1,097 | \$ 899 |
| Buildings | 11,226 | 7,401 |
| Leasehold improvements | 3,112 | 1,841 |
| Network equipment | 17,004 | 13,017 |
| Computer software, office equipment and other | 1,813 | 1,187 |
| Finance lease right-of-use assets | 1,635 | — |
| Construction in progress | 10,099 | 7,228 |
| Total | 45,986 | 31,573 |
| Less: Accumulated depreciation | (10,663) | (6,890) |
| Property and equipment, net | \$ 35,323 | \$ 24,683 |

Depreciation expense on property and equipment were \$5.18 billion, \$3.68 billion, and \$2.33 billion for the years ended December 31, 2019, 2018, and 2017, respectively. The majority of the property and equipment depreciation expense was from network equipment depreciation of \$3.83 billion, \$2.94 billion, and \$1.84 billion for the years ended December 31, 2019, 2018, and 2017, respectively. Construction in progress includes costs mostly related to construction of data centers, network equipment infrastructure to support our data centers around the world, and office buildings. No interest was capitalized for any period presented.

Note 7. Leases

We have entered into various non-cancelable operating lease agreements for certain of our offices, data center, land, colocations, and equipment. We have also entered into various non-cancelable finance lease agreements for certain network equipment. Our leases have original lease periods expiring between 2020 and 2093. Many leases include one or more options to renew. We do not assume renewals in our determination of the lease term unless the renewals are deemed to be reasonably assured at lease commencement. Our lease agreements generally do not contain any material residual value guarantees or material restrictive covenants.

The components of lease costs, lease term and discount rate for the year ended December 31, 2019 are as follows (in millions):

| | | |
|---------------------------------------|----|------------|
| Finance lease cost | | |
| Amortization of right-of-use assets | \$ | 195 |
| Interest | | 12 |
| Operating lease cost | | 1,139 |
| Variable lease cost and other, net | | 160 |
| Total lease cost | \$ | 1,506 |
| | | |
| Weighted-average remaining lease term | | |
| Operating leases | | 13.0 years |
| Finance leases | | 15.3 years |
| | | |
| Weighted-average discount rate | | |
| Operating leases | | 3.2% |
| Finance leases | | 3.1% |

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Operating lease expense was \$629 million and \$363 million for the years ended December 31, 2018 and 2017, respectively, under Topic 840.

The following is a schedule, by years, of maturities of lease liabilities as of December 31, 2019 (in millions):

| | Operating Leases | Finance Leases |
|------------------------------------|------------------|----------------|
| 2020 | \$ 1,060 | \$ 69 |
| 2021 | 1,244 | 48 |
| 2022 | 1,141 | 35 |
| 2023 | 1,116 | 35 |
| 2024 | 1,039 | 35 |
| Thereafter | 7,572 | 371 |
| Total undiscounted cash flows | 13,172 | 593 |
| Less: Imputed interest | (2,848) | (120) |
| Present value of lease liabilities | \$ 10,324 | \$ 473 |
| Lease liabilities, current | \$ 800 | \$ 55 |
| Lease liabilities, non-current | 9,524 | 418 |
| Present value of lease liabilities | \$ 10,324 | \$ 473 |

As of December 31, 2019, we have additional operating and finance leases for facilities and network equipment that have not yet commenced with lease obligations of approximately \$5.04 billion and \$317 million, respectively. These operating and finance leases will commence between 2020 and 2023 with lease terms of greater than one year to 25 years. The table above does not include lease payments that were not fixed at commencement or lease modification.

Supplemental cash flow information related to leases for the year ended December 31, 2019 are as follows (in millions):

| | | |
|---|----|-------|
| Cash paid for amounts included in the measurement of lease liabilities: | | |
| Operating cash flows from operating leases | \$ | 902 |
| Operating cash flows from finance leases | \$ | 12 |
| Financing cash flows from finance leases | \$ | 552 |
| Lease liabilities arising from obtaining right-of-use assets: | | |
| Operating leases | \$ | 5,081 |
| Finance leases | \$ | 193 |

Note 8. Goodwill and Intangible Assets

During the year ended December 31, 2019, we purchased certain intangible assets and completed several business acquisitions that were not material to our consolidated financial statements, either individually or in the aggregate. Accordingly, pro forma historical results of operations related to these business acquisitions during the year ended December 31, 2019 have not been presented. We have included the financial results of these business acquisitions in our consolidated financial statements from their respective dates of acquisition.

Goodwill generated from all business acquisitions completed was primarily attributable to expected synergies from future growth and potential monetization opportunities. The amount of goodwill generated that was deductible for tax purposes was not material.

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The changes in the carrying amount of goodwill for the years ended December 31, 2019 and 2018 are as follows (in millions):

| | | |
|---|----|--------|
| Balance as of December 31, 2017 | \$ | 18,221 |
| Goodwill acquired | | 88 |
| Effect of currency translation adjustment | | (8) |
| Balance as of December 31, 2018 | | 18,301 |
| Goodwill acquired | | 408 |
| Effect of currency translation adjustment | | 6 |
| Balance as of December 31, 2019 | \$ | 18,715 |

The following table sets forth the major categories of the intangible assets and the weighted-average remaining useful lives for those assets that are not already fully amortized (in millions):

| | Weighted-Average Remaining Useful Lives (in years) | December 31, 2019 | | | December 31, 2018 | | |
|-------------------------|--|--------------------------|-----------------------------|------------------------|--------------------------|-----------------------------|------------------------|
| | | Gross Carrying Amount | Accumulated Amortization | Net Carrying Amount | Gross Carrying Amount | Accumulated Amortization | Net Carrying Amount |
| Acquired users | 1.8 | \$ 2,056 | \$ (1,550) | \$ 506 | \$ 2,056 | \$ (1,260) | \$ 796 |
| Acquired technology | 2.6 | 1,158 | (986) | 172 | 1,002 | (871) | 131 |
| Acquired patents | 4.6 | 805 | (625) | 180 | 805 | (565) | 240 |
| Trade names | 2.0 | 635 | (604) | 31 | 629 | (517) | 112 |
| Other | 3.3 | 162 | (157) | 5 | 162 | (147) | 15 |
| Total intangible assets | | \$ 4,816 | \$ (3,922) | \$ 894 | \$ 4,654 | \$ (3,360) | \$ 1,294 |

Amortization expense of intangible assets for the years ended December 31, 2019, 2018, and 2017 was \$562 million, \$640 million, and \$692 million, respectively.

As of December 31, 2019, expected amortization expense for the unamortized acquired intangible assets for the next five years and thereafter is as follows (in millions):

| | | |
|------------|----|-----|
| 2020 | \$ | 431 |
| 2021 | | 326 |
| 2022 | | 78 |
| 2023 | | 27 |
| 2024 | | 17 |
| Thereafter | | 15 |
| Total | \$ | 894 |

Note 9. Liabilities

The components of accrued expenses and other current liabilities are as follows (in millions):

| | December 31, | |
|---|------------------|-----------------|
| | 2019 | 2018 |
| Accrued legal settlements for FTC and BIPA ⁽¹⁾ | \$ 5,550 | \$ — |
| Accrued compensation and benefits | 1,704 | 1,203 |
| Accrued property and equipment | 1,082 | 1,531 |
| Accrued taxes | 624 | 491 |
| Overdraft in cash pooling entities | 277 | 500 |
| Other current liabilities | 2,498 | 1,784 |
| Accrued expenses and other current liabilities | <u>\$ 11,735</u> | <u>\$ 5,509</u> |

(1) Includes accrued legal settlements for U.S. Federal Trade Commission (FTC) of \$5.0 billion and Illinois Biometric Information Privacy Act (BIPA) of \$550 million. For further information, see *Legal Matters* in Note. 11—Commitments and Contingencies.

The components of other liabilities are as follows (in millions):

| | December 31, | |
|--------------------------|-----------------|-----------------|
| | 2019 | 2018 |
| Income tax payable | \$ 5,651 | \$ 4,655 |
| Deferred tax liabilities | 1,039 | 673 |
| Other liabilities | 1,055 | 862 |
| Other liabilities | <u>\$ 7,745</u> | <u>\$ 6,190</u> |

Note 10. Long-term Debt

In May 2016, we entered into a \$2.0 billion senior unsecured revolving credit facility, and any amounts outstanding under this facility will be due and payable on May 20, 2021. As of December 31, 2019, no amounts had been drawn down and we were in compliance with the covenants under this facility.

Note 11. Commitments and Contingencies***Guarantee***

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.

Other contractual commitments

We also have \$4.54 billion of non-cancelable contractual commitments as of December 31, 2019, which is primarily related to network infrastructure and our data center operations. These commitments are primarily due within five years.

Legal Matters

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. On September 25, 2019, the district court granted our motion to dismiss the consolidated putative securities class action, with leave to amend. On November 15, 2019, an amended complaint was filed in the consolidated putative securities class action. 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 (FTC), state attorneys general, and other government inquiries in the United States, Europe, and other jurisdictions. In July 2019, we entered into a settlement and modified consent order to resolve the FTC inquiry, which is pending federal court approval. Among other matters, our settlement with the FTC requires us to pay a penalty of \$5.0 billion and to significantly enhance our practices and processes for privacy compliance and oversight. We have recognized the penalty in accrued expenses and other current liabilities on our consolidated balance sheet as of December 31, 2019.

On April 1, 2015, a putative class action was filed against us in the U.S. District Court for the Northern District of California by Facebook users alleging that the "tag suggestions" facial recognition feature violates the Illinois Biometric Information Privacy Act, and seeking statutory damages and injunctive relief. On April 16, 2018, the district court certified a class of Illinois residents, and on May 14, 2018, the district court denied both parties' motions for summary judgment. On May 29, 2018, the U.S. Court of Appeals for the Ninth Circuit granted our petition for review of the class certification order and stayed the proceeding. On August 8, 2019, the Ninth Circuit affirmed the class certification order. On December 2, 2019, we filed a petition with the U.S. Supreme Court seeking review of the decision of the Ninth Circuit, which was denied. On January 15, 2020, the parties agreed to a settlement in principle to resolve the lawsuit, which will require a payment of \$550 million by us and is subject to approval by the court.

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. The actions filed in the United States were consolidated in the U.S. District Court for the Northern District of California. On November 26, 2019, the district court certified a class for injunctive relief purposes, but denied certification of a class for purposes of pursuing damages. On January 16, 2020, the parties agreed to a settlement in principle to resolve the lawsuit. We believe the remaining 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 (IDPC) and other government inquiries.

From time to time we also notify the IDPC, our designated European privacy regulator under the General Data Protection Regulation, of certain other personal data breaches and privacy issues, and are subject to inquiries and investigations regarding various aspects of our regulatory compliance. Although we are vigorously defending our regulatory compliance, we believe there is a reasonable possibility that the ultimate potential loss related to the inquiries and investigations by the IDPC could be material in the aggregate.

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.

With respect to the cases, actions, and inquiries described above, we evaluate the associated developments on a regular basis and accrue a liability when we believe a loss is probable and the amount can be reasonably estimated. In addition, we believe there is a reasonable possibility that we may incur a loss in some of these matters. With respect to the matters described above that do not include an estimate of the amount of loss or range of possible loss, such losses or range of possible losses either cannot be estimated or are not individually material, but we believe there is a reasonable possibility that they may be material in the aggregate.

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. With respect to these other matters, we evaluate the associated developments on a regular basis and accrue a liability when we believe a loss is probable and the amount can be reasonably estimated. In addition, we believe there is a reasonable possibility that we may incur a loss in some of these other matters. We believe that the amount of losses or any estimable range of possible losses with respect to these other matters will not, either individually or in the aggregate, have a material adverse effect on our business and consolidated financial statements.

However, the outcome of the legal matters described in this section 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.

For information regarding income tax contingencies, see Note 14—Income Taxes.

Indemnifications

In the normal course of business, to facilitate transactions of services and products, we have agreed to indemnify certain parties with respect to certain matters. We have agreed to hold certain parties harmless against losses arising from a breach of representations or covenants, or out of intellectual property infringement or other claims made by third parties. These agreements may limit the time within which an indemnification claim can be made and the amount of the claim. In addition, we have entered into indemnification agreements with our officers, directors, and certain employees, and our certificate of incorporation and bylaws contain similar indemnification obligations.

It is not possible to determine the maximum potential amount under these indemnification agreements due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each particular agreement. Historically, payments made by us under these agreements have not had a material impact on our consolidated financial statements. In our opinion, as of December 31, 2019, there was not at least a reasonable possibility we had incurred a material loss with respect to indemnification of such parties. We have not recorded any liability for costs related to indemnification through December 31, 2019.

Note 12. Stockholders' Equity

Common Stock

Our certificate of incorporation authorizes the issuance of Class A common stock and Class B common stock. As of December 31, 2019, we are authorized to issue 5,000 million shares of Class A common stock and 4,141 million shares of Class B common stock, each with a par value of \$0.000006 per share. Holders of our Class A common stock and Class B common stock are entitled to dividends when, as and if, declared by our board of directors, subject to the rights of the holders of all classes of stock outstanding having priority rights to dividends. As of December 31, 2019, we have not declared any dividends and our credit facility contains restrictions on our ability to pay dividends. The holder of each share of Class A common stock is entitled to one vote, while the holder of each share of Class B common stock is entitled to ten votes. Shares of our Class B common stock are convertible into an equivalent number of shares of our Class A common stock and generally convert into shares of our Class A common stock upon transfer. Class A common stock and Class B common stock are referred to as common stock throughout the notes to these financial statements, unless otherwise noted.

As of December 31, 2019, there were 2,407 million shares and 445 million shares of Class A common stock and Class B common stock, respectively, issued and outstanding.

Share Repurchase Program

Our board of directors has authorized a share repurchase program of our Class A common stock, which commenced in January 2017 and does not have an expiration date. As of December 31, 2018, \$9.0 billion remained available and authorized for repurchases under this program. In 2019, we repurchased and subsequently retired 22 million shares of our Class A common stock for \$4.10 billion. As of December 31, 2019, \$4.90 billion remained available and authorized for repurchases. In January 2020, an additional \$10.0 billion of repurchases was authorized under this program.

The timing and actual number of shares repurchased under the repurchase program 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 Securities Exchange Act of 1934, as amended.

Share-based Compensation Plans

We maintain two share-based employee compensation plans: the 2012 Equity Incentive Plan, which was amended in each of June 2016 and February 2018 (Amended 2012 Plan), and the 2005 Stock Plan (collectively, Stock Plans). Our Amended 2012 Plan serves as the successor to our 2005 Stock Plan and provides for the issuance of incentive and nonstatutory stock options, restricted stock awards, stock appreciation rights, RSUs, performance shares, and stock bonuses to qualified employees, directors and consultants. Outstanding awards under the 2005 Stock Plan continue to be subject to the terms and conditions of the 2005 Stock Plan. Shares that are withheld in connection with the net settlement of RSUs or forfeited under our Stock Plans are added to the reserves of the Amended 2012 Plan. We account for forfeitures as they occur.

Share-based compensation expense mostly consists of the Company's restricted stock units (RSUs) expense. RSUs granted to employees are measured based on the grant-date fair value. In general, our RSUs vest over a service period of four years. Share-based compensation expense is generally recognized based on the straight-line basis over the requisite service period.

As of December 31, 2019, there were 111 million shares of our Class A common stock reserved for future issuance under our Amended 2012 Plan. The number of shares reserved for issuance under our Amended 2012 Plan increases automatically on January 1 of each of the calendar years during the term of the Amended 2012 Plan, which will continue through April 2026, by a number of shares of Class A common stock equal to the lesser of (i) 2.5% of the total issued and outstanding shares of our Class A common stock as of the immediately preceding December 31st or (ii) a number of shares determined by our board of directors. Pursuant to this automatic increase provision, our board of directors approved an increase of 60 million shares reserved for issuance effective January 1, 2020.

The following table summarizes the activities of stock option awards under the Stock Plans for the year ended December 31, 2019:

| | Number of Shares (in thousands) | Weighted-Average Exercise Price | Weighted- Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value (in millions) |
|---------------------------------|------------------------------------|------------------------------------|--|---|
| Balance as of December 31, 2018 | 1,137 | \$ 13.74 | | |
| Stock options exercised | (1,137) | \$ 13.74 | | |
| Balances at December 31, 2019 | — | \$ — | — | \$ — |

There were no options granted, forfeited, or canceled for the year ended December 31, 2019. The aggregate intrinsic value of the options exercised in the years ended December 31, 2019, 2018, and 2017 was \$185 million, \$315 million, and \$359 million, respectively. All of our outstanding options had vested by December 31, 2018. The total grant date fair value of stock options vested during the years ended December 31, 2018, and 2017 was not material.

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The following table summarizes the activities for our unvested RSUs for the year ended December 31, 2019:

| | <u>Number of Shares</u> | <u>Weighted-Average Grant Date Fair Value</u> |
|-------------------------------|-------------------------|---|
| | (in thousands) | |
| Unvested at December 31, 2018 | 67,298 | \$ 144.77 |
| Granted | 54,379 | \$ 173.66 |
| Vested | (33,501) | \$ 142.04 |
| Forfeited | (9,325) | \$ 145.86 |
| Unvested at December 31, 2019 | <u>78,851</u> | <u>\$ 165.74</u> |

The fair value as of the respective vesting dates of RSUs that vested during the years ended December 31, 2019, 2018, and 2017 was \$6.01 billion, \$7.57 billion, and \$6.76 billion, respectively.

As of December 31, 2019, there was \$12.21 billion of unrecognized share-based compensation expense related to RSUs awards. This unrecognized compensation expense is expected to be recognized over a weighted-average period of approximately three years based on vesting under the award service conditions.

Note 13. Interest and other income, net

The following table presents the detail of interest and other income, net, for the years ended December 31, 2019, 2018, and 2017 are as follows (in millions):

| | <u>Year Ended December 31,</u> | | |
|---------------------------------------|--------------------------------|---------------|---------------|
| | <u>2019</u> | <u>2018</u> | <u>2017</u> |
| Interest income | \$ 924 | \$ 661 | \$ 398 |
| Interest expense | (20) | (9) | (6) |
| Foreign currency exchange losses, net | (105) | (213) | (6) |
| Other | 27 | 9 | 5 |
| Interest and other income, net | <u>\$ 826</u> | <u>\$ 448</u> | <u>\$ 391</u> |

Note 14. Income Taxes

The components of income before provision for income taxes are as follows (in millions):

| | Year Ended December 31, | | |
|--|-------------------------|------------------|------------------|
| | 2019 | 2018 | 2017 |
| Domestic | \$ 5,317 | \$ 8,800 | \$ 7,079 |
| Foreign | 19,495 | 16,561 | 13,515 |
| Income before provision for income taxes | <u>\$ 24,812</u> | <u>\$ 25,361</u> | <u>\$ 20,594</u> |

The provision for income taxes consisted of the following (in millions):

| | Year Ended December 31, | | |
|---------------------------------------|-------------------------|-----------------|-----------------|
| | 2019 | 2018 | 2017 |
| Current: | | | |
| Federal | \$ 4,321 | \$ 1,747 | \$ 4,455 |
| State | 565 | 176 | 190 |
| Foreign | 1,481 | 1,031 | 389 |
| Total current tax expense | <u>6,367</u> | <u>2,954</u> | <u>5,034</u> |
| Deferred: | | | |
| Federal | (39) | 316 | (296) |
| State | 19 | 34 | (33) |
| Foreign | (20) | (55) | (45) |
| Total deferred tax (benefits)/expense | <u>(40)</u> | <u>295</u> | <u>(374)</u> |
| Provision for income taxes | <u>\$ 6,327</u> | <u>\$ 3,249</u> | <u>\$ 4,660</u> |

A reconciliation of the U.S. federal statutory income tax rates to our effective tax rate is as follows (in percentages):

| | Year Ended December 31, | | |
|---|-------------------------|---------------|---------------|
| | 2019 | 2018 | 2017 |
| U.S. federal statutory income tax rate | 21.0 % | 21.0 % | 35.0 % |
| State income taxes, net of federal benefit | 1.8 | 0.7 | 0.6 |
| Research tax credits | (0.8) | (1.0) | (0.9) |
| Share-based compensation | 4.5 | 0.3 | 0.4 |
| Excess tax benefits related to share-based compensation | (0.7) | (2.6) | (5.8) |
| Effect of non-U.S. operations | (5.8) | (5.9) | (18.6) |
| Effect of U.S. tax law change ⁽¹⁾ | — | — | 11.0 |
| Non-deductible FTC settlement accrual | 4.5 | — | — |
| Other | 1.0 | 0.3 | 0.9 |
| Effective tax rate | <u>25.5 %</u> | <u>12.8 %</u> | <u>22.6 %</u> |

(1) Due to the 2017 Tax Cuts and Jobs Act, provisional one-time mandatory transition tax on accumulated foreign earnings was accrued as of December 31, 2017. In addition, deferred taxes were derecognized for previous estimated tax liabilities that would arise upon repatriation of a portion of these earnings in the foreign jurisdictions.

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Our deferred tax assets (liabilities) are as follows (in millions):

| | December 31, | |
|---|--------------|----------|
| | 2019 | 2018 |
| Deferred tax assets: | | |
| Net operating loss carryforward | \$ 2,051 | \$ 1,825 |
| Tax credit carryforward | 1,333 | 668 |
| Share-based compensation | 135 | 270 |
| Accrued expenses and other liabilities | 798 | 487 |
| Lease liabilities | 1,999 | — |
| Other | 149 | 153 |
| Total deferred tax assets | 6,465 | 3,403 |
| Less: valuation allowance | (1,012) | (600) |
| Deferred tax assets, net of valuation allowance | 5,453 | 2,803 |
| Deferred tax liabilities: | | |
| Depreciation and amortization | (2,387) | (1,401) |
| Right-of-use assets | (1,910) | — |
| Purchased intangible assets | — | (195) |
| Total deferred tax liabilities | (4,297) | (1,596) |
| Net deferred tax assets | \$ 1,156 | \$ 1,207 |

The valuation allowance was approximately \$1.01 billion and \$600 million as of December 31, 2019 and 2018, respectively, mostly relating to U.S. state tax credit carryforwards and U.S. foreign tax credits for which we do not believe a tax benefit is more likely than not to be realized.

As of December 31, 2019, the U.S. federal and state net operating loss carryforwards were \$9.06 billion and \$2.37 billion, which will begin to expire in 2033 and 2027, respectively, if not utilized. We have federal tax credit carryforwards of \$357 million, which will begin to expire in 2029, if not utilized, and state tax credit carryforwards of \$2.28 billion, most of which do not expire.

Utilization of our net operating loss and tax credit carryforwards may be subject to substantial annual limitations due to the ownership change limitations provided by the Internal Revenue Code and similar state provisions. Such annual limitations could result in the expiration of the net operating loss and tax credit carryforwards before their utilization. The events that may cause ownership changes include, but are not limited to, a cumulative stock ownership change of greater than 50% over a three-year period.

The 2017 Tax Cuts and Jobs Act (Tax Act) imposed a mandatory transition tax on accumulated foreign earnings and generally eliminated U.S. taxes on foreign subsidiary distribution. As a result, accumulated earnings in foreign jurisdictions are available for distribution to the U.S. without incremental U.S. taxes.

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The following table reflects changes in the gross unrecognized tax benefits (in millions):

| | Year Ended December 31, | | |
|--|-------------------------|----------|----------|
| | 2019 | 2018 | 2017 |
| Gross unrecognized tax benefits - beginning of period | \$ 4,678 | \$ 3,870 | \$ 3,309 |
| Increases related to prior year tax positions | 2,309 | 457 | 72 |
| Decreases related to prior year tax positions | (525) | (396) | (34) |
| Increases related to current year tax positions | 1,402 | 831 | 536 |
| Decreases related to settlements of prior year tax positions | (1) | (84) | (13) |
| Gross unrecognized tax benefits - end of period | \$ 7,863 | \$ 4,678 | \$ 3,870 |

During all years presented, we recognized interest and penalties related to unrecognized tax benefits within the provision for income taxes on the consolidated statements of income. The amount of interest and penalties accrued as of December 31, 2019 and 2018 were \$747 million and \$340 million, respectively.

If the balance of gross unrecognized tax benefits of \$7.86 billion as of December 31, 2019 were realized in a future period, this would result in a tax benefit of \$4.71 billion within our provision of income taxes at such time.

On July 27, 2015, the United States Tax Court issued a decision (Tax Court Decision) in *Altera Corp. v. Commissioner*, which concluded that related parties in a cost sharing arrangement are not required to share expenses related to share-based compensation. The Tax Court Decision was appealed by the Commissioner to the Ninth Circuit Court of Appeals (Ninth Circuit). On June 7, 2019, the Ninth Circuit issued an opinion (*Altera Ninth Circuit Opinion*) that reversed the Tax Court Decision. Based on the *Altera Ninth Circuit Opinion*, we recorded a cumulative income tax expense of \$1.11 billion in the second quarter of 2019. On July 22, 2019, the taxpayer requested a rehearing before the full Ninth Circuit and the request was denied on November 12, 2019. The taxpayer has until February 10, 2020 to request a hearing before the Supreme Court of the United States. As a result, the final outcome of the case is uncertain. In November 2019, we made a \$1.64 billion payment related to this matter and recorded the payment to net against the related tax liability included within other liabilities in our consolidated balance sheets. If the *Altera Ninth Circuit Opinion* is reversed, we would anticipate recording an income tax benefit at that time.

We are subject to taxation in the United States and various other state and foreign jurisdictions. The material jurisdictions in which we are subject to potential examination include the United States and Ireland. We are under examination by the Internal Revenue Service (IRS) for our 2014 through 2016 tax years and by the Ireland tax authorities for our 2012 through 2015 tax years. Our 2017 and subsequent tax years remain open to examination by the IRS. Our 2016 and subsequent tax years remain open to examination in Ireland.

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 stated that it will also apply its position for tax years subsequent to 2010. We do not agree with the position of the IRS and have filed a petition in the Tax Court challenging the Notice. The case is scheduled for trial beginning in February 2020. On January 15, 2020, the IRS filed its Pretrial Memorandum in the case stating that it planned to assert at trial an adjustment that is higher than the adjustment stated in the Notice. The IRS did not provide any information about how it intends to apply the revised adjustment to future years. Based on the information provided, we believe that, if the IRS prevails in its updated position, this could result in an additional federal tax liability of an estimated, aggregate amount of up to approximately \$9.0 billion in excess of the amounts in our originally filed U.S. return, plus interest and any penalties asserted.

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. returns, 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, *Income Taxes*, that is lower than the potential additional federal tax liability from the positions taken by the IRS in the two Notices and

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its Pretrial Memorandum. 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, 2019, we have not resolved these matters and proceedings continue in the 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, 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 impact on our financial position, results of operations, and cash flows.

Note 15. Geographical Information

The following table sets forth our long-lived assets by geographic area, which consist of property and equipment, net and operating lease right-of-use assets, net (in millions):

| | December 31, | |
|----------------------------------|--------------|-----------|
| | 2019 | 2018 |
| Long-lived assets: | | |
| United States | \$ 35,858 | \$ 18,950 |
| Rest of the world ⁽¹⁾ | 8,925 | 5,733 |
| Total long-lived assets | \$ 44,783 | \$ 24,683 |

(1) No individual country, other than disclosed above, exceeded 10% of our total long-lived assets for any period presented.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our chief executive officer (CEO) and chief financial officer (CFO), has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a- 15(e) and 15d- 15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act)), as of the end of the period covered by this Annual Report on Form 10-K. Based on such evaluation, our CEO and CFO have concluded that as of December 31, 2019, our disclosure controls and procedures are designed at a reasonable assurance level and are effective to provide reasonable assurance that information we are required to disclose in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the rules and forms of the Securities and Exchange Commission (SEC), and that such information is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Management conducted an assessment of the effectiveness of our internal control over financial reporting based on the criteria set forth in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on the assessment, management has concluded that its internal control over financial reporting was effective as of December 31, 2019 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with U.S. GAAP. Our independent registered public accounting firm, Ernst & Young LLP, has issued an audit report with respect to our internal control over financial reporting, which appears in Part II, Item 8 of this Annual Report on Form 10-K.

Changes in Internal Control

There were no changes in our internal control over financial reporting identified in management's evaluation pursuant to Rules 13a-15(d) or 15d-15(d) of the Exchange Act during the fourth quarter of 2019 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures and Internal Control over Financial Reporting

In designing and evaluating the disclosure controls and procedures and internal control over financial reporting, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures and internal control over financial reporting must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

The information required by this item is incorporated by reference to our Proxy Statement for the 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019.

Our board of directors has adopted a Code of Conduct applicable to all officers, directors and employees, which is available on our website (investor.fb.com) under "Corporate Governance." We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding amendment to, or waiver from, a provision of our Code of Conduct by posting such information on the website address and location specified above.

Item 11. Executive Compensation

The information required by this item is incorporated by reference to our Proxy Statement for the 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this item is incorporated by reference to our Proxy Statement for the 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item is incorporated by reference to our Proxy Statement for the 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019.

Item 14. Principal Accounting Fees and Services

The information required by this item is incorporated by reference to our Proxy Statement for the 2020 Annual Meeting of Stockholders to be filed with the SEC within 120 days of the fiscal year ended December 31, 2019.

PART IV

Item 15. Exhibits, Financial Statement Schedules

We have filed the following documents as part of this Form 10-K:

1. Consolidated Financial Statements:

| | Page |
|--|--------------------|
| Reports of Independent Registered Public Accounting Firm | 69 |
| Consolidated Balance Sheets | 73 |
| Consolidated Statements of Income | 74 |
| Consolidated Statements of Comprehensive Income | 75 |
| Consolidated Statements of Stockholders' Equity | 76 |
| Consolidated Statements of Cash Flows | 77 |
| Notes to Consolidated Financial Statements | 79 |

2. Financial Statement Schedules

All schedules have been omitted because they are not required, not applicable, not present in amounts sufficient to require submission of the schedule, or the required information is otherwise included.

3. Exhibits

| Exhibit Number | Exhibit Description | Incorporated by Reference | | | | Filed Herewith |
|-------------------|---|---------------------------|------------|---------|------------------|-------------------|
| | | Form | File No. | Exhibit | Filing Date | |
| 3.1 | Restated Certificate of Incorporation. | 10-Q | 001-35551 | 3.1 | July 31, 2012 | |
| 3.2 | Amended and Restated Bylaws. | 8-K | 001-35551 | 3.1 | April 15, 2019 | |
| 3.3 | Description of Registrant's Capital Stock. | | | | | X |
| 4.1 | Form of Class A Common Stock Certificate. | S-1 | 333-179287 | 4.1 | February 8, 2012 | |
| 4.2 | Form of Class B Common Stock Certificate. | S-8 | 333-181566 | 4.4 | May 21, 2012 | |
| 4.3 | Form of "Type 1" Holder Voting Agreement, between Registrant, Mark Zuckerberg, and certain parties thereto. | S-1 | 333-179287 | 4.3 | February 8, 2012 | |
| 10.1+ | Form of Indemnification Agreement. | 8-K | 333-179287 | 10.1 | April 15, 2019 | |
| 10.2(A)+ | 2005 Stock Plan, as amended. | 10-K | 001-35551 | 10.2(A) | February 1, 2013 | |
| 10.2(B)+ | 2005 Stock Plan forms of award agreements. | S-1 | 333-179287 | 10.2 | February 8, 2012 | |
| 10.3(A)+ | 2012 Equity Incentive Plan, as amended. | 10-Q | 001-35551 | 10.1 | April 26, 2018 | |
| 10.3(B)+ | 2012 Equity Incentive Plan forms of award agreements. | 10-Q | 001-35551 | 10.2 | July 31, 2012 | |
| 10.3(C)+ | 2012 Equity Incentive Plan forms of award agreements (Additional Forms). | 10-K | 001-35551 | 10.3(C) | January 29, 2015 | |
| 10.3(D)+ | 2012 Equity Incentive Plan forms of award agreements (Additional Forms). | 10-Q | 001-35551 | 10.1 | May 4, 2017 | |
| 10.3(E)+ | 2012 Equity Incentive Plan forms of award agreements (Additional Forms). | 10-Q | 001-35551 | 10.1 | July 27, 2017 | |

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| Exhibit Number | Exhibit Description | Incorporated by Reference | | | | Filed Herewith |
|----------------|--|---------------------------|------------|---------|------------------|----------------|
| | | Form | File No. | Exhibit | Filing Date | |
| 10.3(F)+ | 2012 Equity Incentive Plan forms of award agreements (Additional Forms). | 10-Q | 001-35551 | 10.2 | April 26, 2018 | |
| 10.3(G)+ | 2012 Equity Incentive Plan forms of award agreements (Additional Forms). | 10-K | 001-35551 | 10.3(G) | January 31, 2019 | |
| 10.3(H)+ | 2012 Equity Incentive Plan forms of award agreements (Additional Forms). | 10-Q | 001-35551 | 10.2 | April 25, 2019 | |
| 10.4+ | Bonus Plan. | 10-Q | 001-35551 | 10.3 | April 25, 2019 | |
| 10.5+ | Amended and Restated Offer Letter, dated January 27, 2012, between Registrant and Mark Zuckerberg. | S-1 | 333-179287 | 10.6 | February 8, 2012 | |
| 10.6+ | Amended and Restated Employment Agreement, dated January 27, 2012, between Registrant and Sheryl K. Sandberg. | S-1 | 333-179287 | 10.7 | February 8, 2012 | |
| 10.7+ | Amended and Restated Offer Letter, dated May 2, 2014, between Registrant and Christopher Cox. | 10-K | 001-35551 | 10.8 | January 29, 2015 | |
| 10.8+ | Amended and Restated Offer Letter, dated January 27, 2012, between Registrant and Mike Schroepfer. | S-1 | 333-179287 | 10.9 | February 8, 2012 | |
| 10.11+ | Amended and Restated Offer Letter, dated August 25, 2014, between Registrant and David M. Wehner. | 10-K | 001-35551 | 10.10 | January 29, 2015 | |
| 10.12+ | Offer Letter, dated December 8, 2017, between Registrant and Kenneth I. Chenault. | 10-Q | 001-35551 | 10.4 | April 26, 2018 | |
| 10.13+ | Offer Letter, dated April 23, 2018, between Registrant and Jeffrey D. Zients. | 10-Q | 001-35551 | 10.1 | July 26, 2018 | |
| 10.14+ | Advisory Services Agreement, dated April 8, 2019, between Registrant and Christopher Cox. | 10-Q | 001-35551 | 10.4 | April 25, 2019 | |
| 10.15+ | Form of Executive Officer Offer Letter. | 10-Q | 001-35551 | 10.3 | July 25, 2019 | |
| 10.16+ | Executive Sales Incentive Plan. | 10-Q | 001-35551 | 10.4 | July 25, 2019 | |
| 21.1 | List of subsidiaries. | | | | | X |
| 23.1 | Consent of Independent Registered Public Accounting Firm. | | | | | X |
| 31.1 | Certification of Mark Zuckerberg, Chief Executive Officer, pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. | | | | | X |
| 31.2 | Certification of David M. Wehner, Chief Financial Officer, pursuant to Rule 13a-14(a)/15d-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002. | | | | | X |
| 32.1# | Certification of Mark Zuckerberg, Chief Executive Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. | | | | | X |

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| Exhibit Number | Exhibit Description | Incorporated by Reference | | | | Filed Herewith |
|-------------------|--|---------------------------|----------|---------|-------------|-------------------|
| | | Form | File No. | Exhibit | Filing Date | |
| 32.2# | Certification of David M. Wehner, Chief Financial Officer, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002. | | | | | X |
| 101.INS | XBRL Instance Document. | | | | | X |
| 101.SCH | XBRL Taxonomy Extension Schema Document. | | | | | X |
| 101.CAL | XBRL Taxonomy Extension Calculation Linkbase Document. | | | | | X |
| 101.DEF | XBRL Taxonomy Extension Definition Linkbase Document. | | | | | X |
| 101.LAB | XBRL Taxonomy Extension Labels Linkbase Document. | | | | | X |
| 101.PRE | XBRL Taxonomy Extension Presentation Linkbase Document. | | | | | X |
| 104 | Cover Page Interactive Data File (formatted as inline XBRL and contained in Exhibit 101). | | | | | X |

+ Indicates a management contract or compensatory plan.

This certification is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, as amended (Exchange Act), or otherwise subject to the liability of that section, nor shall it be deemed incorporated by reference into any filing under the Securities Act of 1933, as amended or the Exchange Act.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Menlo Park, State of California, on this 29th day of January 2020.

FACEBOOK, INC.

Date: January 29, 2020

/s/ David M. Wehner

David M. Wehner

Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints David M. Wehner and David W. Kling, and each of them, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming that all said attorneys-in-fact and agents, or any of them or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

| Signature | Title | Date |
|---|--|---------------------------------|
| <hr/> <i>/s/ Mark Zuckerberg</i> <hr/> Mark Zuckerberg | Chairman and Chief Executive Officer <i>(Principal Executive Officer)</i> | <hr/> January 29, 2020 <hr/> |
| <hr/> <i>/s/ David M. Wehner</i> <hr/> David M. Wehner | Chief Financial Officer <i>(Principal Financial Officer)</i> | <hr/> January 29, 2020 <hr/> |
| <hr/> <i>/s/ Susan J.S. Taylor</i> <hr/> Susan J.S. Taylor | Chief Accounting Officer <i>(Principal Accounting Officer)</i> | <hr/> January 29, 2020 <hr/> |
| <hr/> <i>/s/ Peggy Alford</i> <hr/> Peggy Alford | Director | <hr/> January 29, 2020 <hr/> |
| <hr/> <i>/s/ Marc L. Andreessen</i> <hr/> Marc L. Andreessen | Director | <hr/> January 29, 2020 <hr/> |
| <hr/> <i>/s/ Kenneth I. Chenault</i> <hr/> Kenneth I. Chenault | Director | <hr/> January 29, 2020 <hr/> |
| <hr/> <i>/s/ Sheryl K. Sandberg</i> <hr/> Sheryl K. Sandberg | Director | <hr/> January 29, 2020 <hr/> |
| <hr/> <i>/s/ Peter A. Thiel</i> <hr/> Peter A. Thiel | Director | <hr/> January 29, 2020 <hr/> |
| <hr/> <i>/s/ Jeffrey D. Zients</i> <hr/> Jeffrey D. Zients | Director | <hr/> January 29, 2020 <hr/> |

DESCRIPTION OF CAPITAL STOCK

The following description of capital stock of Facebook, Inc. (the “company,” “we,” “us” and “our”) summarizes certain provisions of our restated certificate of incorporation and our amended and restated bylaws. The description is intended as a summary, and is qualified in its entirety by reference to our restated certificate of incorporation and our amended and restated bylaws, copies of which have been filed as exhibits to this Annual Report on Form 10-K.

Our authorized capital stock consists of 9,241,000,000 shares, consisting of: (i) 5,000,000,000 shares of Class A common stock, \$0.000006 par value per share; (ii) 4,141,000,000 shares of Class B common stock, \$0.000006 par value per share; and (iii) 100,000,000 shares of preferred stock, \$0.000006 par value per share.

Common Stock***Dividend Rights***

Subject to preferences that may apply to shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and only then at the times and in the amounts that our board of directors may determine.

Voting Rights

The holders of our Class B common stock are entitled to ten votes per share, and holders of our Class A common stock are entitled to one vote per share. The holders of our Class A common stock and Class B common stock vote together as a single class, unless otherwise required by law. Delaware law could require either holders of our Class A common stock or our Class B common stock to vote separately as a single class in the following circumstances:

- if we were to seek to amend our certificate of incorporation to increase the authorized number of shares of a class of stock, or to increase or decrease the par value of a class of stock, then that class would be required to vote separately to approve the proposed amendment; and
- if we were to seek to amend our certificate of incorporation in a manner that alters or changes the powers, preferences or special rights of a class of stock in a manner that affected its holders adversely, then that class would be required to vote separately to approve the proposed amendment.

Stockholders do not have the ability to cumulate votes for the election of directors. Our restated certificate of incorporation and amended and restated bylaws provide for a classified board of directors consisting of three classes of approximately equal size, each serving staggered three-year terms, when the outstanding shares of our Class B common stock represent less than a majority of the combined voting power of common stock. Our directors will be assigned by the then-current board of directors to a class when the outstanding shares of our Class B common stock represent less than a majority of the combined voting power of common stock.

No Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights and is not subject to conversion, redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

Upon our dissolution, liquidation or winding-up, the assets legally available for distribution to our stockholders are distributable ratably among the holders of our common stock, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights and payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

Conversion

The outstanding shares of Class B common stock are convertible at any time as follows: (1) at the option of the holder, a share of Class B common stock may be converted at any time into one share of Class A common stock or (2) upon the election of the holders of a majority of the then outstanding shares of Class B common stock, all outstanding shares of Class B common stock may be converted into shares of Class A common stock. In addition, each share of Class B common stock will convert automatically into one share of Class A common stock upon any transfer, whether or not for value, except for certain transfers described in our restated certificate of incorporation, including transfers to family members, trusts solely for the benefit of the stockholder or their family members, and partnerships, corporations, and other entities exclusively owned by the stockholder or their family members. Once converted or transferred and converted into Class A common stock, the Class B common stock will not be reissued.

Preferred Stock

Subject to limitations prescribed by Delaware law, our board of directors is authorized to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences and rights of the shares of each series and any of its qualifications, limitations or restrictions. Our board of directors also can increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company.

Voting Agreement

Our CEO is a party to a voting agreement with Dustin Moskowitz and certain of his affiliates.

The stockholders party to this agreement have agreed to vote all of their shares as directed by, and granted an irrevocable proxy to, Mr. Zuckerberg at his discretion on all matters to be voted upon by stockholders. Until the earlier of Mr. Zuckerberg's death or consent to waive or terminate the voting agreement, the shares of our common stock will remain subject the provisions of this voting agreement regardless of any sale, transfer, assignment, pledge, or other disposition of the shares.

We do not believe that the parties to this voting agreement constitute a "group" under Section 13 of the Exchange Act, as Mr. Zuckerberg exercises voting control over the shares held by these stockholders.

Anti-Takeover Provisions

So long as the outstanding shares of our Class B common stock represent a majority of the combined voting power of common stock, Mark Zuckerberg will effectively control all matters submitted to our stockholders for a vote, as well as the overall management and direction of our company, which will have the effect of delaying, deferring or discouraging another person from acquiring control of our company.

After such time as the shares of our Class B common stock no longer represent a majority of the combined voting power of our common stock, the provisions of Delaware law, our restated certificate of incorporation and our amended and restated bylaws may have the effect of delaying, deferring or discouraging another person from acquiring control of our company.

Delaware Law

A Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a stockholders' amendment approved by at least a majority of the outstanding voting shares. We have expressly elected not to be governed by the business combination provisions of Section 203 of the Delaware General Corporation Law.

Restated Certificate of Incorporation and Bylaw Provisions

Our restated certificate of incorporation and our amended and restated bylaws include a number of provisions that may have the effect of deterring hostile takeovers or delaying or preventing changes in control of our company, even after such time as the shares of our Class B common stock no longer represent a majority of the combined voting power of our common stock, including the following:

- *Separate Class B Vote for Certain Transactions.* 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 until such time as shares of our Class B common stock represent less than thirty-five percent (35%) of the combined voting power of our common stock. This provision could delay or prevent the approval of a change in control that might otherwise be approved by a majority of outstanding shares of our Class A and Class B common stock voting together on a combined basis.
 - *Dual Class Stock.* Our restated certificate of incorporation provides for a dual class common stock structure, which provides Mark Zuckerberg, our founder, Chairman, and CEO, 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, including the election of directors and significant corporate transactions, such as a merger or other sale of our company or its assets.
 - *Supermajority Approvals.* Our restated certificate of incorporation and amended and restated bylaws do not provide that certain amendments to our restated certificate of incorporation or amended and restated bylaws by stockholders will require the approval of two-thirds of the combined vote of our then-outstanding shares of Class A and Class B common stock. However, 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 amended and restated bylaws by stockholders will require the approval of two-thirds of the combined vote of our then-outstanding shares of Class A and Class B common stock. This will have the effect of making it more difficult to amend our certificate of incorporation or amended and restated bylaws to remove or modify certain provisions.
 - *Board of Directors Vacancies.* Our restated certificate of incorporation and amended and restated bylaws provide that stockholders may fill vacant directorships. When the outstanding shares of our Class B common stock represent less than a majority of the combined voting power of common stock, our restated certificate of incorporation and amended and restated bylaws authorize only our board of directors to fill vacant directorships. In addition, the number of directors constituting our board of directors is set only by resolution adopted by a majority vote of our entire board of directors. These provisions restricting the filling of vacancies will prevent a stockholder from increasing the size of our board of directors and gaining control of our board of directors by filling the resulting vacancies with its own nominees.
 - *Classified Board.* Our board of directors is not classified. Our restated certificate of incorporation and amended and restated bylaws provide that when the outstanding shares of our Class B common stock represent less than a majority of the combined voting power of common stock, our board of directors will be classified into three classes of directors each of which will hold office for a three-year term. In addition, thereafter, directors may only be removed from the board of directors for cause. The existence of a classified board could delay a successful tender offeror from obtaining majority control of our board of directors, and the prospect of that delay might deter a potential offeror.
 - *Stockholder Action; Special Meeting of Stockholders.* Our restated certificate of incorporation provides that stockholders will be able to take action by written consent. When the outstanding shares of our Class B common stock represent less than a majority of the combined voting power of common stock, our stockholders will no longer be able to take action by written consent, and will only be able to take action at annual or special meetings of our stockholders. Stockholders will not be permitted to cumulate their votes for the election of directors. Our amended and restated bylaws further provide that special meetings of our stockholders may be called only by a majority of our board of directors, the chairman of our board of directors, our chief executive officer or our president.
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- *Advance Notice Requirements for Stockholder Proposals and Director Nominations.* Our amended and restated bylaws provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at any meeting of stockholders. Our amended and restated bylaws also specify certain requirements regarding the form and content of a stockholder's notice. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our meetings of stockholders.
- *Issuance of Undesignated Preferred Stock.* Our board of directors has the authority, without further action by the stockholders, to issue up to 100,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by the board of directors. The existence of authorized but unissued shares of preferred stock enables our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise.

Choice of Forum

Our restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our restated certificate of incorporation or our amended and restated bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine.

Listing

Our Class A common stock is listed on the Nasdaq Global Select Market under the symbol "FB."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A.

**LIST OF SUBSIDIARIES
FACEBOOK, INC.**

Andale, Inc. (Delaware)
Cassin Networks ApS (Denmark)
Edge Network Services Limited (Ireland)
Facebook Global Holdings I, Inc. (Delaware)
Facebook Global Holdings I, LLC (Delaware)
Facebook Global Holdings II, LLC (Delaware)
Facebook International Operations Limited (Ireland)
Facebook Ireland Holdings Unlimited (Ireland)
Facebook Ireland Limited (Ireland)
Facebook Operations, LLC (Delaware)
Facebook Sweden Holdings AB (Sweden)
Facebook Technologies, LLC (Delaware)
FCL Tech Limited (Ireland)
Greater Kudu LLC (Delaware)
Instagram, LLC (Delaware)
KUSU PTE. LTD. (Singapore)
MALKOHA PTE LTD. (Singapore)
Morning Hornet LLC (Delaware)
Parse, LLC (Delaware)
Pinnacle Sweden AB (Sweden)
Raven Northbrook LLC (Delaware)
Runways Information Services Limited (Ireland)
Scout Development LLC (Delaware)
Siculus, Inc. (Delaware)
Sidecat LLC (Delaware)
Stadion LLC (Delaware)
Starbelt LLC (Delaware)
Vitesse, LLC (Delaware)
WhatsApp Inc. (Delaware)
Winner LLC (Delaware)

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 No. 333-229457) pertaining to the 2012 Equity Incentive Plan of Facebook, Inc.,
- (2) Registration Statement (Form S-8 No. 333-222823) pertaining to the 2012 Equity Incentive Plan of Facebook, Inc.,
- (3) Registration Statement (Form S-8 No. 333-186402) pertaining to the 2012 Equity Incentive Plan of Facebook, Inc., and
- (4) Registration Statement (Form S-8 No. 333-181566) pertaining to the 2005 Officers' Stock Plan, 2005 Stock Plan, and 2012 Equity Incentive Plan of Facebook, Inc.

of our reports dated January 29, 2020, with respect to the consolidated financial statements of Facebook, Inc. and the effectiveness of internal control over financial reporting of Facebook, Inc. included in this Annual Report (Form 10-K) of Facebook, Inc. for the year ended December 31, 2019.

/s/ Ernst & Young LLP

Redwood City, California
January 29, 2020

**CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, Mark Zuckerberg, certify that:

1. I have reviewed this annual report on Form 10-K of Facebook, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: January 29, 2020

/s/ MARK ZUCKERBERG

Mark Zuckerberg

Chairman and Chief Executive Officer

(Principal Executive Officer)

**CERTIFICATION OF PERIODIC REPORT UNDER SECTION 302 OF
THE SARBANES-OXLEY ACT OF 2002**

I, David M. Wehner, certify that:

1. I have reviewed this annual report on Form 10-K of Facebook, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: January 29, 2020

/s/ DAVID M. WEHNER

David M. Wehner

Chief Financial Officer

(Principal Financial Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

I, Mark Zuckerberg, Chairman and Chief Executive Officer of Facebook, Inc. (Company), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

- the Annual Report on Form 10-K of the Company for the year ended December 31, 2019 (Report) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the periods presented therein.

Date: January 29, 2020

/s/ MARK ZUCKERBERG

Mark Zuckerberg

Chairman and Chief Executive Officer

(Principal Executive Officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

I, David M. Wehner, Chief Financial Officer of Facebook, Inc. (Company), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to the best of my knowledge:

- the Annual Report on Form 10-K of the Company for the year ended December 31, 2019 (Report) fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company for the periods presented therein.

Date: January 29, 2020

/s/ DAVID M. WEHNER

David M. Wehner

Chief Financial Officer

(Principal Financial Officer)