

ZYNGA INC
Form 10-K
February 17, 2017

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2016

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: 001-35375

Zynga Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	42-1733483
(State or Other Jurisdiction of	(I.R.S. Employer
Incorporation or Organization)	Identification Number)
699 Eighth Street	94103
San Francisco, CA	(Zip Code)
(Address of principal executive offices)	

(855) 449-9642

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(Registrant's telephone number, including area code)

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

Title of each class:	Name of each exchange on which registered:
Class A Common Stock, par value \$0.00000625 per share	The Nasdaq Global Select Market

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 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 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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company)	Smaller reporting company

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

The aggregate market value of the voting stock held by non-affiliates of the registrant on June 30, 2016, based upon the closing price of \$2.49 of the registrant's Class A Common Stock as reported on the NASDAQ Global Select Market, was approximately \$1.861 billion, which excludes 134.7 million shares of the registrant's common stock held

on June 30, 2016 by then current executive officers, directors, and stockholders that the registrant has concluded are affiliates of the registrant.

As of February 15, 2017, there were 787,117,661 shares of the registrant's Class A common stock outstanding, 70,303,727 shares of the registrant's Class B common stock outstanding and 20,517,472 shares of the registrant's Class C common stock outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement for the 2017 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. The proxy statement will be filed with the Securities and Exchange Commission within 120 days of the registrant's fiscal year ended December 31, 2016.

Zynga Inc.

Form 10-K

For the Fiscal Year Ended December 31, 2016

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Zynga, the Zynga logo and other trademarks or service marks of Zynga appearing in this report are the property of Zynga. Trade names, trademarks and service marks of other companies appearing in this report are the property of their respective holders.

References in this report to “DAUs” mean daily active users of our games, “MAUs” mean monthly active users of our games, “MUUs” mean monthly unique users of our games, “ABPU” means average daily bookings per average DAU and “MUPs” mean monthly unique payers in our games. Unless otherwise indicated, these metrics are based on internally-derived measurements across all platforms on which our games are played. For further information about ABPU, DAUs, MAUs, MUPs, and MUUs as measured by us, see the section titled “Management’s Discussion and

Analysis of Financial Condition and Results of Operations—Key Metrics.”

CAUTIONARY NOTE ABOUT FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward looking statements. All statements, other than statements of historical fact, made in this Annual Report on Form 10-K are forward looking. Examples of forward-looking statements include statements related to industry prospects, our future economic performance including anticipated revenues and expenditures, results of operations or financial position, and other financial items, our business plans and objectives, including our intended product releases, and may include certain assumptions that underlie the forward-looking statements. Forward-looking statements often include words such as “outlook,” “projected,” “intends,” “will,” “anticipate,” “believe,” “target,” “expect,” and statements in the future tense are generally forward-looking.

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. The achievement or success of the matters covered by such forward-looking statements involves significant risks, uncertainties and assumptions, including those described in “Part I. Item 1A. Risk Factors” of this Annual Report on Form 10-K. Moreover, we operate in a very competitive and rapidly changing environment and industry. New risks may also emerge from time to time. It is not possible for our management to predict all of the risks related to our business and operations, 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 forward-looking events and circumstances discussed in this Annual Report on Form 10-K may not occur and actual results could differ materially and adversely from those anticipated, predicted or implied in the forward-looking statements.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur, and reported results should not be considered as an indication of future performance. Given these risks and uncertainties, readers are cautioned not to place undue reliance on such forward-looking statements.

Except as required by law, we undertake no obligation to update any forward-looking statements for any reason to conform these statements to actual results or to changes in our expectations.

PART I

ITEM 1. BUSINESS

Overview

Zynga Inc. (“Zynga” or “we” or the “Company”) is a leading provider of social game services. We develop, market and operate social games as live services played on mobile platforms such as Apple’s iOS operating system and Google’s Android operating system and social networking sites such as Facebook. Generally, all of our games are free to play, and we generate revenue through the in-game sale of virtual goods (“online game revenue”) and advertising services (“advertising revenue”).

We are a pioneer and innovator of social games and a leader in making “play” a core activity on mobile devices and social networking sites. We believe our leadership position in social games is the result of our significant investment in our people, content, brand, technology and infrastructure. Our leadership position in social games is defined by the following:

• **Engaged and Global Community of Players.** According to our analytics, in 2016, we had 64 million monthly active users (“MAUs”), of which 82% were mobile MAUs, and 19 million daily active users (“DAUs”), of which 84% were mobile DAUs.

• **Leading Portfolio of Social Games.** We have developed a number of popular social games including games in our Slots, Words With Friends, Zynga Poker and FarmVille franchises.

• **Scalable Technology and Data.** We leverage our technology to increase player engagement, cross-promote our portfolio of games, continually enhance existing games, launch new games and build the Zynga brand. We believe our scale results in network effects that deliver compelling value to our players, and we are committed to making significant investments to grow our community of players, their engagement and monetization over time. We believe that combining data analytics with creative game design enables us to create a superior player experience.

Consistent with our free-to-play business model, a small portion of our players have historically been payers. In 2016, we had approximately 1.1 million monthly unique payers (“MUPs”) (excluding payers of Daily Celebrity Crossword and Vegas Diamond Slots). Because the opportunity for social interactions increases as the number of players increases, we believe that maintaining and growing our overall number of players, including the number of players who may not purchase virtual goods, is important to the success of our business. As a result, we believe that the number of players who choose to purchase virtual goods will continue to constitute a small portion of our overall players.

Our top three revenue-generating games historically have contributed a significant portion of our revenue, though the games that represent our top three revenue-generating games vary over time. Our top three revenue-generating games accounted for 44%, 53% and 60% of our online game revenue in 2016, 2015 and 2014, respectively. In 2016, our top games were Zynga Poker, Wizard of Oz Slots and Hit It Rich! Slots.

Our operations are headquartered in San Francisco, California, and we have several operating locations in the U.S. as well as various international office locations in India and Europe. We were originally organized in April 2007 and completed our initial public offering in December 2011. Our Class A common stock is listed on the NASDAQ Global Select Market under the symbol “ZNGA.”

Our Strategy and Core Commitments

Our mission is to connect the world through games. In pursuit of our mission, we encourage entrepreneurship and intelligent risk-taking to produce great games and breakthrough innovations. Our goal is to create new games that engage mainstream global audiences.

We encourage innovation, the creation of compelling game experiences and moving with a sense of urgency to capitalize on our opportunities for our success and the benefit of our players. These factors are critical to extending our leadership position as we seek to continue building successful franchises.

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Our Social Games

We design our social games to provide players with shared experiences that surprise and delight them. Our social games leverage the global connectivity and distribution of mobile platforms such as iOS and Android and social networking sites such as Facebook. Our games are free to play, span a number of categories and attract a community of players that is demographically and geographically diverse. We operate our games as live services and update them with fresh content and new features to make them more social, enhance player engagement and improve monetization. We analyze the data generated by our players' game play and social interactions to guide the creation of new content and features. We use this ongoing feedback loop to keep our games compelling and enhance the player experience.

Our Content

Make Games Free, Accessible and Fun. We operate our games as live services that are available anytime and anywhere. We design our social games to provide players with easy access to shared experiences that delight, amuse and entertain, and we will continue to update our games on an ongoing basis with fresh content and new features to make them more social and fun for our players.

Sustain and Grow Live Franchises. We will continue to enhance the games that make up our market-leading franchises including Slots, Words With Friends, Zynga Poker and FarmVille. We regularly update our games after launch to encourage social interactions, add new content and features and seek to improve monetization.

Create New Games. We will continue to invest in building new games that we offer, as well as offer our games on multiple platforms so players can access our games on various devices.

Growth on Mobile. We believe there is a large opportunity to extend our brand and games to mobile platforms including iOS and Android. We continued our focus on mobile first games in 2016.

Our Franchises

We currently invest in the following game categories:

- **Social Casino.** Includes Zynga Poker and our Slots games such as Hit It Rich! Slots, Wizard of Oz Slots, Willy Wonka and the Chocolate Factory Slots and Black Diamond Casino. Games in this category allow our players to experience the thrill of the win as they compete against friends and family in their favorite casino card and slots games.
- **Casual.** Includes one of our most popular mobile game titles, Words With Friends, along with other casual offerings such as Wizard of Oz: Magic Match. In 2016, we became one of the first game companies to launch on the Apple App Store for iMessage with our Words With Friends iMessage app. Games in this category provide chances for friendly competition and allow our players to quickly connect with friends and family when they start a game and to build and enhance relationships throughout the game experience.
- **Action Strategy.** Includes CSR Racing 2 and Dawn of Titans, which both launched in the second half of 2016. Games in this category emphasize skillful thinking and planning to achieve victory against other players.
- **Invest Express.** Includes FarmVille, FarmVille 2, FarmVille 2: Country Escape and FarmVille: Tropic Escape. Games in this category allow our players to express their personalities by customizing the appearances of their game board.

We also may invest in other strategic categories in the future.

Our Network

We believe it is more fun for players to engage in our games with friends and family. Players also progress faster in our games by connecting with friends and other players in our network to instantly get what they need to complete quests, obtain virtual items and enhance their experience. We aspire to leverage our existing and new games to bring the best social playing experiences to our audience. Our network enables users to discover new games, find and connect with new friends, and challenge, cooperate and compete with friends, all of which drive higher user engagement for games on our network.

Our Revenues

We generate revenue from the following live services:

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Virtual Goods and Paid Downloads

Our primary revenue source is the sale of virtual currency that players use to buy in-game virtual goods. Virtual currency can also be earned for free through game play or by accepting promotional offers from our advertising partners. We also generate revenue when players purchase mobile game downloads.

Advertising and Licensing

Our advertising services offer creative ways for marketers and advertisers to reach and engage with our players while allowing continued operation of a free-to-play business model. Our advertising offerings include:

- Branded Virtual Goods and Sponsorships that integrate relevant advertising and messaging within game play;
- Engagement Ads and Offers in which players can answer certain questions, watch-to-earn engagements or sign up for third party services to receive virtual currency and in-game bonuses;
- Mobile Ads through ad-supported free versions of our mobile games;
- Display Ads in our online web games that include banner advertisements; and
- Licensing our brands.

The goal of our engagement-based advertising and branded virtual goods and sponsorships is to enhance the player experience while delivering real value to advertisers.

Revenue and Profits

For a description of our revenue and profits see the consolidated financial statements including Note 13 —“Geographic information” in the notes to the consolidated financial statements, which are incorporated by reference herein.

Marketing and Distribution

We acquire our players through unpaid channels by cross-promoting new games to our existing audience and through paid advertising channels. We have been able to build a large community of players through the viral and sharing features provided by social networks, the social innovations in our games and the network effects of our games.

We are committed to connecting with our players. We have fan pages, generally on Facebook, for each of our games to connect with our players, and we leverage various other forms of social media, including Twitter, to communicate with them. We periodically host live and online player events. We also advertise our games within other mobile applications and on social networks such as Facebook via various in-app advertising partners. In 2016 and 2015, we spent \$132.5 million and \$128.9 million, respectively, on these player acquisition costs.

Agreements with Facebook, Apple and Google

Our revenue depends on our continued ability to publish our games on mobile platforms, primarily iOS and Android, and on social networking sites, primarily Facebook. In 2016, we derived 46% of our revenue and 47% of our bookings from Apple, 29% of our revenue and 30% of our bookings from Google and 20% of our revenue and 18% of our bookings from Facebook. In 2016, an increasing number of our players played our games on mobile platforms.

Our use of mobile platforms and data derived from mobile platforms is governed by the standard terms of service of the mobile platforms, primarily Apple and Google. Our use of the Facebook platform and data derived from Facebook is also governed by Facebook’s standard terms of service except for certain limited addenda. Any of these operators could unilaterally alter their terms of service in a manner that could harm our business.

Research and Development

We believe continued investment in enhancing existing games and developing new games, and in software development tools and code modification, is important to attaining our strategic objectives. Our research and development expenses were \$320.3 million, \$361.9 million and \$396.6 million in 2016, 2015 and 2014, respectively, which included stock-based expense of \$84.2 million, \$94.5 million and \$83.7 million, respectively, related to compensation for research and development personnel.

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Technology and Tools

We have invested extensively in developing our proprietary technology stack, which has the ability to handle sudden bursts of activity for millions of players over a short period of time with high levels of performance and reliability. Our proprietary technology stack includes datacenter and cloud computing management, a shared code base, network and cross-promotional features and proprietary data analytics. Our technology stack also supports the growth of our 2D and 3D game engines across the mobile business in addition to supporting high-level security and anti-fraud infrastructure. We are also investing in machine learning. We believe that investing in technology and tools, including the simulation technologies we acquired with our purchase of NaturalMotion, can create competitive advantages as well as extend our technology leadership. We will continue to innovate and optimize across our technology and tools to deliver cost-effective, high performance and highly available social games.

Intellectual Property

Our business is significantly based on the creation, acquisition, use and protection of intellectual property. Some of this intellectual property is in the form of software code, patented technology and trade secrets that we use to develop our games and to enable them to run properly on multiple platforms. Other intellectual property we create includes product and feature names and audio-visual elements, including graphics, music, story lines and interface design.

While most of the intellectual property we use is created by us, we have also acquired rights to proprietary intellectual property. We have also obtained rights to use intellectual property through licenses and service agreements with third parties. These licenses typically limit our use of intellectual property to specific uses and for specific time periods.

We protect our intellectual property rights by relying on federal, state and common law protections, as well as contractual restrictions. We actively seek patent protection covering our inventions and we acquire patents we believe may be useful or relevant to our business. We control access to our proprietary technology by entering into confidentiality and invention assignment agreements with our employees and contractors, and confidentiality agreements with third parties. We also actively engage in monitoring and enforcement activities with respect to infringing uses of our trademarks, copyrights and domain names by third parties.

In addition to these contractual arrangements, we also rely on a combination of trade secret, copyright, trademark, trade dress, domain name and patents to protect our games and other intellectual property. We typically own the copyright to the software code to our content, as well as the trademark for the brand or title under which our games are marketed. We pursue the registration of our domain names, copyrights, trademarks patents, and service marks in the U.S. and, for some, in locations outside the U.S. Our registered trademarks in the U.S. include “Zynga” and the names of our games, among others.

Circumstances outside our control could pose a threat to our intellectual property rights. For example, effective intellectual property protection may not be available in the U.S. or other countries in which our games are distributed. Also, the efforts we have taken to protect our proprietary rights may not be sufficient or effective. Any significant impairment of our intellectual property rights could harm our business or our ability to compete. Also, protecting our intellectual property rights is costly and time-consuming. Any unauthorized disclosure or use of our intellectual property could make it more expensive to do business, thereby harming our operating results.

Companies in the Internet, games, social media, technology and other industries may own large numbers of patents, copyrights and trademarks and may frequently request license agreements, threaten litigation or file suit against us based on allegations of infringement or other violations of intellectual property rights. From time to time, we have faced, and we expect to face in the future, allegations by third parties, including our competitors and non-practicing entities, that we have infringed their copyrights, trademarks, patents and other intellectual property rights. As we face increasing competition and as our business grows, including into new areas, we will likely face more claims of infringement.

Competition

We face significant competition in all aspects of our business. Specifically, we compete for the leisure time, attention and discretionary spending of our players with other social game developers on the basis of a number of factors, including quality of player experience, brand awareness and reputation and access to distribution channels.

We believe we compete favorably on these factors. However, our industry is evolving rapidly and is becoming increasingly competitive. Other developers of social games could develop more compelling content that competes with our social games and adversely affects our ability to attract and retain players and their entertainment time. These competitors, including companies of which we may not be currently aware, may take advantage of social networks, access to a large user base and their network effects to grow rapidly and virally.

Our competitors include:

• **Developers for Mobile and Web Games:** We face competition from a number of competitors who develop mobile and web games. These competitors, some of which have significant financial, technical and other resources, greater name recognition and longer operating histories, may create games that appeal to our players. The mobile game sector specifically is characterized by frequent product introductions, rapidly emerging mobile platforms, new technologies and new mobile application storefronts. Some of these competitors include Electronic Arts (EA Mobile), Activision Blizzard (King Digital), Gameloft, Glu Mobile, Kabam, Jam City, Machine Zone, Pocket Gems, Rovio, Supercell, Playtika, DoubleDown and SG Interactive. Because our games are free to play, we compete primarily on the basis of player experience rather than price. We also expect new competitors to enter the market and existing competitors to allocate more resources to develop and market competing games and applications.

• **Other Game Developers:** Our players may also play other games on personal computers and consoles, some of which include social features that compete with our social games and have community functions where game developers can engage with their players. Some of these competitors include Activision Blizzard, Electronic Arts, Riot Games, Sony, Ubisoft, Take-Two Interactive, Nintendo, SEGA and Disney.

• **Other Forms of Media and Entertainment:** We compete more broadly for the leisure time and attention of our players with providers of other forms of Internet and mobile entertainment, including social networking, online casual entertainment and music. To the extent existing or potential players choose to read, watch or listen to online content or streaming video or radio, play interactive video games at home or on their computer or mobile devices rather than play social games, these content services pose a competitive threat.

Government Regulation

We are subject to various federal, state and international laws and regulations that affect that affect companies conducting business on the Internet and mobile platforms, including those relating to privacy, use and protection of player and employee personal information and data (including the collection of data from minors), the Internet, behavioral tracking, mobile applications, content, advertising and marketing activities (including sweepstakes, contests and giveaways), and anti-corruption. Additional laws in all of these areas are likely to be passed in the future, which could result in significant limitations on or changes to the ways in which we can collect, use, host, store or transmit the personal information and data of our customers or employees, communicate with our players, and deliver products and services, or may significantly increase our compliance costs. As our business expands to include new uses or collection of data that are subject to privacy or security regulations, our compliance requirements and costs will increase and we may be subject to increased regulatory scrutiny.

Some of our games and features are based upon traditional casino games, such as slots and poker. We have structured and operate these games and features with gambling laws in mind and believe that these games and features do not constitute gambling.

Seasonality

In 2016, approximately 26% of our revenue was derived from the “advertising and other” category. Advertising budgets are generally highest during the fourth quarter and decline significantly in the first quarter of the following year, which affects the revenues we derive from advertisements and offers in our games. Additionally, we generally experience increases in game downloads and resulting online games revenues in the fourth quarter and first quarter corresponding to increases in smartphone and tablet purchases during the holiday shopping season.

Employees

Our future success depends upon the continued service of our key technical and management personnel and upon our ability to continue to attract and retain qualified employees, particularly our senior management team and highly skilled game designers, product managers and engineers. We currently have favorable employee relations, but the competition for technical personnel is intense, and the loss of key employees or the inability to hire such employees

when needed could have a material adverse impact on our business and financial condition. As of December 31, 2016, we had 1,681 full-time employees.

Financial Information about Segments and Geographic Areas

We have one operating segment with one business activity, developing and monetizing social games. Financial information about our one segment and geographic areas is incorporated into this section by reference to our consolidated financial statements including Note 13 —“Geographic information” in the notes to the consolidated financial statements.

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Available Information

Our website is located at www.zynga.com and our investor relations website is located at <http://investor.zynga.com>. We make available free of charge (and available for download) on our investor relations website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, proxy statements and other Securities and Exchange Commission (“SEC”) filings, and any amendments to those reports and any other filings that we file with or furnish to the SEC as soon as reasonably practicable after they are filed. These reports and filings are also available at the SEC’s website at www.sec.gov and at the SEC’s Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. Information on the operation of the Public Reference Room can be obtained by calling the SEC at 1-800-SEC-0330.

We post an audio version of our earnings calls and may webcast certain events we participate in or host with members of the investment community on our investor relations website. Additionally, we provide notifications of news or announcements regarding our financial performance, including SEC filings, investor events, press and earnings releases as part of our investor relations website. Investors and others can receive notifications of new information posted on our investor relations website in real time by signing up for email alerts and RSS feeds. Further corporate governance information, including our certificate of incorporation, bylaws, governance guidelines, board committee charters and committee memberships, and code of conduct, is also available on our investor relations website under the heading “Corporate Governance.” The contents of our websites are not incorporated by reference into this Annual Report on Form 10-K or in any other report or document we file with the SEC, and any references to our websites are intended to be inactive textual references only.

ITEM 1A. RISK FACTORS

We have identified the following risks and uncertainties that may have a material adverse effect on our business, financial condition, results of operations or reputation. The risks described below are not the only ones we face. Additional risks not presently known to us or that we currently believe are not material may also significantly affect our business, financial condition, results of operations or reputation. Our business could be harmed by any of these risks. The trading price of our Class A common stock could decline due to any of these risks, and you may lose all or part of your investment. In assessing these risks, you should also refer to the other information contained in this Annual Report on Form 10-K, including our consolidated financial statements and related notes.

Risks Related to Our Business and Industry

Our business will suffer if we are unable to continue to develop successful games for mobile platforms, successfully monetize mobile games, or successfully forecast mobile launches and/or monetization.

Our business depends on developing and publishing mobile games that consumers will download and spend time and money playing. We have devoted and we expect to continue to devote substantial resources to the research, development, analytics and marketing of our mobile games; however, we cannot guarantee that we will continue to develop games that appeal to players or advertisers. We are also in the process of executing plans to succeed as a mobile first company, which includes the optimization of our live games, development and launch of new games, stemming declines in our audience size and prudent cost control. However, these efforts may not be sufficient to enable us to improve our operating results. In order to generate profits, new games that we introduce need to generate sufficient bookings and revenues to offset the associated development and marketing costs. As our player base becomes more heavily concentrated on mobile platforms, our ability to drive traffic to our games through unpaid channels may become diminished, and the overall cost of marketing our games may increase. We may also encounter

difficulty in integrating features on games developed for mobile platforms that a sufficient number of players will pay for or otherwise sufficiently monetizing mobile games. The success of our games depends, in part, on unpredictable and volatile factors beyond our control including consumer preferences, competing games, new mobile platforms and the availability of other entertainment experiences. If our games are not launched on time or do not meet consumer expectations, or they are not brought to market in a timely and effective manner, our ability to grow revenue and our financial performance will be negatively affected. For example, we experienced delays in the introduction of Dawn of Titans and CSR Racing 2, which had a negative impact on our financial results.

We focus our efforts on four categories: Social Casino, Casual, Action Strategy and Invest Express. In addition to the market factors noted above, our ability to successfully develop games for mobile platforms and their ability to achieve commercial success will depend on our ability to:

- effectively market mobile games to our existing web-based players, mobile players and new players without excess cost;
- achieve viral organic growth;
- achieve benefit from player acquisition costs that may materialize in the future;
- adapt to changing player preferences;

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- adapt games quickly to make sure they are compatible with, and take advantage of feature sets for new releases of mobile phones and other devices;
- expand and enhance games after their initial release;
- anticipate and effectively respond to the growing number of players switching from web-based to mobile games, the changing mobile landscape and the interests of players on mobile platforms;
- attract, retain and motivate talented game designers, product managers and engineers who have experience developing games for mobile platforms;
- partner with mobile platforms and obtain featuring opportunities;
 - adapt game feature sets for limited bandwidth, processing power and screen size of typical mobile devices;
- minimize launch delays and cost overruns on the development of new games;
- effectively monetize our games;
- maintain a quality social game experience;
- provide a compelling and optimal user experience through existing and developing third party technologies, including third party software and middleware utilized by our players;
- release games compatible with an increasingly diverse set of mobile devices;
- compete successfully against a large and growing number of existing market participants;
- minimize and quickly resolve bugs or outages; and
- acquire and successfully integrate high quality mobile game assets, personnel or companies.

These and other uncertainties make it difficult to know whether we will succeed in continuing to develop successful mobile games and launch these games in accordance with our financial plan. If we do not succeed in doing so, our business, financial condition, results of operations or reputation will suffer.

Moreover, our mobile games generally monetize at a lower rate than our web-based games and we may not be successful in our efforts to increase our monetization from mobile games. If we are unable to offset the decline in our web-based games with bookings from our mobile games, our revenue and our financial performance will suffer.

We have a relatively short history in developing and launching mobile games. As a result, we may have difficulty predicting the development schedule of a new game and forecasting bookings for a game. If launches are delayed and we are unable to monetize mobile games in the manner that we forecast, our ability to grow revenue and our financial performance will be negatively impacted.

We must continue to launch, innovate and enhance games that players like and attract and retain a significant number of players in order to grow our revenue and sustain our competitive position.

There is inherent risk that we may not launch games or features that we expect to launch in a given period according to schedule. Moreover, the games or features we do launch may not attract and retain a significant number of players or monetize well. If we do not launch games or features on schedule or our games do not monetize well, our business, revenue, bookings and profits will be negatively impacted. For example, in 2015 we announced that we would launch six to ten new mobile games in 2015. This estimate subsequently underwent several downward revisions and we ultimately launched 6 new mobile games in 2015, which negatively impacted our revenue, bookings and profits relative to our original expectations.

If our top games do not maintain their popularity, our results of operations could be harmed.

In addition to creating new games that are attractive to a significant number of players, we must extend the life of our existing games, in particular our most successful games. Historically, we have depended on a small number of games for a majority of our revenue and we expect that this dependency will continue for the foreseeable future. Our existing games compete with our new offerings and the offerings of our competitors. Traditionally, bookings from existing games decline over time. For a game to remain popular, we must constantly enhance, expand or upgrade the game with new features that players find attractive. Increased competition can result in increasing player acquisition

and retention costs. Constant game enhancement requires the investment of significant resources, particularly with older games, and such costs on average have increased. We may not be able to successfully enhance, expand or upgrade our current games. Any reduction in the number of players of our most popular games, any decrease in the popularity of our games or social games in general, any breach of game-related security or prolonged server interruption impacting

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player's ease of use of our games, any loss of rights to any intellectual property underlying such games disabling player use, or any other similar adverse developments relating to our most popular games, could harm our business, financial condition, results of operations or reputation..

Our industry is intensely competitive. If consumers prefer our competitors' products or services over our own, our operating results could suffer.

Competition in the gaming industry, especially the mobile gaming segment, is intense. Many new games are introduced in each major industry segment (mobile, web, and PC free-to-download), but only a relatively small number of titles account for a significant portion of total revenue in each segment. Our competitors that develop mobile and web games vary in size and include companies such as Electronic Arts (EA Mobile), Activision Blizzard (the parent company of King Digital), Gameloft, Glu Mobile, Kabam, Jam City, Machine Zone, Pocket Gems, Rovio, Supercell, Playtika, DoubleDown and SG Interactive. In addition, online game developers and distributors who are primarily focused on specific international markets, such as Tencent and Giant Interactive in Asia, and high-profile companies with significant online presences that to date have not actively focused on social games, such as Facebook, Apple, Google and Microsoft, may decide to develop social games. Some of these current and potential competitors have significant resources for developing or acquiring additional games, may be able to incorporate their own strong brands and assets into their games, have a more diversified set of revenue sources than we do and may be less severely affected by changes in consumer preferences, regulations or other developments that may impact our industry. In addition, we have limited experience in developing games for mobile and other platforms and our ability to succeed on those platforms is uncertain. We expect new game competitors to enter the market and existing competitors to allocate more resources to develop and market competing games and applications.

As there are relatively low barriers to entry to develop a mobile or online casual game, we expect new game competitors to enter the market and existing competitors to allocate more resources to develop and market competing games and applications. We also compete or will compete with a vast number of small companies and individuals who are able to create and launch games and other content for devices and platforms using relatively limited resources and with relatively limited start-up time or expertise. The proliferation of titles in these open developer channels makes it difficult for us to differentiate ourselves from other developers and to compete for players without substantially increasing our marketing expenses and development costs. Increasing competition could result in loss of players, loss of talent or loss of our ability to acquire new players in a cost-effective manner, all of which could harm our business, financial condition or results of operations.

Our operating results are volatile and difficult to predict, and our stock price may decline if we fail to meet the expectations of securities analysts or investors.

Our bookings, revenue, player traffic and operating results have fluctuated in the past and could vary significantly from quarter-to-quarter and year-to-year and may fail to match our past performance or the expectations of securities analysts or investors because of a variety of factors, some of which are outside of our control. Factors that may contribute to the variability of our operating results include the risk factors listed in these "Risk Factors" and the factors discussed in the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations — Factors Affecting Our Performance."

In particular, it is difficult to predict when bookings from one of our games will begin to decline, the decay rate for any particular game (i.e., the speed at which the popularity and player usage for a game declines) and the commercial success of our new games. The success of our business depends on our ability to consistently and timely launch new games or versions of games that achieve significant popularity and have the potential to become franchise games as bookings from our older games decline. It is difficult for us to predict with certainty when we will launch a new game as games may require longer development schedules or soft launch periods than we expect to meet our quality standards. For example, our experience with our launches in 2014 and 2015 caused us to extend soft launch periods for certain of our games before worldwide launch, including a move in the launch of Dawn of Titans and CSR Racing

2 from 2015 to 2016, which resulted in a delay in significant bookings for the games. If decay rates are higher than expected in a particular quarterly period and/or we experience delays in the launch of new games that we expect to offset decay rates of other games and/or new games do not monetize well, we may not meet our expectations or the expectations of securities analysts or investors for a given quarter.

In addition, we recognize revenue from the sale of our virtual goods in accordance with U.S. GAAP, which is complex and based on our assumptions and historical data with respect to the sale and use of various types of virtual goods. In the event that such assumptions are revised based on new data or there are changes in the historical mix of virtual goods sold due to new game introductions, reduced virtual good sales in existing games or other factors or there are changes in our estimates of average playing periods and player life, the amount of revenue that we recognize in any particular period may fluctuate significantly. In addition, changes in the policies of Facebook, Apple, Google or other third party platforms or accounting policies promulgated by the SEC and national accounting standards bodies affecting software and virtual goods revenue recognition could further significantly affect the way we report revenue related to our products. Such changes could have an adverse effect on our reported revenue, net income and earnings per share under U.S. GAAP. For

further information regarding our revenue recognition policy, see the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Critical Accounting Policies—Revenue Recognition”.

Given the rapidly evolving social game industry in which we operate, our historical operating results may not be useful in predicting our future operating results. In addition, metrics we have developed or those available from third parties regarding our industry and the performance of our games, including DAUs, MAUs, MUUs, MUPs and ABPU may not be indicative of our future financial performance.

A small number of games have generated a majority of our revenue, and we must continue to launch, innovate and enhance games that players like and attract and retain a significant number of players in order to grow our revenue and sustain our competitive position.

Historically, we have depended on a small number of games for a majority of our revenue and we expect that this dependency will continue for the foreseeable future. Bookings and revenue from many of our games tend to decline over time after reaching a peak of popularity and player usage. As a result of this natural decline in the life cycle of our games, our business depends on our ability to consistently and timely launch new games across multiple platforms and devices that achieve significant popularity and have the potential to become franchise games.

Each of our games requires significant engineering, marketing and other resources to develop, launch and sustain via regular upgrades and expansions, and such costs on average have increased over the last several years. Our ability to successfully launch, sustain and expand games and attract and retain players largely will depend on our ability to:

- anticipate and effectively respond to changing game player interests and preferences;
- achieve benefit from player acquisition costs that may materialize in the future;
- anticipate or respond to changes in the competitive and technological landscape (including, but not limited to changes in mobile devices and gaming platforms);
- attract, retain and motivate talented game designers, product managers and engineers;
- develop, sustain and expand games that our players find fun, interesting and compelling to play;
- develop games that can build upon or become franchise games;
- effectively market and advertise new games and enhancements to our existing players and new players;
- acquire players in a cost-effective manner;
- minimize the launch delays and cost overruns on new games and game expansions;
- minimize downtime and other technical difficulties; and
- acquire and integrate high quality assets, personnel and companies.

It is difficult to consistently anticipate player demand on a large scale, particularly as we develop games in new categories or new markets, including international markets and mobile platforms. If we do not successfully launch games that attract and retain a significant number of players and extend the life of our existing games, our market share, brand and financial results will be harmed. For example, in September 2014, we launched a new version of Zynga Poker which replaced our existing mobile poker offering. The launch resulted in a sharp decline in DAUs and revenue, and feedback that some existing players preferred the prior version of the game. As a result, we now have two mobile poker offerings, Zynga Poker and the original game offering, which was subsequently reintroduced as Zynga Poker Classic.

We rely on a small portion of our total players for nearly all of our revenue and if we fail to grow our player base, or if player engagement continues to decline, bookings, revenue and operating results will be harmed.

Compared to all players who play our games in any period, only a small portion are paying players. During 2016, we had approximately 1.1 million MUPs (excluding payers of Daily Celebrity Crossword and Vegas Diamond Slots), who represent approximately 2% of our total players during 2016. In order to sustain and grow our revenue levels, we must attract, retain and increase the number of paying players or more effectively monetize our players. To retain players, we must devote significant resources so that the games they play retain their interest and attract them to our

other games. We might not succeed in our efforts to increase the monetization rates of our users, particularly if we are unable to retain our paying players. If we fail to grow or sustain the number of our paying players, if the rates at which we attract and retain paying players declines or if the average amount our players pay declines, our business may not grow and our financial results will suffer.

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Our business depends on our players and our player's level of engagement is critical to our success. We lose players in the ordinary course of business. Average MAU declined 7% from 68 million in the fourth quarter of 2015 to 63 million in the fourth quarter of 2016. Our financial performance will continue to be significantly impacted if we continue to lose users. If we fail to sustain the number of our paying players, if the rates at which we attract and retain players declines or if the average amount our players pay declines, our business will continue to decline and our financial results will suffer.

We rely on third-party platforms such as the Apple App Store, the Google Play Store and Facebook to distribute our games and collect revenue. If we are unable to maintain a good relationship with such platform providers, if their terms and conditions or pricing changed to our detriment, if we violate, or if a platform provider believes that we have violated, the terms and conditions of its platform, or if any of these platforms loses market share or falls out of favor or is unavailable for a prolonged period of time, our business will suffer.

We derive a significant portion of our bookings from distribution of our games on the Apple App Store, the Google Play Store, and Facebook and the virtual items we sell in our games are purchased using the payment processing systems of these platform providers. Additionally, we have historically acquired a significant number of our players through Facebook. In 2016, we derived 46% of our revenue and 47% of our bookings from Apple, 29% of our revenue and 30% of our bookings from Google and 20% of our revenue and 18% of our bookings from Facebook.

We are subject to the standard policies and terms of service of third party platforms, which govern the promotion, distribution and operation generally of games on the platform. Each platform provider has broad discretion to change and interpret its terms of service and other policies with respect to us and other developers, and those changes may be unfavorable to us. A platform provider may also change its fee structure, add fees associated with access to and use of its platform, alter how we are able to advertise on the platform, change how the personal information of its users is made available to application developers on the platform or restrict how players can share information with friends on its platform or across platforms.

Such changes may decrease the visibility or availability of our games, limit our distribution capabilities, prevent access to our existing games, reduce the amount of bookings and revenue we may recognize from in-game purchases, increase our costs to operate on these platforms or result in the exclusion or limitation of our games on such platforms. Any such changes could adversely affect our business, financial condition or results of operations.

For example, Apple previously changed its policy and required apps available through the Apple App Store to provide 64-bit support and be built with the iOS 8 software development kit, with certain exceptions. This policy change required us to adapt our games to support 64-bit and be built with the iOS 8 software development kit, which involved significant development, time, and expense. In addition, due to the significant expense involved in supporting 64-bit development, we might decide not to continue updating certain of our existing games that we otherwise would have continued to update, which would cause the revenues we generate from those games to decline more quickly than they otherwise would have. Furthermore, building our games to support 64-bit development will increase the file size of our games, which could reduce the number of downloads of these games, particularly if we are unable to keep the size of the games below 100 megabytes, which is the maximum file size that can currently be downloaded over any carrier's wireless network.

As another example, Facebook introduced a new version of its developer platform that required us to migrate our games to that platform. We have made the decision not to migrate multiple games to the new platform, which impacted our players ability to access those games through Facebook and web based bookings and revenue in 2015 and 2016. If we are unable to develop new games or features that work with this platform our players may not be able to access those games or features or otherwise may encounter a negative gaming experience, resulting in reduced bookings and revenue. In addition, the new platform and any future changes to it may change the way our developers can interact with users or how Facebook users can share information with friends. Any such changes in the future could significantly alter how players experience or interact within our games, which may harm our business, financial

condition or results of operations.

If we violate, or a platform provider believes we have violated its terms of service (or if there is any change or deterioration in our relationship with these platform providers), that platform provider could limit or discontinue our access to the platform. A platform provider could also limit or discontinue our access to the platform if it establishes more favorable relationships with one or more of our competitors or it determines that we are a competitor. Any limit of, or discontinuation to, our access to any platform could adversely affect our business, financial condition or results of operations.

We also rely on the continued functionality of third-party platforms. In the past, some of these platform providers have been unavailable for short periods of time or experienced issues with their in-app purchasing functionality. If either of these events recurs on a prolonged, or even short-term, basis or other similar issues arise that impact players' ability to access our games, access social features or purchase virtual items, our business, financial condition, results of operations or reputation may be harmed.

Our prospects may suffer if our network is unsuccessful.

We aspire to expand our network to leverage our existing and new games to bring the best social playing experiences to our audience and further broaden to other games to ultimately create the best experience for play that includes mobile and web players. If our network fails to engage players or attract advertisers, we may fail to generate sufficient revenue or bookings to justify our investment in the development and operation of our network. We may also encounter technical and operational challenges operating a network.

We are subject to the terms of service of third party social networks and platforms such as Facebook, Apple and Google, where our games are distributed, which may limit our ability to operate or promote our network. For example, under the current terms of service with Facebook, we are limited in our ability to use a Facebook users' friends list and Facebook's communication channels to promote our network. This may limit our ability to reach Facebook users from our network and may limit the number of players that use our network.

Any restructuring actions and cost reduction initiatives that we undertake may not deliver the expected results and these actions may adversely affect our business.

We have implemented a number of restructurings during the last several years in which we implemented certain restructuring actions and cost reduction initiatives to streamline operations and improve cost efficiencies to better align our operating expenses with our revenue, including reducing our headcount, rationalizing our product pipeline, reducing marketing and technology expenditures and consolidating and closing certain facilities. Our most recent restructurings included a reduction in 2015 in headcount of approximately 18% of our global workforce, including contractors, and the closing of our studio in Beijing, China. We plan to continue to manage costs to better and more efficiently manage our business. Our restructuring plans and other such efforts could result in disruptions to our operations and adversely affect our business, financial condition or results of operations.

We expect to continue to actively monitor our costs, however, if we do not fully realize or maintain the anticipated benefits of any restructuring actions and cost reduction initiatives, our business, financial condition or results of operations could be adversely affected. In addition, we cannot be sure that the cost reduction initiatives will be as successful in reducing our overall expenses as expected or that additional costs will not offset any such reductions. If our operating costs are higher than we expect or if we do not maintain adequate control of our costs and expenses, our operating results will suffer.

In addition, our cost-cutting measures could negatively impact our business, financial condition or results of operations including but not limited to, delaying the introduction of new games, features or events, interrupting live services, impairing our control environment, delaying introduction of new technology, impacting our ability to react nimbly to game or technology issues, or impacting employee retention and morale.

If we fail to maintain and enhance our capabilities for porting games to a broad array of mobile devices, particularly those running the Android operating system, our revenues and financial results could suffer.

We derive a significant portion of our revenues from the sale of virtual goods within our games for smartphones and tablets that run iOS or Android. Unlike the Apple ecosystem in which Apple controls both the device (e.g., iPhone and iPad) and the storefront (Apple's App Store), the Android ecosystem is highly fragmented since a large number of original equipment manufacturers (OEMs) manufacture and sell Android-based devices that run a variety of versions of the Android operating system, and there are many Android-based storefronts in addition to the Google Play Store, such as Amazon App Store for Android. For us to sell our games to the widest possible audience of Android users, we must port our games to a significant portion of the more than 1,000 Android-based devices that are commercially available, many of which have different technical requirements. Since the number of Android-based smartphones and tablets shipped worldwide is growing significantly, it is important that we maintain and enhance our porting capabilities, which could require us to invest considerable resources in this area. These additional costs could

adversely affect our business, financial condition or results of operations. In addition, we must continue to increase the efficiency of our porting processes or it may take us longer to port games to an equivalent number of devices, which would negatively impact our margins. If we fail to maintain or enhance our porting capabilities, our revenues and financial results could suffer.

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We operate in a rapidly changing industry.

The game industry, through which we derive substantially all of our revenue, is a rapidly evolving industry. The growth of the game industry and the level of demand and market acceptance of our games are subject to a high degree of uncertainty. Our future operating results will depend on numerous factors affecting the social game industry, many of which are beyond our control, including:

- our ability to extend our brand and games to mobile platforms and the timing and success of such mobile game launches;
- continued worldwide growth in the adoption and use of Facebook and other social networks on which our platform relies;
- our ability to maintain the popularity of our games on Facebook, iOS, Android and other platforms;
- our ability to maintain technological solutions and employee expertise to rapidly respond to continuous changes in mobile platforms and mobile devices;
- our ability to maintain technological solutions and employee expertise to rapidly respond to changes in consumer demand for games on new gaming platforms;
- changes in consumer demographics and public tastes and preferences;
- the availability and popularity of other forms of entertainment;
- the worldwide growth of mobile devices, broadband Internet and personal computer users, and the rate of any such growth; and
- general economic conditions, particularly economic conditions adversely affecting discretionary consumer spending.

Our ability to plan for game development, distribution and promotional activities will be significantly affected by our ability to anticipate and adapt to relatively rapid changes in the tastes and preferences of our current and potential players and relatively rapid changes in technology. New and different types of entertainment may increase in popularity at the expense of social games. A decline in the popularity of social games in general, or our games in particular, could adversely affect our business, financial condition, results of operations or reputation.

We must continue to spend significant resources to effectively manage our business and operations.

To effectively manage our business and operations, we will need to continue to focus on spending significant resources to improve our technology infrastructure, our operational, financial and management controls, and our reporting systems and procedures by, among other things:

- monitoring and updating our technology infrastructure to maintain high performance and minimize down time;
- enhancing information and communication systems to ensure that our employees and offices around the world are well-coordinated and can effectively communicate with each other; and
- monitoring our internal controls to ensure timely and accurate reporting of all of our operations.

These enhancements and improvements will require capital expenditures and allocation of valuable management and employee resources.

Our business will suffer if we are unable to successfully acquire or integrate acquired companies into our business or otherwise manage the growth associated with multiple acquisitions.

We have acquired businesses, personnel and technologies in the past and we intend to continue to evaluate and pursue acquisitions and strategic investments. These acquisitions and strategic investments could be material to our financial condition or results of operations.

Challenges and risks from such investments and acquisitions include:

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negative effects on products and product pipeline from the changes and potential disruption that may follow the acquisition;

• diversion of our management's attention away from our business;

• declining employee morale and retention issues resulting from changes in compensation, or changes in management, reporting relationships, or future prospects;

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- significant competition from other game companies as the social game industry consolidates;
- the need to integrate the operations, systems, technologies, products and personnel of each acquired company, the inefficiencies and lack of control that may result if such integration is delayed or not implemented, and unforeseen difficulties and expenditures that may arise in connection with integration;
- the difficulty in determining the appropriate purchase price of acquired companies may lead to the overpayment from certain acquisitions and the potential impairment of intangible assets and goodwill acquired in the acquisitions;
- the difficulty in successfully evaluating and utilizing the acquired products, technology or personnel;
- the potential incurrence of debt, contingent liabilities, amortization expenses or restructuring charges in connection with any acquisition;
- the need to implement controls, procedures and policies appropriate for a larger public company at companies that prior to acquisition had lacked such controls, procedures and policies;
- the difficulty in accurately forecasting and accounting for the financial impact of an acquisition transaction, including accounting charges and integrating and reporting results for acquired companies that do not historically follow U.S. GAAP;
- the fact that we may be required to pay contingent consideration in excess of the initial fair value, and contingent consideration may become payable at a time when we do not have sufficient cash available to pay such consideration;
- under purchase accounting, we may be required to write off deferred revenue which may impair our ability to recognize revenue that would have otherwise been recognizable which may impact our financial performance or that of the acquired company;
- risks associated with our expansion into new international markets and doing business internationally, including those described under the risk factor caption “Our international operations are subject to increased challenges and risks”;
- in the case of foreign acquisitions, the need to integrate operations across different cultures and languages and to address the particular economic, currency, political and regulatory risks associated with specific countries;
- in some cases, the need to transition operations and players onto our existing or new platforms and the potential loss of, or harm to, our relationships with employees, players and other suppliers as a result of integration of new businesses;
- in certain instances, the ability to exert control of acquired businesses that include earn out provisions in the agreements relating to such acquisitions or the potential obligation to fund an earn out for, or other obligations related to, a product that has not met expectations;
- our dependence on the accuracy and completeness of statements and disclosures made or actions taken by the companies we acquire or their representatives, when conducting due diligence and evaluating the results of such due diligence; and
- liability for activities of the acquired company before the acquisition, including intellectual property and other litigation claims or disputes, information security vulnerabilities, violations of laws, rules and regulations, commercial disputes, tax liabilities and other known and unknown liabilities.

The benefits of an acquisition or investment may also take considerable time to develop, and we cannot be certain that any particular acquisition or investment will produce the intended benefits, which could adversely affect our business, financial condition or results of operations. Our ability to grow through future acquisitions will depend on the availability of suitable acquisition and investment candidates at an acceptable cost, our ability to compete effectively to attract these candidates and the availability of financing to complete larger acquisitions. Acquisitions could result in potential dilutive issuances of equity securities, use of significant cash balances or incurrence of debt (and increased interest expense), contingent liabilities or amortization expenses related to intangible assets or write-offs of goodwill and/or intangible assets, which could adversely affect our results of operations and dilute the economic and voting rights of our stockholders. For example, in the third quarter of 2016, we recorded an intangible asset impairment charge of \$18.2 million and \$ 2.4 million related to Rising Tide Games, Inc. and Zindagi, Inc., respectively. For more information, see Note 6 – “Goodwill and Other Intangible Assets” in the notes to the consolidated financial statements included herein.

Some of our players may make sales or purchases of virtual goods used in our games through unauthorized or fraudulent third-party websites, which may reduce our revenue.

Virtual goods in our games have no monetary value outside of our games. Nonetheless, some of our players may make sales and/or purchases of our virtual goods, such as virtual coins for our Slots franchise games and Zynga Poker virtual poker chips, through unauthorized third-party sellers in exchange for real currency. These unauthorized or fraudulent transactions are usually arranged on third-party websites and the virtual goods offered may have been obtained through unauthorized means such as exploiting vulnerabilities in our games, from scamming our players with fake offers or virtual goods or other game benefits, or from credit card fraud. We do not generate any revenue from these transactions. These unauthorized purchases and sales from third-party sellers could impede our revenue and profit growth by, among other things:

- decreasing revenue from authorized transactions;
- creating downward pressure on the prices we charge players for our virtual currency and virtual goods;
- increasing chargebacks from unauthorized credit card transactions;
- causing us to lose revenue from paying players as our partners increase their credit card fraud prevention efforts;
- causing us to lose revenue from paying players who stop playing a particular game;
- increasing costs we incur to develop technological measures to curtail unauthorized transactions;
- generating legal claims relating to the diminution of value of our virtual goods;
- resulting in negative publicity or harm our reputation with players and partners; and
- increasing customer support costs to respond to dissatisfied players.

To discourage unauthorized purchases and sales of our virtual goods, we state in our terms of service that the buying or selling of virtual currency and virtual goods from unauthorized third party sellers may result in bans from our games or legal action. We have banned players as a result of such activities. We have also filed lawsuits against third parties attempting to “sell” virtual goods from our games, particularly poker chips from Zynga Poker, outside of our games. We have also employed technological measures to help detect unauthorized transactions and continue to develop additional methods and processes by which we can identify unauthorized transactions and block such transactions. However, there can be no assurance that our efforts to prevent or minimize these unauthorized or fraudulent transactions will be successful.

The value of our virtual goods is highly dependent on how we manage the economies in our games. If we fail to manage our game economies properly, our business may suffer.

Paying players purchase virtual goods in our games because of the perceived value of these goods, which is dependent on the relative ease of securing an equivalent good via non-paid means within the game. The perceived value of these virtual goods can be impacted if one of our platform providers offers discounted local currency or other incentives to our players, or by various actions that we take in the games including offering discounts for virtual goods, giving away virtual goods in promotions or providing easier non-paid means to secure these goods. If we fail to manage our virtual economies properly, players may be less likely to purchase virtual goods and our business, financial condition or results of operations may suffer.

If we are able to develop new games that achieve success, it is possible that these games could divert players of our other games without growing our overall user base, which could harm operating results.

Although it is important to our future success that we develop new games that become popular with players, it is possible that these games could cause players to reduce their playing time and purchase of virtual items in our existing games. We plan to cross-promote our new games in our other games, which could encourage players of existing games to divert some of their playing time and spend on existing games. If new games do not grow our player base or generate sufficient new bookings to offset any declines from our other games, our bookings and revenue could be adversely affected.

We derive a significant portion of our revenues from advertisements and offers that are incorporated into our free-to-play games through relationships with third parties. If we lose the ability to provide these advertisements and offers, or if any events occur that negatively impact the revenues we receive from these sources, it would negatively impact our operating results.

We derive revenues from our free-to-play games through in-app purchases, advertisements and offers. We incorporate advertisements and offers into our games by implementing third parties' software development kits and we have direct relationships with third parties regarding advertising. We rely on these third parties to continue our advertising relationships and/or to provide us with a sufficient inventory of advertisements and offers to meet the demand of our user base. If direct advertising relationships change

or competitors' advertising efforts change these third parties' fill rates of available advertising inventory, it will negatively impact our revenues. If our relationship with any of these third parties terminates for any reason, or if the commercial terms of our relationships do not continue to be renewed on favorable terms, we would need to locate and implement other third-party solutions, which could negatively impact our revenues, at least in the short term. Furthermore, the revenues that we derive from advertisements and offers is subject to seasonality, as companies' advertising budgets are generally highest during the fourth quarter and decline significantly in the first quarter of the following year, which negatively impacts our revenues in the first quarter, and conversely significantly increases our marketing expenses in the fourth quarter.

We have a history of net losses and our revenue, bookings and operating margins may decline. We also may incur substantial net losses in the future and may not achieve profitability.

The industry in which we operate is highly competitive and rapidly changing, and relies heavily on successful new product launches and compelling content, products and services. As such, if we fail to deliver such content, products and services, do not execute our strategy successfully or if our new content launches are delayed, our revenue, bookings and audience numbers may decline, and our operating results will suffer. We have incurred significant losses since inception, including a net loss of \$226 million in 2014, a net loss of \$122 million in 2015 and a net loss of \$108 million in 2016. As of December 31, 2016, we had an accumulated deficit of \$1.6 billion.

In addition, our operating margin may experience downward pressure as a result of increasing competition. We expect to continue to expend substantial financial and other resources on game development, including mobile games, our technology stack, game engines, game technology and tools, the expansion of our network, international expansion and marketing. Our operating costs will increase and our operating margins may decline if we do not effectively manage costs, launch new products on schedule that monetize successfully and enhance our franchise games so that these games continue to monetize successfully. In addition, weak economic conditions or other factors could cause our business to further contract, requiring us to implement significant additional cost cutting measures, including a decrease in research and development, which could harm our long-term prospects.

If our revenues do not increase to offset these additional expenses, if we experience unexpected increases in operating expenses or if we are required to take additional charges related to impairments or restructurings, we will continue to incur losses and will not become profitable on a sustained basis. If we are unable to significantly increase our revenues or reduce our expenses, it will continue to negatively affect our operating results and our ability to achieve and sustain profitability.

We rely on assumptions and estimates to calculate certain of our key metrics, and real or perceived inaccuracies in such metrics may harm our reputation and negatively affect our business.

The numbers of our DAUs, MAUs, MUUs, MUPs, and ABPU are calculated using metrics tracked by our internal analytics systems based on tracking activity of user accounts. The analytics systems and the resulting data have not been independently verified. While these numbers are based on what we believe to be reasonable calculations for the applicable period of measurement, there are inherent challenges in measuring usage and user engagement across our user base and factors relating to user activity and systems may impact these numbers. The calculation of these metrics and examples of how user activity and our systems may impact the calculation of the metrics is described in detail under the heading titled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Metrics."

As we transition our business to increasingly focus on mobile games, there is more likelihood of difficulty calculating these metrics. As described under the heading titled "Management's Discussion and Analysis of Financial Condition and Results of Operations—Key Metrics," we updated our calculation of these metrics to take into account our business's transition to mobile in 2016 and we rely on the veracity of data provided by individuals and reported by third parties to calculate our metrics and eliminate duplication of data. The recent update to our calculation methodology resulted

in a reduction in our as reported DAUs, MAUs, MUUs, MUPs and ABPU for 2014 and 2015. These metrics are disclosed under the heading titled Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Metrics.”

For purposes of calculating MUUs and MUPs, we are unable to distinguish whether players of certain games are also players of other Zynga games. As a result of this, we exclude players of these games from our calculation of MUUs and MUPs to avoid potential double counting.

Our advertisers and investors rely on our key metrics as a representation of our performance. We regularly review and may adjust our processes for calculating our internal metrics to improve their accuracy. If we determine that we can no longer calculate any of our key metrics with a sufficient degree of accuracy, and we cannot find an adequate replacement for the metric, our business, financial condition or results of operations may be harmed. In addition, if advertisers, platform partners or investors do not perceive our user metrics to be accurate representations of our user base or user engagement, or if we discover material inaccuracies in our user

metrics, our reputation may be harmed and advertisers and platform partners may be less willing to allocate their budgets or resources to our products and services, which could negatively affect our business, financial condition or results of operations.

If we fail to effectively manage our human resources, our business, financial condition, results of operations or reputation may suffer.

Our ability to compete and grow depends in large part on the efforts and talents of our employees and executives. Our success depends in a large part upon the continued service of our senior management team. We saw significant turnover in our management team in 2016, including the appointment of Frank Gibeau as our Chief Executive Officer, the appointment of Mark Pincus as our Executive Chairman and the addition of a new Chief Financial Officer, new Chief Operating Officer, and new President of Publishing. Mr. Pincus and Mr. Gibeau are both critical to our vision, strategic direction, culture, products and technology and the continued retention of the remaining senior management team is important to our continued development. We do not have employment agreements, other than offer letters, with our senior management team and a retention agreement with our General Counsel, and we do not maintain key-man insurance for member of our senior management team. The loss of any member of our senior management team could harm our business, financial condition, results of operations or reputation.

In addition, our ability to execute our strategy depends on our continued ability to identify, hire, develop, motivate and retain highly skilled employees, particularly game designers, product managers and engineers. These employees are in high demand, and we devote significant resources to identifying, recruiting, hiring, training, successfully integrating and retaining them. We have experienced significant turnover in our headcount over the last year, which has placed and will continue to place significant demands on our management and our operational, financial and technological infrastructure. As of December 31, 2016, approximately 20% of our employees had been with us for less than one year and approximately 45% for less than two years.

We believe that two critical components of our success and our ability to retain our best people are our culture and our competitive compensation practices. As we operate as a public company, we may find it difficult to maintain our entrepreneurial, execution-focused culture. In addition, our recent operating results and the current trading price of our Class A common stock may cause our employee base to be more vulnerable to be targeted for recruitment by competitors. Some of our employees may have been motivated to work for us by an expectation that our Class A common stock would be trading at a higher value and may be less motivated by the equity compensation they receive as a result. Competitors may leverage any resulting disappointment as a tool to recruit talented employees. Competition for highly skilled employees is intense, particularly in the San Francisco Bay Area, where our headquarters is located. If we are unable to retain our senior management team and our key employees, are unable to continue to hire highly skilled employees our business, financial condition or results of operations could be harmed. Moreover, if our team fails to work together effectively to execute our plans and strategies on a timely basis, our business, financial condition or results of operations could be harmed.

We have historically hired a number of key personnel through acquisitions, and as competition with other game companies for attractive target companies with a skilled employee base persists and increases, we may incur significant expenses in continuing this practice. In addition, our recent operating results and the current trading price of our Class A common stock may negatively impact our perceived reputation and make it more difficult and more expensive to recruit new employees. The loss of talented employees or the inability to hire skilled employees as replacements could result in significant disruptions to our business, and the integration of replacement personnel could be time-consuming and expensive and cause additional disruptions to our business. If we do not succeed in recruiting, retaining, and motivating our key employees to achieve a high level of success, or if we do not attract new key personnel, we may be unable to continue to launch new games and enhance existing games, including in each case on mobile, expand our network, or execute our business strategy, and as a result, our business, financial condition or results of operations may suffer.

Our core values of focusing on our players first and acting for the long-term may conflict with the short-term interests of our business.

One of our core values is to focus on surprising and delighting our players, which we believe is essential to our success and serves the best, long-term interests of Zynga and our stockholders. Therefore, we have made in the past and we may make in the future, significant investments or changes in strategy that we think will benefit us in the long-term, even if our decision negatively impacts our operating results in the short term. For example, we delayed the launches of Dawn of Titans and CSR Racing 2 from 2015 to 2016. Although launching Dawn of Titans or CSR Racing 2 in 2015 may have offered short-term bookings, we determined that both games needed more time in soft launch to achieve their full potential. We also exited the Sports category in 2015 in order to focus on fewer game categories that we believe have the highest potential of driving long-term enterprise value. Although games in the discontinued Sports category may have offered short-term bookings, we determined that they did not contribute meaningfully to the brand and our strategy in the long-term. In the future, we could make decisions to balance the number of advertisements we show in games based on consumer reaction to advertising. This type of decision may increase consumer satisfaction and decrease bookings in the short-term. Our decisions may not result in the long-term benefits that we expect, in which case the success of our games, business, financial condition or results of operations could be harmed.

If the use of mobile devices as game platforms and the proliferation of mobile devices generally do not increase, our business could be adversely affected.

We have shifted our business to become a “mobile first” game company. The number of people using mobile Internet-enabled devices has increased dramatically in the past few years and we expect that this trend will continue. However, the mobile market, particularly the market for mobile games may not grow in the way we anticipate. Our future success is substantially dependent upon the continued growth of the market for mobile games. The mobile market may not continue to grow at historic rates and consumers may not continue to use mobile-Internet enabled devices as a platform for games. In addition, we do not currently offer our games on all mobile devices. If the mobile devices on which our games are available decline in popularity, we could experience a decline in bookings and revenue. In addition, new and emerging technologies could make the mobile devices on which our games are currently released obsolete, requiring us to transition our business model to develop games for other next-generation platforms. Any decline in the growth of the mobile market or in the use of mobile devices for games could harm our business, financial condition or results of operations.

We have a new business model and a limited operating history, which make it difficult to evaluate our prospects and future financial results and may increase the risk that we will not be successful.

We began operations in 2007, and became publicly listed 2011, and a new business model focusing on mobile-first, which make it difficult to effectively assess our future prospects. Our business model is based on offering games that are free to play. To date, only a small portion of our players pay for our products. We cannot assure that any of our efforts will be successful or result in the development or timely launch of additional products, or ultimately produce any material revenue.

If we do not successfully invest in, establish and maintain awareness of our brand and games, if we incur excessive expenses promoting and maintaining our brand or our games or if our games contain defects or objectionable content, our business, financial condition, results of operations or reputation could be harmed.

We believe that establishing and maintaining our brand is critical to establishing a direct relationship with players who purchase our products from direct-to-consumer channels and to maintaining our existing relationships with distributors and content licensors, as well as potentially developing new such relationships. Increasing awareness of our brand and recognition of our games is particularly important in connection with our strategic focus of developing games based on our own intellectual property. Our ability to promote the Zynga brand and increase recognition of our games depends on our ability to develop high quality, engaging games. If consumers, digital storefront owners and branded content owners do not perceive our existing games as high-quality or if we introduce new games that are not favorably received by them, then we may not succeed in building brand recognition and brand loyalty in the marketplace. In addition, globalizing and extending our brand and recognition of our games requires significant and involves extensive management time to execute successfully. Although we make significant sales and marketing expenditures in connection with the launch of our games, these efforts may not succeed in increasing awareness of our brand or the new games. If we fail to increase and maintain brand awareness and consumer recognition of our games, our potential revenues could be limited, our costs could increase and our business, financial condition, results of operations or reputation could suffer.

In addition, if a game contains objectionable content, we could experience damage to our reputation and brand. Despite reasonable precautions, some consumers may be offended by certain of our game content. If consumers believe that a game we published contains objectionable content, it could harm our brand and consumers could refuse to play it and could pressure the digital storefront operators to no longer allow us to publish the game on their platforms. Similarly, if any of our games are introduced with defects or have playability issues, we may receive negative user reviews and our brand may be damaged. These issues could be exacerbated if our customer service department does not timely and adequately address issues that our players have encountered with our games.

Our existing and potential players may be attracted to competing forms of entertainment such as offline and traditional online games, television, movies and sports, as well as other entertainment options on the Internet.

Our players face a vast array of entertainment choices. Other forms of entertainment, such as offline, traditional online, personal computer and console games, television, movies, sports, real money gaming and the Internet, are much larger and more well-established markets and may be perceived by our players to offer greater variety, affordability, interactivity and enjoyment. These other forms of entertainment compete for the discretionary time and income of our players. If we are unable to sustain sufficient interest in our games in comparison to other forms of entertainment, including new forms of entertainment, our business model may no longer be viable.

Failure in pursuing or executing new business initiatives could have a material adverse impact on our business and future strategy.

Our strategy includes evaluating, considering and effectively executing new business initiatives, which can be difficult. Management may not properly ascertain or assess the risks of new initiatives, and subsequent events may alter the risks that were evaluated at the time we decided to execute any new initiative. Entering into any new initiatives can also divert our management's attention from other business issues and opportunities. Failure to effectively identify, pursue and execute new business initiatives may adversely affect our business, financial condition, results of operations or reputation.

If we fail to anticipate or successfully develop new games for new technologies, platforms and devices, the quality, timeliness and competitiveness of our games could suffer.

The games industry is characterized by rapid technological changes that can be difficult to anticipate. New technologies, including distribution platforms and gaming devices, such as consoles, connected TVs, virtual or augmented reality devices, or a combination of existing and new devices, may force us to adapt our current game development processes or adopt new processes. If consumers shift their time to platforms other than the mobile and social platforms where our games are currently distributed, the size of our audience could decline and our performance could be impacted. It may take significant time and resources to shift our focus to such technologies, platforms and devices, putting us at a competitive disadvantage. Alternatively, we may increase the resources employed in research and development to adapt to these new technologies, distribution platforms and devices, either to preserve our games or a game launch schedule or to keep up with our competition, which would increase our development expenses. We could also devote significant resources to developing games to work with such technologies, platforms or devices, and these new technologies, platforms or devices may not experience sustained, widespread consumer acceptance. The occurrence of any of these events could adversely affect the quality, timelines and competitiveness of our games, or cause us to incur significantly increased costs, which could harm our operation results.

Our revenue may be harmed by the proliferation of "cheating" programs and scam offers that seek to exploit our games and players, which may affect the game-playing experience and may lead players to stop playing our games.

Unrelated third parties have developed, and may continue to develop, "cheating" programs that enable players to exploit vulnerabilities in our games, play them in an automated way or obtain unfair advantages over other players who do play fairly. These programs harm the experience of players who play fairly, may disrupt the virtual economies of our games and may reduce the demand for virtual items. In addition, unrelated third parties attempt to scam our players with fake offers for virtual goods or other game benefits. We devote significant resources to discover and disable these programs and activities, and if we are unable to do so quickly our operations may be disrupted, our reputation damaged and players may stop playing our games. This may lead to lost revenue from paying players, increased cost of developing technological measures to combat these programs and activities, legal claims relating to the diminution in value of our virtual currency and goods, and increased customer service costs needed to respond to dissatisfied players.

Security breaches, computer viruses and computer hacking attacks could harm our business, financial condition, results of operations or reputation.

Security breaches, computer malware and computer hacking attacks have become more prevalent in our industry, have occurred on our systems in the past and may occur on our systems in the future. Any security breach caused by hacking, which involves efforts to gain unauthorized access to information or systems, or to cause intentional malfunctions or loss or corruption of data, software, hardware or other computer equipment, and the inadvertent transmission of computer viruses could adversely affect our business, financial condition, results of operations or reputation. We have experienced and will continue to experience hacking attacks of varying degrees from time to time, including denial-of-service attacks. Because of our prominence in the social game industry, we believe we are a

particularly attractive target for hackers.

In addition, we store sensitive information, including personal information about our employees and our games involve the storage and transmission of players' personal information in our facilities and on our equipment, networks and corporate systems run by us or managed by third-parties including Facebook, Apple, Microsoft, Amazon, and Google. Many states have passed laws requiring notification to persons when there is a security breach for personal data, such as the 2002 amendment to California's Information Practices Act. Security breaches of our systems or the systems of third-parties on whom we rely could compel us to comply with various breach notification laws and otherwise expose us to litigation, remediation costs, increased costs for security measures, loss of revenue, damage to our reputation and potential liability. Our corporate systems, third-party systems and security measures may be breached due to the actions of outside parties, employee error, malfeasance, a combination of these, or otherwise, and, as a result, an unauthorized party may obtain access to our data, our employees' data, our players' data or our advertisers' data. Additionally, outside parties may attempt to fraudulently induce employees or players to disclose sensitive information in order to gain access to our data, our employees' data, our players' data or our advertisers' data.

As a result of the frequent introduction of new devices and technologies that enable players to share data and communicate in new ways, as well as the increasing focus by our players and regulators on controlling and protecting user data, we must examine, and, from time to time modify, our security controls and business practices to address these changes.

Because the techniques used to obtain unauthorized access, disable or degrade service, or sabotage systems change frequently or may be designed to remain dormant until a predetermined event and often are not recognized until launched against a target, we may be unable to anticipate these techniques or implement adequate preventative measures. Though it is difficult to determine what harm may directly result from any specific interruption or breach, any failure or perceived failure to maintain performance, reliability, security and availability of our systems to the satisfaction of our players may harm our reputation and our ability to retain existing players and attract new players.

If an actual or perceived security breach occurs, the market perception of the effectiveness of our security measures could be harmed, we could lose players and advertisers, and we could suffer significant legal and financial harm due to such events or in connection with remediation efforts, investigation costs, penalties, changed security and system protection measures. Any of these actions could have a material and adverse effect on our business, financial condition, results of operations or reputation.

Any failure or significant interruption in our infrastructure could impact our operations and harm our business.

Our technology infrastructure is critical to the performance of our games and to player satisfaction, as well our corporate functions. Our games and company systems run on a complex distributed system, or what is commonly known as cloud computing. We own, operate and maintain elements of this system, but many elements of this system are operated by third-parties that we do not control and which would require significant time and potential expense to replace. We have experienced, and may in the future experience, service disruptions, outages and other performance problems due to a variety of factors, including infrastructure changes, human or software errors and capacity constraints. For example, the operation of most of our games was interrupted for several hours in January 2013, due to network outages. If a particular game is unavailable when players attempt to access it or navigation through a game is slower than they expect, players may stop playing the game and may be less likely to return to the game as often, if at all. A failure or significant interruption in our game service could harm our business, financial condition, results of operations or reputation. We have suffered interruptions in service when releasing new software versions or bug fixes for specific games in the past and if any such interruption were significant it could adversely affect our business, financial condition, results of operations or reputation. We expect to continue to maintain our technology infrastructure to maintain and improve our player experience and game performance and maintain our corporate system functionality. To the extent we do not effectively address capacity constraints, upgrade our systems as needed and continually develop our technology and network architecture to accommodate increasing traffic, our business, financial condition or results of operations could be adversely affected. We do not maintain insurance policies covering losses relating to our systems and we do not have business interruption insurance. Furthermore, our disaster recovery systems and those of third-parties with which we do business may not function as intended or may fail to adequately protect our critical business information in the event of a significant business interruption, which may cause interruption in service of our games, security breaches or the loss of data or functionality, leading to a negative effect on our business, financial condition or results of operations.

We rely on third-party hosting and cloud computing providers, like Amazon Web Services (“AWS”), to operate certain aspects of our business. A significant portion of our game traffic is hosted by a single vendor, and any failure, disruption or significant interruption in our network or hosting and cloud services could adversely impact our operations and harm our business.

Our technology infrastructure is critical to the performance of our games and to player satisfaction. Our games run on a complex distributed system, or what is commonly known as cloud computing. We own, operate and maintain elements of this system, but significant elements of this system are operated by third-parties that we do not control and

which would require significant time to replace. We expect this dependence on third-parties to continue. In particular, a significant portion, if not almost all, of our game traffic, data storage, data processing and other computing services and systems is hosted by AWS. AWS provides us with computing and storage capacity pursuant to an agreement that continues until terminated by either party. AWS may terminate the agreement without cause by providing 180 days prior written notice, and may terminate the agreement with 30 days prior written notice for cause, including any material default or breach of the agreement by us that we do not cure within the 30 day period. The agreement requires AWS to provide us their standard computing and storage capacity and related support in exchange for timely payment by us. We have experienced, and may in the future experience, disruptions, outages and other performance problems due to a variety of factors, including infrastructure changes, human or software errors and capacity constraints. If a particular game is unavailable when players attempt to access it or navigation through a game is slower than they expect, players may stop playing the game and may be less likely to return to the game as often, if at all. Any failure, disruption or interference with our use of hosted cloud computing services and systems provided by third-parties, like AWS, could adversely impact our business, financial condition or results of operations.

Our web-based games rely on Adobe Flash and our business and operating results could be harmed if web browsers cease to support Adobe Flash and we cannot find substitute software for our web-based games.

Our web-based games currently rely on Adobe Flash, a multimedia and software platform used to show items such as videos, graphics, games and animations on websites. Adobe Flash may fall out of favor with web-browsers, as transitions to different technologies and technology platforms have happened in the past and will occur in the future. It could also be blocked by network administrators for security reasons. If there is a rapid shift to a new or different technology platform where we do not have development experience or resources, the development period for our web-based games may be lengthened, increasing our costs, and the resulting web-based games may be of lower quality, and may be published later than anticipated. Additionally, if we are unable to develop a solution that allows our current games to work with this new or different technology platform (or allows our current games to continue to run on Adobe Flash in non-supported web-browsers) our players may not be able to access those games or otherwise may encounter a negative gaming experience, resulting in reduced bookings and revenue.

For example, Mozilla has informally communicated that it intends to stop support for Adobe Flash in its Firefox web-browser in mid-2017. If Mozilla discontinues support for Adobe Flash before we develop a solution, players will be unable to access our web-based games through Mozilla Firefox and those players may not choose to access our web-based games through another supported browser or another supported platform, which may harm our business, financial condition or results of operations.

Programming errors or flaws in our games could harm our reputation or decrease market acceptance of our games, which could harm our business.

Our games may contain errors, bugs, flaws or corrupted data, and these defects may only become apparent after their launch, particularly as we launch new games and rapidly release new features to existing games under tight time constraints. We believe that if our players have a negative experience with our games, they may be less inclined to continue or resume playing our games or recommend our games to other potential players. Undetected programming errors, game vulnerabilities that may be exploited by cheating programs and other forms of misappropriation, game defects and data corruption can disrupt our operations, adversely affect the game experience of our players by allowing players to gain unfair advantage or misappropriate virtual goods, harm our reputation, cause our players to stop playing our games, divert our resources and delay market acceptance of our games, any of which could result in legal liability to us or harm our business, financial condition or results of operations.

Failure to protect or enforce our intellectual property rights or the costs involved in such enforcement could harm our business, financial condition or results of operations.

We regard the protection of our trade secrets, copyrights, trademarks, service marks, trade dress, domain names, patents, and other product rights as critical to our success. We strive to protect our intellectual property rights by relying on federal, state and common law rights, as well as contractual restrictions. We enter into confidentiality and invention assignment agreements with our employees and contractors and confidentiality agreements with parties with whom we conduct business in order to limit access to, and disclosure and use of, our proprietary information. However, these contractual arrangements and the other steps we have taken to protect our intellectual property may not prevent the misappropriation of our proprietary information or deter independent development of similar technologies by others.

We pursue the registration of our copyrights, trademarks, service marks, domain names, and patents in the U.S. and in certain locations outside the U.S. This process can be expensive and time-consuming, may not always be successful depending on local laws or other circumstances, and we also may choose not pursue registrations in every location depending on the nature of the project to which the intellectual property rights pertain. We may, over time, increase our investments in protecting our creative works through increased copyright filings and our brands through increased trademark and other filings. Likewise, we may, over time, increase our investment in protecting our innovations

through increased patent filings that are expensive and time-consuming and may not result in issued patents that can be effectively enforced or licensed. The Leahy-Smith America Invents Act (the “Leahy-Smith Act”) was adopted in September 2011. The Leahy-Smith Act includes a number of significant changes to U.S. patent law, including provisions that affect the way patent applications will be prosecuted, which could be detrimental to investors, and may also affect patent litigation. The Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents, all of which could harm our business, financial condition or results of operations.

Litigation may be necessary to enforce our intellectual property rights, protect our trade secrets or determine the validity and scope of proprietary rights claimed by others. For example, we historically have brought several actions to protect our “Zynga Poker,” “Ville,” and “With Friends” franchises against third-party uses of those intellectual property assets and brands. Any litigation of this nature, regardless of outcome or merit, could result in substantial costs, adverse publicity, or diversion of management and technical resources, any of which could adversely affect our business, financial condition or results of operations. If we fail to maintain, protect and enhance our intellectual property rights, our business, financial condition or results of operations may be harmed.

Our ability to acquire and maintain licenses to intellectual property may affect our revenue and profitability. Competition for these licenses may make them more expensive and increase our costs.

While most of the intellectual property we use is created by us, we have also acquired rights to proprietary intellectual property. We have also obtained rights to use intellectual property through licenses and service agreements with third parties. We use licensed intellectual property as a creative asset in certain games, such as Looney Tunes Dash!, Willy Wonka and the Chocolate Factory Slots, Hit It Rich! Slots, Spin it Rich! Slots, Wizard of Oz: Magic Match, Wizard of Oz Slots and Black Diamond Casino and have built many of our games on proprietary source code of third parties, such as Unity.

Proprietary licenses typically limit our use of intellectual property to specific uses and for specific time periods. Competition for licenses for creative assets is intense. If we are unable to maintain these licenses or obtain additional licenses on reasonable economic terms or with significant commercial value, our revenue and profitability may be adversely impacted. Competition for these licenses may also increase the advances, guarantees and royalties that we must pay to the licensor, which could significantly increase our costs and adversely affect our profitability.

Many of our games are built on proprietary source code of third parties, such as Unity. If we are unable to renew licenses to proprietary source code underlying our games, or the terms and conditions of these licenses change at the time of renewal our business, financial condition or results of operations could be negatively impacted. We rely on third parties, including Unity, to maintain versions of their proprietary engines that allow us to ship our games on multiple platforms. If a third party from whom we license source code discontinues support for one or more of these platforms, our business, financial condition or results of operations could be negatively impacted.

We are, and may in the future be, subject to intellectual property disputes, which are costly to defend and could require us to pay significant damages and could limit our ability to use certain technologies in the future.

From time to time, we have faced, and we expect to face in the future, allegations that we have infringed the trademarks, copyrights, patents and other intellectual property rights of third parties, including from our competitors, non-practicing entities and former employers of our personnel. Intellectual property litigation may be protracted and expensive, and the results are difficult to predict. As the result of any court judgment or settlement, we may be obligated to cancel the launch of a new game, stop offering a game or certain features of a game in a particular geographic region or worldwide, pay royalties or significant settlement costs, purchase licenses or modify our games and features, or develop substitutes.

In addition, we use open source software in our games and expect to continue to use open source software in the future. From time to time, we may face claims from companies that incorporate open source software into their products, claiming ownership of, or demanding release of, the source code, the open source software and/or derivative works that were developed using such software, or otherwise seeking to enforce the terms of the applicable open source license. These claims could also result in litigation, require us to purchase a costly license or require us to devote additional research and development resources to change our games, any of which would have a negative effect on our business, financial condition or results of operations.

We are involved in legal proceedings that may result in adverse outcomes.

We may be involved in claims, suits, government investigations, and proceedings arising in the ordinary course of our business, including actions with respect to intellectual property claims, privacy, data protection or law enforcement matters, tax matters, labor and employment claims, commercial and acquisition-related claims, as well as stockholder derivative actions, class action lawsuits, and other matters. Such claims, suits, government investigations, and proceedings are inherently uncertain and their results cannot be predicted with certainty. Regardless of their outcomes, such legal proceedings can have an adverse impact on us because of legal costs, diversion of management and other personnel, and other factors. In addition, it is possible that a resolution of one or more such proceedings could result in

liability, penalties, or sanctions, as well as judgments, consent decrees, or orders preventing us from offering certain features, functionalities, products, or services, or requiring a change in our business practices, products or technologies, which could in the future materially and adversely affect our business, financial condition or results of operations. See the section titled “Legal Matters” included in Note 12 – “Commitments and Contingencies” in the notes to the consolidated financial statements included herein.

We are subject to laws and regulations concerning privacy, information security, data protection, consumer protection and protection of minors and these laws and regulations are continually evolving. Our actual or perceived failure to comply with these laws and regulations could harm our business.

We receive, store and process personal information and other player data, and we enable our players to share their personal information with each other and with third parties, including on the Internet and mobile platforms. There are numerous federal, state and local laws around the world regarding privacy and the storing, sharing, use, processing, disclosure and protection of

personal information and other player data on the Internet and mobile platforms, the scope of which are changing, subject to differing interpretations, and may be inconsistent between countries or conflict with other rules.

Various government and consumer agencies have called for new regulation and changes in industry practices and are continuing to review the need for greater regulation for the collection of information concerning consumer behavior on the Internet, including regulation aimed at restricting certain targeted advertising practices. For example, the European Union's General Data Protection Regulation, which will become effective in May 2018, creates new individual privacy rights and imposes worldwide obligations on companies handling personal data, which will result in a greater compliance burden for us and other companies with European users. There is also increased attention being given to the collection of data from minors. For instance, the Children's Online Privacy Protection Act requires companies to obtain parental consent before collecting personal information from children under the age of 13 and in January 2014, the Federal Trade Commission announced a settlement with Apple related to in-app purchases made by minors.

All of our games are subject to our privacy policy and our terms of service located on our corporate website. We generally comply with industry standards and are subject to the terms of our privacy-related obligations to players and third parties. We strive to comply with all applicable laws, policies, legal obligations and certain industry codes of conduct relating to privacy and data protection, to the extent reasonably attainable. However, it is possible that these obligations may be interpreted and applied in a manner that is inconsistent from one jurisdiction to another and may conflict with other rules or our practices. For example, foreign laws and regulations are often more restrictive than those in the U.S. In particular, the European Union and its member states traditionally have taken broader views as to types of data that are subject to data protection, and have imposed legal obligations on companies in this regard. It is also possible that new laws, policies, legal obligations or industry codes of conduct may be passed, or existing laws, policies, legal obligations or industry codes of conduct may be interpreted in such a way that could prevent us from being able to offer services to citizens of a certain jurisdiction or may make it costlier or difficult for us to do so. Any failure or perceived failure by us to comply with our privacy policy and terms of service, our privacy-related obligations to players or other third parties, or our privacy-related legal obligations, or any compromise of security that results in the unauthorized release or transfer of personally identifiable information or other player data, may result in governmental enforcement actions, litigation or public statements against us by consumer advocacy groups or others and could cause our players to lose trust in us, which could have an adverse effect on our business, financial condition or results of operations. Additionally, if third parties we work with, such as players, vendors or developers, violate applicable laws or our policies, such violations may also put our players' information at risk and could in turn have an adverse effect on our business, financial condition or results of operations.

Many states have passed laws requiring notification to players when there is a security breach for personal data, such as the 2002 amendment to California's Information Practices Act, or requiring the adoption of minimum information security standards that are often vaguely defined and difficult to practically implement. The costs of compliance with these laws may increase in the future as a result of changes in interpretation. Furthermore, techniques used to obtain unauthorized access, disable or degrade service or sabotage systems change frequently and often are not recognized until launched against a target and as such we may be unable to anticipate these techniques or to implement adequate preventative measures. Any failure on our part to comply with laws in these areas may subject us to significant liabilities.

Our business is subject to a variety of U.S. and foreign laws, many of which are unsettled and still developing and which could subject us to claims or otherwise harm our business.

We are subject to a variety of laws in the U.S. and abroad that affect our business, including state and Federal laws regarding consumer protection, electronic marketing, protection of minors, data protection, competition, taxation, intellectual property, export and national security, that are continuously evolving and developing. The scope and interpretation of the laws that are or may be applicable to us are often uncertain and may be conflicting, particularly laws outside the U.S. There is a risk that these laws may be interpreted in a manner that is not consistent with our

current practices, and could have an adverse effect on our business. It is also likely that as our business grows and evolves and our games are played in a greater number of countries, we will become subject to laws and regulations in additional jurisdictions or other jurisdictions may claim that we are required to comply with their laws and regulations.

We are potentially subject to a number of foreign and domestic laws and regulations that affect the offering of certain types of content, such as that which depicts violence, many of which are ambiguous, still evolving and could be interpreted in ways that could harm our business or expose us to liability. In addition, there are ongoing academic, political and regulatory discussions in the U.S., Europe, Australia and other jurisdictions regarding whether social casino applications should be subject to a higher level or different type of regulation than other social game applications to protect consumers, in particular minors and persons susceptible to addiction to social games, and, if so, what this regulation should include. If new social casino regulations are imposed, certain of (or all of) our casino-themed games may become subject to the rules and regulations and expose us to civil and criminal penalties if we do not comply. Heightened regulation could increase the cost of running our casino games, make our games more difficult to access, decrease our user base or otherwise harm our business, financial condition or results of operations.

It is difficult to predict how existing laws will be applied to our business or the new laws to which we may become subject. If we are not able to comply with these laws or regulations or if we become liable under these laws or regulations, we could be directly harmed, and we may be forced to implement new measures to reduce our exposure to this liability. This may require us to expend substantial resources or to modify our games, which would harm our business, financial condition and results of operations. In addition, the increased attention focused upon liability issues as a result of lawsuits and legislative proposals could harm our reputation or otherwise impact the growth of our business. Any costs incurred as a result of this potential liability could harm our business, financial condition or results of operations.

It is possible that a number of laws and regulations may be adopted or construed to apply to us in the U.S. and elsewhere that could restrict the online and mobile industries, including player privacy, advertising, taxation, content suitability, copyright, distribution and antitrust. Furthermore, the growth and development of electronic commerce and virtual goods may prompt calls for more stringent consumer protection laws that may impose additional burdens on companies such as ours conducting business through the Internet and mobile devices. We anticipate that scrutiny and regulation of our industry will increase and we will be required to devote legal and other resources to addressing such regulation. For example, existing laws or new laws regarding the marketing of in-app purchases, labeling of free-to-play games, regulation of currency and banking institutions unclaimed property and money transmission may be interpreted to cover our games and the virtual currency, goods or payments that we receive. If that were to occur we may be required to seek licenses, authorizations or approvals from relevant regulators, the granting of which may be dependent on us meeting certain capital and other requirements and we may be subject to additional regulation and oversight, all of which could significantly increase our operating costs. Changes in current laws or regulations or the imposition of new laws and regulations in the U.S. or elsewhere regarding these activities may lessen the growth of social game services and impair our business, financial condition or results of operations.

Our international operations are subject to increased challenges and risks.

Continuing to expand our business to attract players in countries other than the U.S. is a critical element of our business strategy. An important part of targeting international markets is developing offerings that are localized and customized for the players in those markets. We have a limited operating history as a company outside of the U.S. We expect to continue to expand our international operations in the future by expanding our offerings in new languages. Our ability to expand our business and to attract talented employees and players in an increasing number of international markets will require considerable management attention and resources and is subject to the particular challenges of supporting a rapidly growing business in an environment of multiple languages, cultures, customs, legal systems, alternative dispute systems, regulatory systems and commercial infrastructures. We have experienced difficulties in the past and have not been successful in all the countries we have entered. For example, we closed our office in Beijing, China because its game launches and product localization initiatives did not meet expectations. We may not be able to offer our games in certain countries. Expanding our international focus may subject us to risks that we have not faced before or increase risks that we currently face, including risks associated with:

- recruiting and retaining talented and capable management and employees in foreign countries;
- challenges caused by distance, language and cultural differences;
- developing and customizing games and other offerings that appeal to the tastes and preferences of players in international markets;
- competition from local game makers with intellectual property rights and significant market share in those markets and with a better understanding of player preferences;
- utilizing, protecting, defending and enforcing our intellectual property rights;
- negotiating agreements with local distribution platforms that are sufficiently economically beneficial to us and protective of our rights;
- the inability to extend proprietary rights in our brand, content or technology into new jurisdictions;
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implementing alternative payment methods for virtual goods in a manner that complies with local laws and practices and protects us from fraud;

• compliance with applicable foreign laws and regulations, including privacy laws and laws relating to content and consumer protection (for example, the United Kingdom's Office of Fair Trading issued new principles in January 2014 relating to in-app purchases in free-to-play games that are directed toward children 16 and under, which principles became effective in April 2014);

• compliance with anti-bribery laws including without limitation, compliance with the Foreign Corrupt Practices Act;

• credit risk and higher levels of payment fraud;

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- currency exchange rate fluctuations;
- protectionist laws and business practices that favor local businesses in some countries;
- double taxation of our international earnings and potentially adverse tax consequences due to changes in the tax laws of the U.S. or the foreign jurisdictions in which we operate;
- political, economic and social instability;
- higher costs associated with doing business internationally;
- export or import regulations; and
- trade and tariff restrictions.

If we are unable to manage the complexity of our global operations successfully, our business, financial condition and operating results could be adversely affected. Additionally, our ability to successfully gain market acceptance in any particular market is uncertain, and the distraction of our senior management team could harm our business, financial condition or results of operations.

The potential United Kingdom exit from the European Union as a result of the recent United Kingdom referendum could harm our business, financial condition or results of operations.

The United Kingdom affirmatively voted in a June 2016 non-binding referendum advising for the exit of the United Kingdom from the European Union (commonly referred to as the “Brexit”), and voting by legislators to date to render the referendum binding has supported Brexit. If passage is completed, negotiations would commence potentially as soon as the end of first quarter to determine the future terms of the United Kingdom’s relationship with the European Union, including the terms of trade between the United Kingdom and the European Union. The effects of Brexit will depend on any agreements the United Kingdom makes to retain access to European Union markets either during a transitional period or more permanently. Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the United Kingdom determines which European Union laws to replace or replicate.

The announcement of Brexit caused (and the actual exit of the United Kingdom from the European Union is expected to cause future) significant volatility in global stock markets, which could cause our stock price to be subject to wide fluctuations, and significant fluctuations in foreign currency exchange rates, which will affect our financial results as we report in U.S. dollars and may affect our ability to attract and retain employees in the United Kingdom. The announcement of Brexit also created (and the actual exit of the United Kingdom from the European Union may create future) global economic uncertainty, which may cause our players to reduce the amount of money they spend on our games. The actual exit of the United Kingdom from the European Union could cause disruptions to and create uncertainty surrounding our business, including affecting our and NaturalMotion’s relationships with existing and future players, suppliers and employees. Any of these effects of Brexit (and the announcement thereof), and others we cannot anticipate, could harm our business, financial condition or results of operations.

Companies and governmental agencies may restrict access to Facebook, our website, mobile applications or the Internet generally, which could lead to the loss or slower growth of our player base.

Our players generally need to access the Internet and in particular platforms such as Facebook, Apple, Google and our website to play our games. Companies and governmental agencies could block access to Facebook, our website, mobile applications or the Internet generally for a number of reasons such as security or confidentiality concerns or regulatory reasons, or they may adopt policies that prohibit employees from accessing Facebook, Apple, Google and our website or other social platforms. For example, the government of the People’s Republic of China has blocked access to Facebook in China. If companies or governmental entities block or limit such or otherwise adopt policies restricting players from playing our games, our business could be negatively impacted and could lead to the loss or slower growth of our player base.

Fluctuations in foreign currency exchange rates will affect our financial results, which we report in U.S. dollars.

As we continue to expand our international operations, we become more exposed to the effects of fluctuations in currency exchange rates. We incur expenses for employee compensation and other operating expenses at our non-U.S. locations in the local currency, and an increasing percentage of our international revenue is from players who pay us in currencies other than the U.S. dollar. Fluctuations in the exchange rates between the U.S. dollar and those other currencies could result in the dollar equivalent of such expenses being higher and/or the dollar equivalent of such foreign-denominated revenue being lower than would be the case if exchange rates were stable. This could have a negative impact on our reported operating results.

Changes in tax laws or tax rulings could materially affect our financial position and results of operations.

The tax regimes we are subject to or operate under 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 and results of operations. Many countries in the European Union, as well as a number of other countries and organizations such as the Organization for Economic Cooperation and Development, have recently proposed or recommended changes to existing tax laws or have enacted new laws that could impact our tax obligations. For example, in 2015 the United Kingdom enacted the Diverted Profits Tax. In addition, the current U.S. administration and key members of Congress have made public statements indicating that tax reform is a priority. Any changes in the taxation of our international business activities may impact our worldwide effective tax rate, our financial position and results of operations.

We may have exposure to greater than anticipated tax liabilities.

Our income tax obligations are based in part on our corporate operating structure and intercompany arrangements, including the manner in which we develop, value, manage, and use our intellectual property and the valuation of our intercompany transactions. The tax laws applicable to our business, including the laws of the U.S. 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. Our existing corporate structure and intercompany arrangements have been implemented in a manner we believe is in compliance with current prevailing tax laws. However, the taxing authorities of the jurisdictions in which we operate may challenge our methodologies for valuing developed technology or intercompany arrangements, which could impact our worldwide effective tax rate and harm our financial position and results of operations.

We may be required to record impairment related to our goodwill, intangible assets or other long-lived assets if our market capitalization declines below our net asset value or if our financial performance and/or condition deteriorates including for specific games for which we have recorded intangible assets.

As of December 31, 2016, we had over \$900 million of goodwill, intangible assets and other long-lived assets. If our market capitalization declines below our net asset value or if our financial performance and/or condition deteriorate, we may have to impair our goodwill, intangible assets or other long-lived assets, which could adversely impact our results of operations and financial position. For example, in the third quarter of 2016, we recorded an intangible asset impairment charge of \$18.2 million and \$ 2.4 million related to Rising Tide and Zindagi, respectively. For more information, see Note 6 – “Goodwill and Other Intangible Assets” in the notes to the consolidated financial statements included herein.

We may require additional capital to meet our financial obligations and support business growth, and this capital might not be available on acceptable terms or at all.

We intend to continue to make significant investments to support our business growth and may require additional funds to respond to business challenges, including the need to develop new games and features or enhance our existing games, improve our operating infrastructure or acquire complementary businesses, personnel and technologies. Accordingly, we may need to engage in equity or debt financings to secure additional funds. If we raise additional funds through future issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our Class A common stock. Any debt financing that we secure in the future could involve restrictive covenants relating to our capital raising activities and other financial and operational matters, which may make it more difficult for us to obtain additional capital and to pursue business opportunities, including potential acquisitions. We may not be able to obtain additional financing on terms favorable to us, if at all. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, our ability to continue to support our business growth and to respond to business challenges could be significantly impaired, and our business,

financial condition or results of operations may be harmed.

The occurrence of an earthquake or other natural disaster at or near one of our facilities could cause damage to our facilities and equipment, which could require us to curtail or cease operations.

Our principal offices are located in the San Francisco Bay Area, an area known for earthquakes, and are thus vulnerable to damage. All of our facilities are also vulnerable to damage from natural or manmade disasters, including power loss, fire, explosions, floods, communications failures, terrorist attacks and similar events. If any disaster were to occur, our ability to operate our business at our facilities could be impaired and we could incur significant losses, require substantial recovery time and experience significant expenditures in order to resume operations.

Risks Related to Our Class A Common Stock

The three class structure of our common stock has the effect of concentrating voting control with those stockholders who held our stock prior to our initial public offering, including our founder and certain other executive officers, employees and directors and their affiliates; this limits our other stockholders' ability to influence corporate matters.

Our Class C common stock has 70 votes per share, our Class B common stock has seven votes per share and our Class A common stock has one vote per share. Mr. Pincus, our Executive Chairman, beneficially owned approximately 66% of the total voting power of our outstanding capital stock as of December 31, 2016. As a result, Mr. Pincus has significant influence over the management and affairs of the Company and control over matters requiring stockholder approval, including the election of directors and significant corporate transactions, such as a merger or other sale of our Company or our assets. Mr. Pincus may hold this voting power for the foreseeable future, subject to additional issuances of stock by the Company or sales by Mr. Pincus. This concentrated voting control limits the ability of our other stockholders to influence corporate matters and could adversely affect the market price of our Class A common stock.

Future transfers or sales by holders of Class B common stock or Class C common stock will result in those shares converting to Class A common stock, which will have the effect, over time, of increasing the relative voting power of those stockholders who retain their existing shares of Class B or Class C common stock. In addition, as shares of Class B common stock are transferred or sold and converted to Class A common stock, the sole holder of Class C common stock, Mr. Pincus, will have greater relative voting control to the extent he retains his existing shares of Class C common stock, and as a result he could in the future continue to control a majority of our total voting power. Mr. Pincus is entitled to vote the shares he beneficially owns in his own interests and may do so.

Certain provisions in our charter documents and under Delaware law could limit attempts by our stockholders to replace or remove our Board of Directors or current management and limit the market price of our Class A common stock.

Provisions in our certificate of incorporation and bylaws may have the effect of delaying or preventing changes in our Board of Directors or management. Our certificate of incorporation and bylaws include provisions that:

- establish an advance notice procedure for stockholder proposals to be brought before an annual meeting, including proposed nominations of persons for election to our Board of Directors;
- prohibit cumulative voting in the election of directors; and
- reflect three classes of common stock, as discussed above.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our Board of Directors, which is responsible for appointing the members of our management. In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with any "interested" stockholder for a period of three years following the date on which the stockholder became an "interested" stockholder.

Our share price 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, highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control. During the 2016 fiscal year, the stock price of our Class A common stock ranged from \$1.78 to \$3.08. In addition to the factors discussed in these "Risk Factors" and elsewhere in this filing, factors that may cause volatility in our share price include:

- changes in projected operational and financial results;
- issuance of new or updated research or reports by securities analysts;

- market rumors or press reports;
- announcements related to our share repurchase program;
- our announcement of significant transactions;
- the use by investors or analysts of third-party data regarding our business that may not reflect our actual performance;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;

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- the activities, public announcements and financial performance of our commercial partners, such as Facebook, Apple and Google;
- fluctuations in the trading volume of our shares, or the size of our public float relative to the total number of shares of our Class A, Class B and Class C common stock that are issued and outstanding;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares; and
- general economic and market conditions.

Furthermore, 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 companies. These fluctuations often have been unrelated or disproportionate to the operating performance of those companies. These broad market and industry fluctuations, as well as general economic, political and market conditions such as recessions, interest rate changes or international currency fluctuations, may negatively impact the market price of our Class A common stock. In the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We have been the target of this type of litigation as described in the section titled “Legal Matters” included in Note 12 —“Commitments and Contingencies” in the notes to the consolidated financial statements included herein. Securities litigation against us could result in substantial costs and divert our management’s attention from other business concerns, which could harm our business.

In addition, in November 2016, a share repurchase program (“2016 Share Repurchase Program”) was authorized for up to \$200 million of our outstanding Class A common stock that remains in effect through the end of October 2018. The timing and amount of any stock repurchases will be determined based on market conditions, share price and other factors. The 2016 Share Repurchase Program does not require us to repurchase any specific number of shares of our Class A common stock, and may be modified, suspended or terminated at any time without notice. The 2016 Share Repurchase Program will be funded from existing cash on hand or other sources of financing as the Company may determine to be appropriate. Share repurchases under these authorizations may be made through a variety of methods, which may include open market purchases, privately negotiated transactions, block trades, accelerated share repurchase transactions, purchases through 10b5-1 plans or by any combination of such methods. Repurchases of our Class A common stock in the open market could result in increased volatility in our stock price. There is no guarantee that we will do any share repurchases under the 2016 Share Repurchase Program or otherwise in the future.

Our Class A common stock price may be volatile due to third-party data regarding our games.

Third parties, such as AppData, AppAnnie and comScore publish daily data about us and other social game companies with respect to DAUs and MAUs, monthly revenue, time spent per user and other information concerning social game usage. These metrics can be volatile, particularly for specific games, and in many cases do not accurately reflect the actual levels of usage of our games across all platforms and may not correlate to our bookings or revenue from the sale of virtual goods. There is a possibility that third parties could change their methodologies for calculating these metrics in the future. To the extent that securities analysts or investors base their views of our business or prospects on such third-party data, the price of our Class A common stock may be volatile and may not reflect the performance of our business.

If securities or industry analysts do not publish research about our business, or publish negative reports about our business, our share price and trading volume could decline.

The trading market for our Class A common stock, to some extent, depends on the research and reports that securities or industry analysts publish about our business. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our shares or lower their opinion of our shares, our share price would likely decline. If one or more of these analysts cease coverage of our company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

Future sales or potential sales of our Class A common stock in the public market could cause our share price to decline.

If the existing holders of our Class B common stock sell a large number of shares, they could adversely affect the market price for our Class A common stock. Sales of substantial amounts of our Class A common stock in the public market, or the perception that these sales could occur, could cause the market price of our Class A common stock to decline.

Certain holders of our Class B common stock are also entitled to rights with respect to the registration of such shares under the Securities Act of 1933 (the "Securities Act") pursuant to an investors' rights agreement. If these holders of our Class B common stock, by exercising their registration rights, sell a large number of shares, they could adversely affect the market price of our Class A common stock. If we file a registration statement for the purposes of selling additional shares to raise capital and are required to include shares held by these holders pursuant to the exercise of their registration rights, our ability to raise capital may be impaired.

Sales of substantial amounts of our Class A common stock in the public market, following the release of lock-up agreements, the filing of additional registration statements, or otherwise, or the perception that these sales could occur, could cause the market price of our Class A common stock to decline.

If we are unable to implement and maintain effective internal control over financial reporting in the future, the accuracy and timeliness of our financial reporting may be adversely affected.

If we are unable to maintain adequate internal controls for financial reporting in the future, or if our auditors are unable to express an opinion as to the effectiveness of our internal controls as required pursuant to the Sarbanes-Oxley Act, investor confidence in the accuracy of our financial reports may be impacted or the market price of our Class A common stock could be negatively impacted.

The requirements of being a public company may strain our resources, divert management's attention and affect our ability to attract and retain qualified Board members.

We are subject to the reporting requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), the Sarbanes-Oxley Act, the Dodd-Frank Act, the listing requirements of the NASDAQ Global Select Market and other applicable securities rules and regulations. Compliance with these rules and regulations has increased and will continue to increase our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and increase demand on our systems and resources. The Exchange Act requires, among other things, that we file annual, quarterly and current reports with respect to our business and operating results.

As a result of disclosure of information in our public filings with the SEC as required of a public company, our business and financial condition have become more visible, which we believe may result in threatened or actual litigation, including by competitors and other third parties. If such claims are successful, our business, financial condition or results of operations could be harmed, and even if the claims do not result in litigation or are resolved in our favor, these claims, and the time and resources necessary to resolve them, could divert the resources of our management and harm our business, financial condition or results of operations.

We have no plans to pay dividends for the foreseeable future.

We have never declared or paid any cash dividends on our common stock and do not have any plans to pay cash dividends in the foreseeable future. Any determination to pay dividends in the future will be at the discretion of our Board of Directors. Accordingly, investors must rely on sales of their Class A common stock after price appreciation, which may never occur, as the only way to realize any future gains on their investments.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We own our San Francisco, California corporate headquarters, an office building of approximately 660,000 square feet. We use approximately 308,000 square feet for our operations and lease most of the remainder to third-party tenants under leases that range in terms from month-to-month to terms through 2021. Our corporate headquarters currently accommodates our principal executive, development, engineering, marketing, business development, human resources, finance, legal, information technology and administrative activities.

We lease additional domestic office space in San Francisco, California; Camarillo, California; Carlsbad, California; Culver City, California; Eugene, Oregon; Austin, Texas; Chicago, Illinois; and New York, New York. We lease offices for our foreign operations in Toronto, Canada; Victoria, Canada; Bangalore, India; Dublin, Ireland; Warwickshire, England; Oxford, England; Brighton, England; and London, England. These additional domestic and international facilities total approximately 220,000 square feet, excluding restructured properties.

We believe that our existing facilities are sufficient for our current needs. We believe that suitable additional or substitute space will be available as needed to accommodate changes in our operations.

ITEM 3. LEGAL PROCEEDINGS

For a description of our material legal proceedings, see the section titled “Legal Matters’ included in Note 12 —“Commitments and Contingencies” in the notes to the consolidated financial statements, which is incorporated by reference herein.

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

Our Class A common stock has been listed on the NASDAQ Global Select Market under the symbol "ZNGA" since December 16, 2011. Prior to that time, there was no public market for our stock. The following table sets forth for the indicated periods the high and low sales prices per share for our Class A common stock on the NASDAQ Global Select Market.

	High	Low
Fourth Quarter 2015	\$2.75	\$2.22
First Quarter 2016	\$2.65	\$1.78
Second Quarter 2016	\$2.68	\$2.18
Third Quarter 2016	\$3.02	\$2.47
Fourth Quarter 2016	\$3.08	\$2.52

Our Class B common stock and Class C common stock are not listed nor traded on any stock exchange, but are convertible into shares of our Class A common stock on a one-for-one basis.

Holder of Record

As of December 31, 2016, there were approximately 276 stockholders of record of our Class A common stock, and the closing price of our Class A common stock was \$2.57 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 our stockholders, we are unable to estimate the total number of stockholders represented by these record holders. As of December 31, 2016, there were approximately 447 stockholders of record of our Class B common stock, and Mr. Pincus, our Executive Chairman of our Board of Directors, remains the only holder of Class C common stock.

Dividend Policy

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

Issuer Purchases of Equity Securities

In November 2016, we authorized the 2016 Share Repurchase Program. In the fourth quarter of 2016, we repurchased 12.3 million shares of our Class A common stock under the 2016 Share Repurchase Program at a weighted average price of \$2.76 per share for a total of \$34.2 million.

Repurchases of our Class A common stock during the fourth quarter of 2016 were as follows:

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Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares	Maximum Dollar Value
			Purchased as Part of Publicly Announced Programs	That May Yet Be Purchased Under the Program
November 1 - November 30, 2016	8,356,981	\$ 2.83	8,356,981	\$176,310,169
December 1 - December 31, 2016	3,980,518	\$ 2.61	3,980,518	\$165,936,626
Total	12,337,499	\$ 2.76	12,337,499	

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Stock Performance Graph

The following graph compares, for 2016, the cumulative total stockholder return for our Class A common stock, the Standard and Poor's 500 Stock Index (the "S&P 500 Index") and the NASDAQ Composite Index. The measurement points in the graph below are December 16, 2011 (the first trading day of our Class A common stock on the NASDAQ Global Select Market) and December 30, 2016 (the last trading day of 2016). The graph assumes that \$100 was invested on December 16, 2011 in our Class A common stock, the S&P 500 Index and the NASDAQ Composite Index and assumes reinvestment of any dividends. The stock price performance on the following graph is not necessarily indicative of future stock price performance.

The information furnished under the heading "Stock Performance Graph", including the performance graph, shall not be deemed "filed" for purposes of Section 18 of the Exchange Act or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference into any other filing under the Securities Act of 1933, as amended or the Exchange Act, except as expressly set forth by specific reference in such a filing.

ITEM 6. SELECTED CONSOLIDATED FINANCIAL AND OTHER DATA

The following selected consolidated financial and other data should be read in conjunction with “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our audited consolidated financial statements and related notes, which are included elsewhere in this Annual Report on Form 10-K. The consolidated statements of operations data for the years ended December 31, 2016, 2015 and 2014 as well as the consolidated balance sheet data as of December 31, 2016 and 2015 are derived from the audited consolidated financial statements that are included elsewhere in this Annual Report on Form 10-K. The consolidated statement of operations data for the 12 months ended December 31, 2013 and 2012 as well as the consolidated balance sheet data as of December 31, 2014, 2013 and 2012, are derived from audited consolidated financial statements that are not included in this Annual Report on Form 10-K. Our historical results are not necessarily indicative of the results to be expected in the future.

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(in thousands, except per share, user and ABPU data)				
Consolidated Statements of Operations Data:					
Revenue:					
Online game	\$547,291	\$590,755	\$537,619	\$759,572	\$1,144,252
Advertising and other	194,129	173,962	152,791	113,694	137,015
Total revenue	741,420	764,717	690,410	873,266	1,281,267
Costs and expenses:					
Cost of revenue	238,546	235,985	213,570	248,358	352,169
Research and development	320,300	361,931	396,553	413,001	645,648
Sales and marketing	183,637	169,573	157,364	104,403	181,924
General and administrative	92,509	143,284	167,664	162,918	189,004
Impairment of intangible assets	20,677	—	—	10,217	95,493
Total costs and expenses	855,669	910,773	935,151	938,897	1,464,238
Income (loss) from operations	(114,249)	(146,056)	(244,741)	(65,631)	(182,971)
Interest income	3,057	2,568	3,266	4,148	4,749
Other income (expense), net	6,461	13,306	8,248	(3,386)	18,647
Income (loss) before income taxes	(104,731)	(130,182)	(233,227)	(64,869)	(159,575)
Provision for (benefit from) income taxes	3,442	(8,672)	(7,327)	(27,887)	49,873
Net income (loss) attributable to common					
stockholders	\$(108,173)	\$(121,510)	\$(225,900)	\$(36,982)	\$(209,448)
Net income (loss) per share attributable to common					
stockholders					
Basic	\$(0.12)	\$(0.13)	\$(0.26)	\$(0.05)	\$(0.28)
Diluted	\$(0.12)	\$(0.13)	\$(0.26)	\$(0.05)	\$(0.28)
Weighted average common shares used to compute					
net income (loss) per share attributable to common					
stockholders:					
Basic	878,827	913,511	874,509	799,794	741,177
Diluted	878,827	913,511	874,509	799,794	741,177
Other Financial and Operational Data:					
Bookings ⁽¹⁾	754,533	699,955	694,300	716,176	1,147,627

Other Financial and Operational Data - Revised⁽⁶⁾:

Average DAUs (in millions) ⁽²⁾	19	21	26	36	62
Average MAUs (in millions) ⁽³⁾	64	81	110	164	288
Average MUUs (in millions) ⁽⁴⁾	55	57	70	104	159
ABPU ⁽⁵⁾	\$0.111	\$0.093	\$0.074	\$0.054	\$0.051

Other Financial and Operational Data -

As Reported:

Average DAUs (in millions) ⁽²⁾	N/A	N/A	27	37	63
Average MAUs (in millions) ⁽³⁾	N/A	N/A	118	171	302
Average MUUs (in millions) ⁽⁴⁾	N/A	N/A	81	112	180
ABPU ⁽⁶⁾	N/A	N/A	0.071	0.053	0.050

⁽¹⁾See the section titled “Non-GAAP Financial Measures” below for how we define and calculate bookings, a reconciliation between bookings and revenue, the most directly comparable U.S. GAAP financial measure and a discussion about the limitations of bookings.

⁽²⁾DAUs is the number of individuals who played one of our games during a particular day, as recorded by our internal analytics systems. Average DAUs is the average of the DAUs for each day during the period reported. See the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Metrics—Key Operating Metrics—DAUs” for more information on how we define and calculate DAUs.

⁽³⁾MAUs is the number of individuals who played a particular game during a 30-day-period, as recorded by our internal analytics systems. Average MAUs is the average of the MAUs at each month-end during the period reported. See the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Metrics—Key Operating Metrics—MAUs” for more information on how we define and calculate MAUs.

⁽⁴⁾MUUs is the number of unique individuals who played any of our games on a particular platform during a 30-day period, as recorded by our internal analytics systems. Average MUUs is the average of the MUUs at each month-end during the period reported. We are unable to distinguish whether players of certain games are also players of other Zynga games. As a result of this, we exclude players of these games from our calculation of the applicable key operating metric to avoid potential double counting. See the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Metrics—Key Operating Metrics—MUUs” for more information on how we define and calculate MUUs.

(5) ABPU is defined as our total bookings in a given period, divided by the number of days in that period, divided by the average DAUs during the period. See the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Key Metrics—Key Operating Metrics—ABPU” for more information on how we define and calculate ABPU.

(6) In the first quarter of 2015, the company modified its calculation to take into account our business’s transition to mobile and updates to our operating metrics which utilize additional third party data to help us identify whether a player logged in under two or more accounts is the same individual. As a result of these changes, we revised the definitions for DAUs, MAUs, MUUs, and MUPs in the first quarter of 2015. Additionally, in the third quarter of 2015, the company made a subsequent modification to its calculation of MUUs to further reduce duplication of users of both web and mobile platforms. For comparative purposes, the above key operating metrics have been revised to reflect the company’s current definitions and calculations for all periods presented.

Stock-based compensation expense included in the statements of operations data above was as follows:

	Year Ended December 31,				
	2016	2015	2014	2013	2012
Cost of revenue	\$3,720	\$4,547	\$4,623	\$468	\$12,116
Research and development	84,236	94,548	83,673	61,931	200,640
Sales and marketing	7,254	7,501	5,927	8,079	24,684
General and administrative	12,251	24,979	35,010	13,915	44,546
Total stock-based compensation	\$107,461	\$131,575	\$129,233	\$84,393	\$281,986

	Year Ended December 31,				
	2016	2015	2014	2013	2012
Consolidated Balance Sheet Data:					
Cash, cash equivalents and marketable securities	\$852,467	\$987,250	\$1,147,909	\$1,541,970	\$1,652,313
Property and equipment, net	269,439	273,221	297,919	348,793	466,074
Working capital	721,836	876,084	713,901	964,897	975,225
Total assets	1,905,849	2,124,630	2,348,793	2,279,085	2,576,320
Deferred revenue	142,156	129,043	193,805	189,915	347,005
Total stockholders’ equity (deficit)	1,580,664	1,786,901	1,895,692	1,877,271	1,825,503

Non-GAAP Financial Measures

Bookings

To provide investors with additional information about our financial results, we disclose within this Annual Report on Form 10-K, bookings, a non-GAAP financial measure. We have provided below a reconciliation between bookings and revenue, the most directly comparable GAAP financial measure.

Bookings is a non-GAAP financial measure that is equal to revenue recognized during the period plus or minus the change in deferred revenue during the period. We record the sale of virtual goods and mobile downloads as deferred revenue and then recognize that revenue over the estimated average payer life or as virtual goods are consumed. Advertising sales that consist of certain branded virtual goods and sponsorships are also deferred and recognized over the estimated average life of the branded virtual good, similar to online game revenue. For additional discussion of the estimated average life of durable virtual goods, see the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Revenue Recognition” elsewhere in this Annual Report on Form 10-K.

We use bookings to evaluate the results of our operations, generate future operating plans and assess the performance of our company. While we believe that this non-GAAP financial measure is useful in evaluating our business, this information should be considered as supplemental in nature and is not meant as a substitute for revenue recognized in accordance with U.S. GAAP. In addition, other companies, including companies in our industry, may calculate bookings differently or not at all, which reduces its usefulness as a comparative measure.

The following table is a reconciliation of revenue to bookings for each of the periods presented:

	Year Ended December 31,				
	2016	2015	2014	2013	2012
	(in thousands)				
Reconciliation of Revenue to Bookings:					
Revenue	\$741,420	\$764,717	\$690,410	\$873,266	\$1,281,267
Change in deferred revenue	13,113	(64,762)	3,890	(157,090)	(133,640)
Bookings	\$754,533	\$699,955	\$694,300	\$716,176	\$1,147,627

Limitations of Bookings

Some limitations of bookings are:

Bookings do not reflect that we defer and recognize online game revenue and revenue from certain advertising transactions over the estimated average life of durable virtual goods or as virtual goods are consumed; and other companies, including companies in our industry, may calculate bookings differently or not at all, which reduces their usefulness as a comparative measure.

Because of these limitations, you should consider bookings along with other financial performance measures, including revenue, net income (loss) and our other financial results presented in accordance with U.S. GAAP.

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 the consolidated financial statements and the related notes included elsewhere in this Annual Report on Form 10-K. 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 "Special Note Regarding Forward-Looking Statements" and "Risk Factors."

Overview

We are a leading provider of social game services with approximately 64 million average MAUs for 2016. We develop market and operate social games as live services played on mobile platforms such as iOS and Android and social networking sites such as Facebook. Generally, all of our games are free to play, and we generate revenue through the in-game sale of virtual goods and advertising services.

We are a pioneer and innovator of social games and a leader in making "play" a core activity on mobile devices and social networking sites. Our objective is to become the worldwide leader in play by connecting the world through games.

Consistent with our free-to-play business model, a small portion of our players have historically been payers. Because the opportunity for social interactions increases as the number of players increases, we believe that maintaining and

growing our overall number of players, including the number of players who may not purchase virtual goods, is important to the success of our business. As a result, we believe that the number of players who choose to purchase virtual goods will continue to constitute a small portion of our overall players.

Our top three revenue-generating games historically have contributed a significant portion of our revenue, though the games that represent our top three revenue-generating games vary over time. Our top three revenue-generating games accounted for 44%, 53% and 60% of our online game revenue in 2016, 2015 and 2014, respectively. In 2016, our top games were Zynga Poker, Wizard of Oz Slots and Hit It Rich! Slots.

How We Generate Revenue

We operate our social games as live services that allow players to play for free. We generate revenue primarily from the in-game sale of virtual goods and advertising services. Revenue growth will continue to depend largely on our ability to attract and retain players and more effectively monetize our player base through the in-game sale of virtual goods (referred to as “online game

revenue”) and advertising (referred to as “advertising revenue”). We intend to do this through the launch of new games, enhancements to current games and expansion into new markets and distribution platforms.

Online game. We provide our players with the opportunity to purchase virtual goods that enhance their game-playing experience. We believe players choose to pay for virtual goods for the same reasons they are willing to pay for other forms of entertainment – they enjoy the additional playing time or added convenience, the ability to personalize their own game boards, the satisfaction of leveling up and the opportunity for sharing creative expressions. We believe players are more likely to purchase virtual goods when they are connected to and playing with their friends, whether those friends play for free or also purchase virtual goods. Players may also elect to pay a one-time download fee to obtain certain mobile games free of third-party advertisements.

In 2016, our business continued generating a higher percentage of revenue and bookings through mobile platforms than through the Facebook platform. In 2016, we estimate that 46%, 29% and 20% of our revenue and 47%, 30% and 18% of our bookings were generated from Apple, Google and Facebook, respectively, while in 2015, we estimate that 38%, 23% and 33% of revenue and 40%, 25% and 29% of our bookings were generated from Apple, Google and Facebook, respectively. We have had to estimate this information because certain payment methods we accept and certain advertising networks do not allow us to determine the platform used.

For all payment transactions in our games under Facebook’s local currency-based payments model, Facebook remits to us an amount equal to 70% of the price we requested to be charged to our players. On platforms other than Facebook, players purchase our virtual goods through various widely accepted payment methods offered in the games, including PayPal, Apple iTunes accounts, Google Wallet and credit cards.

Advertising and other. Advertising revenue primarily includes engagement ads and offers, mobile and display ads, branded virtual goods and sponsorships and other. We generally report our advertising revenue net of amounts due to advertising agencies and brokers. Other revenue includes software licensing and maintenance related to technology acquired in our acquisition of NaturalMotion as well as licensing of our brands.

Key Metrics

We regularly review a number of metrics, including the following key financial and operating metrics, to evaluate our business, measure our performance, identify trends in our business, prepare financial projections and make strategic decisions.

Key Financial Metrics

Bookings. Bookings is a non-GAAP financial measure that is equal to revenue recognized during the period plus the change in deferred revenue during the period. We record the sale of virtual goods as deferred revenue and then recognize that revenue over the estimated average life of the purchased virtual goods or as the virtual goods are consumed. Advertising sales which consist of certain branded virtual goods and sponsorships are also deferred and recognized over the estimated average life of the branded virtual good, similar to online game revenue. Bookings, as opposed to revenue, is the fundamental top-line metric we use to manage our business, as we believe it is a useful indicator of the sales activity in a given period. Over the long-term, the factors impacting our bookings and revenue are the same. However, in the short term, there are factors that may cause revenue to exceed or be less than bookings in any period.

We use bookings to evaluate the results of our operations, generate future operating plans and assess the performance of our company. While we believe that this non-GAAP financial measure is useful in evaluating our business, this information should be considered as supplemental in nature and is not meant as a substitute for revenue recognized in accordance with U.S. GAAP. In addition, other companies, including companies in our industry, may calculate bookings differently or not at all, which reduces its usefulness as a comparative measure.

Key Operating Metrics

We manage our business by tracking several operating metrics: “DAUs,” which measure daily active users of our games, “MAUs,” which measure monthly active users of our games, “MUUs,” which measure monthly unique users of our games, “MUPs,” which measure monthly unique payers in our games, and “ABPU,” which measures our average daily bookings per average DAU, each of which is recorded by our internal analytics systems. The numbers for these operating metrics are calculated using internal company data based on tracking of user account activity. We use the information provided by third parties, including third party network logins provided by platform providers, to help us track whether a player logged in under two or more different user accounts is the same individual. We believe that the numbers are reasonable estimates of our user base for the applicable period of measurement; however, factors relating to user activity and systems may impact these numbers.

DAUs. We define DAUs as the number of individuals who played one of our games during a particular day. Under this metric, an individual who plays two different games on the same day is counted as two DAUs. We use information provided by third parties to help us identify individuals who play the same game to reduce this duplication. However, because we do not always have the third party network login data to link an individual who has played under multiple user accounts, a player may be counted as multiple DAUs. Average DAUs for a particular period is the average of the DAUs for each day during that period. We use DAUs as a measure of audience engagement.

MAUs. We define MAUs as the number of individuals who played one of our games in the 30-day period ending with the measurement date. Under this metric, an individual who plays two different games in the same 30-day period is counted as two MAUs. We use information provided by third parties to help us identify individuals who play the same game to reduce this duplication. However, because we do not always have the third party network login data to link an individual who has played under multiple user accounts, a player may be counted as multiple MAUs. Average MAUs for a particular period is the average of the MAUs at each month-end during that period. We use MAUs as a measure of total game audience size.

MUUs. We define MUUs as the number of individuals who played one or more of our games, which we were able to verify were played by the same individual in the 30-day period ending with the measurement date. An individual who plays more than one of our games in a given 30-day period would be counted as a single MUU to the extent we can verify that the games were played by the same individual. However, because we do not always have the third party network login data necessary to link an individual who has paid under multiple user accounts in a given 30-day period, an individual may be counted as multiple MUUs. Because many of our players play more than one game in a given 30-day period, MUUs are always equal to or lower than MAUs in any given time period. Average MUUs for a particular period is the average of the MUUs at each month end during that period. We use MUUs as a measure of total audience reach across our network of games.

MUPs. We define MUPs as the number of individuals who made a payment at least once during the applicable 30-day period through a payment method for which we can quantify the number of individuals, including payers from certain mobile games. MUPs does not include individuals who use certain payment methods for which we cannot quantify the number of unique payers. However, because we do not always have the third party network login data necessary to link an individual who has paid under multiple user accounts in a 30-day period, a player who has paid using multiple user accounts may be counted as multiple MUPs. MUPs are presented as an average of the three months in the applicable quarter. We use MUPs as a measure of the number of individuals who made payments across our network of games during a 30-day period.

ABPU. We define ABPU as our total bookings in a given period, divided by the number of days in that period, divided by the average DAUs during the period. We believe that ABPU provides useful information to investors and others in understanding and evaluating our results in the same manner as our management and Board of Directors. We use ABPU as a measure of overall monetization across all of our players through the sale of virtual goods and advertising.

Our business model for social games is designed so that, as there are more players that play our games, social interactions increase and the more valuable the games and our business become. All engaged players of our games help drive our bookings and, consequently, both online game revenue and advertising revenue. Virtual goods are purchased by players who are socializing with, competing against or collaborating with other players, most of whom do not buy virtual goods. Accordingly, we primarily focus on bookings, DAUs, MAUs, MUUs, MUPs and ABPU, which together we believe best reflect key audience metrics.

The table below shows average DAUs, MAUs, MUPs and ABPU for the last eight quarters:

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	For the Three Months Ended							
	Dec	Sep		Mar	Dec	Sep		Mar
	31,	30,	Jun 30,	31,	31,	30,	Jun 30,	31,
	2016	2016	2016	2016	2015	2015	2015	2015
	(users and payers in millions)							
Average DAUs	18	18	18	19	18	19	21	25
Average MAUs	63	66	61	68	68	75	83	100
Average MUPs ⁽¹⁾	1.2	1.3	0.9	1.0	0.8	0.9	1.0	1.1
ABPU	\$0.120	\$0.116	\$0.107	\$0.103	\$0.110	\$0.100	\$0.091	\$0.076

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The table below shows average MUUs for the last eight quarters, including the initially reported and revised average MUUs for the first and second quarters of 2015 (refer to footnotes below):

	For the Three Months Ended							
	Dec 31, 2016	Sep 30, 2016	Jun 30, 2016	Mar 31, 2016	Dec 31, 2015	Sep 30, 2015	Jun 30, 2015	Mar 31, 2015
	2016	2016	2016	2016	2015	2015	2015	2015
	(users in millions)							
Average MUUs ⁽¹⁾	56	57	50	56	48	51	60	71
As Reported ⁽²⁾	N/A	N/A	N/A	N/A	N/A	N/A	62	73

⁽¹⁾ For the three months ended September 30, 2016 and December 31, 2016, MUUs and MUPs exclude Daily Celebrity Crossword and Vegas Diamond Slots. For the three months ended March 31, 2016 and June 30, 2016, MUUs and MUPs exclude Black Diamond Casino, Vegas Diamond Slots, Yummy Gummy and Crazy Kitchen. For all quarters in 2015, MUUs and MUPs exclude CSR Racing, CSR Classics and Clumsy Ninja. These games are excluded to avoid potential double counting of MUUs and MUPs as our systems are unable to distinguish whether a player of these games is also a player of other Zynga games.

⁽²⁾ In the third quarter of 2015, the company made a modification to its calculation of MUUs to further reduce duplication of users of both web and mobile platforms. The “As Reported” numbers represent average MUUs disclosed prior to the modification in the third quarter of 2015.

Average DAUs, MAUs and MUUs increased from the fourth quarter of 2015 to the first quarter of 2016 due to the contribution from our games released in the first quarter of 2016, Crazy Kitchen and Yummy Gummy, which were acquired from Zindagi in the first quarter of 2016, in addition to strong performance from Words With Friends resulting from new feature releases such as Weekly Challenges. These metrics did not sustain in the second quarter of 2016, causing the sequential decline in average DAUs, MAUs and MUUs from the first quarter of 2016.

Average DAUs, MAUs and MUUs increased from the second quarter of 2016 to the third quarter of 2016 due to the contribution from our games released in the second quarter of 2016, FarmVille: Tropic Escape and CSR Racing 2. These metrics did not sustain in the fourth quarter of 2016, causing the sequential decline in average DAUs, MAUs and MUUs from the third quarter of 2016.

Average MAUs decreased when comparing the fourth quarter of 2015 to the fourth quarter of 2016 due to declines in users for our existing web and mobile games, primarily from CSR Racing, Looney Tunes Dash! and FarmVille 2, which were not offset by the contribution from new games such as FarmVille: Tropic Escape, CSR Racing 2 and Dawn of Titans, while average MUUs increased when comparing the fourth quarter of 2015 to the fourth quarter of 2016 due to the inclusion of CSR Racing, CSR Classics and Clumsy Ninja beginning in the first quarter of 2016. Average DAUs were flat when comparing the fourth quarter of 2015 to the fourth quarter of 2016.

ABPU increased in the third and fourth quarters of 2016 due to an increase in bookings due to new game launches, while ABPU increased in the second quarter of 2016 due to a decline in average DAUs. ABPU decreased in the first quarter of 2016 due to a decrease in bookings and an increase in average DAUs.

Other Metrics

Although our management primarily focuses on the operating metrics above, we also monitor periodic trends in our paying players of our games. The table below shows average monthly unique payer bookings, average MUPs and unique payer bookings per unique payer for the last eight quarters:

	For the Three Months Ended							
	Dec 31,	Sep 30,	Jun 30,	Mar 31,	Dec 31,	Sep 30,	Jun 30,	Mar 31,
	2016	2016	2016	2016	2015	2015	2015	2015
Average monthly unique payer bookings								
(in thousands) ⁽¹⁾	\$49,711	\$48,303	\$39,531	\$41,742	\$38,444	\$40,780	\$42,488	\$41,352
Average MUPs (in millions) ⁽²⁾	1.2	1.3	0.9	1.0	0.8	0.9	1.0	1.1
Monthly unique payer bookings per MUP ⁽³⁾	\$41	\$37	\$43	\$44	\$47	\$47	\$44	\$38

⁽¹⁾ Average monthly unique payer bookings represent the monthly average amount of bookings for the applicable quarter that we received through payment methods for which we can quantify the number of unique payers and excludes bookings from certain payment methods for which we cannot quantify the number of unique payers. Also excluded are bookings from advertising. For the three months ended December 31, 2016 and September 30, 2016, bookings from Daily Celebrity Crossword and Vegas Diamond Slots are excluded. For the three months ended March 31, 2016 and June 30, 2016 bookings from Black Diamond Casino, Vegas Diamond Slots, Yummy Gummy and Crazy Kitchen are excluded. For all quarters in 2015, bookings from CSR Racing, CSR Classics and Clumsy Ninja are excluded.

- (2) For the three months ended September 30, 2016 and December 31, 2016, MUPs exclude Daily Celebrity Crossword and Vegas Diamond Slots. For the three months ended March 31, 2016 and June 30, 2016, MUPs exclude Black Diamond Casino, Vegas Diamond Slots, Yummy Gummy and Crazy Kitchen. For all quarters in 2015, MUPs exclude CSR Racing, CSR Classics and Clumsy Ninja. These games are excluded to avoid potential double counting of MUPs, as our systems are unable to distinguish whether a player of these games is also a player of other Zynga games
- (3) Monthly unique payer bookings per MUP is calculated by dividing average monthly unique payer bookings by average MUPs.

Average monthly unique payer bookings grew in the first, third and fourth quarters of 2016, and when comparing the fourth quarter of 2016 to the fourth quarter of 2015, primarily due to the bookings contribution from new games launched in 2016, namely Willy Wonka and the Chocolate Factory Slots (launched in the first quarter), Wizard of Oz: Magic Match (launched in the second quarter), CSR Racing 2 (launched at the end of the second quarter), FarmVille: Tropic Escape (launched in the third quarter) and Dawn of Titans (launched in the fourth quarter). Additionally, unique payer bookings includes CSR Racing, CSR Classics and Clumsy Ninja beginning in the first quarter of 2016. Average monthly unique payer bookings decreased in the second quarter of 2016 due to a greater decline in bookings from some of our existing web and mobile games, such as Hit It Rich! Slots and Empires & Allies, which was not offset by the bookings contribution from newer titles.

Monthly unique payer bookings per MUP decreased to \$44 in the first quarter of 2016 due to average MUPs increasing faster than monthly unique payer bookings, while monthly unique payer bookings per MUP decreased to \$37 in the third quarter of 2016 due to a decrease in both average MUPs and unique payer bookings. Monthly unique payer bookings per MUP increased to \$41 in the fourth quarter of 2016 due to an increase in unique payer bookings and a decrease in average MUPs.

Although we monitor our unique payer metrics, we focus on monetization, including through in-game advertising, of all of our players and not just those who are payers. Accordingly, we strive to enhance content and our players' game experience to increase our bookings and ABPU, which is a measure of overall monetization across all of our players through the sale of virtual goods and advertising.

Future growth in audience and engagement will depend on our ability to retain current players, attract new players, launch new games and expand into new markets and distribution platforms, and the success of our network. Our operating metrics may not correlate directly to quarterly bookings or revenue trends in the short term.

2016 Highlights

- **Game Launches.** We launched several new games in 2016 on mobile and web, including Willy Wonka and the Chocolate Factory Slots, Wizard of Oz: Magic Match, CSR Racing 2, FarmVille: Tropic Escape and Dawn of Titans.
- **Mobile Growth.** In 2016, we delivered a 17% increase in mobile revenue year over year and a 27% increase in mobile bookings year over year. The increase was driven by the bookings contribution from new mobile games released in 2016, primarily CSR Racing 2, Willy Wonka and the Chocolate Factory Slots, Wizard of Oz: Magic Match and FarmVille: Tropic Escape, supplemented by strong advertising growth from Words With Friends.
- **Share Repurchase Programs.**

In October 2015, we authorized a share repurchase program ("2015 Share Repurchase Program") for up to \$200 million of our outstanding Class A common stock. In the first quarter of 2016, we repurchased 42.2 million shares of our Class A common stock at a weighted average price of \$2.40 for a total of \$101.9 million, completing the repurchase plan put in place during the fourth quarter of 2015.

In November 2016, we authorized the 2016 Share Repurchase Program. In the fourth quarter of 2016, we repurchased 12.3 million shares of our Class A common stock under the 2016 Share Repurchase Program at a weighted average price of \$2.76 per share for a total of \$34.2 million.

Factors Affecting Our Performance

Platform agreements. Our games are primarily distributed, marketed and promoted through third parties, primarily Facebook, Apple's App Store and the Google Play App Store. Virtual goods for our games are purchased through the payment processing systems of these platform providers. To date, we have generated a significant portion of our bookings, revenue and players through the Facebook, Apple and Google platforms and expect to continue to do so for the foreseeable future. We are generating an increasing portion of our bookings, revenue and players through the Apple App Store and Google Play App Store and expect that this trend will continue as we launch more games for mobile devices. Facebook, Apple and Google generally have the discretion to change their platforms' terms of service and other policies with respect to us or other developers in their sole discretion, and those changes may be unfavorable to us.

Launch of new games and release of enhancements. Our bookings and revenue results have been driven by the launch of new mobile and web games and the release of fresh content and new features in existing games. Our future success depends on our ability to innovate and provide fresh content to keep our existing players engaged as well as launch and monetize new titles on various platforms. Although the amount of revenue and bookings we generate from an enhancement to an existing game or launch of a new game or can vary significantly, we expect our revenue and bookings to be correlated to our success in releasing engaging content and features for our existing games and the success and timely launch of our new games. In addition, revenue and bookings from many of our games tend to decline over time after reaching a peak of popularity and player usage. We often refer to the speed of this decline as the decay rate of a game. As a result of this decline in the revenue and bookings of our games, our business depends on our ability to consistently release fresh content for our existing games and launch new games that achieve significant popularity and have the potential to become franchise games.

Game monetization. We generate most of our bookings and revenue from the sale of virtual goods in our games. The degree to which our players choose to pay for virtual goods in our games is driven by our ability to create content and virtual goods that enhance the game-play experience. Our bookings, revenue and overall financial performance are affected by the number of players and the effectiveness of our monetization of players through the sale of virtual goods and advertising. For example, ABPU increased from \$0.093 in 2015 to \$0.111 in 2016 due to higher decline in DAU of non-paying players (compared to paying players) who do not contribute to online game bookings. The percentage of paying mobile and international players may increase or decrease based on a number of factors, including growth in mobile games as a percentage of total game audience and our overall international players, localization of content and the availability of payment options. In addition, mobile and international players have historically monetized at a lower level than web and U.S. players, respectively.

Investment in game development. In order to develop new games and enhance the content and features in our existing games, we must continue to invest in a significant amount of engineering and creative resources. These expenditures generally occur in advance of the launch of a new game or the release of new content, and the resulting revenue may not equal or exceed our development costs, or the game or feature may be abandoned in its entirety.

Player acquisition costs. We utilize advertising and other forms of player acquisition and retention to grow and retain our player audience. These expenditures generally relate to the promotion of new game launches and ongoing performance-based programs to drive new player acquisition and lapsed player reactivation. Over time, these acquisition and retention-related programs may become either less effective or costlier, negatively impacting our operating results. Additionally, as our player base becomes more heavily concentrated on mobile platforms, our ability to drive traffic to our games through unpaid channels may become diminished, and the overall cost of marketing our games may increase.

New market development. We are investing in new distribution channels, mobile platforms and international markets to expand our reach and grow our business. For example, we have continued to hire additional employees and acquire companies with experience developing mobile applications. Our ability to be successful will depend on our ability to develop a successful mobile network, obtain new players and retain existing players on new and existing social networks and attract advertisers.

As we expand into new markets and distribution channels, we expect to incur headcount, marketing and other operating costs in advance of the associated bookings and revenue. Our financial performance will be impacted by our investment in these initiatives and their success.

Hiring and retaining key personnel. Our ability to compete and grow depends in large part on the efforts and talents of our employees. In addition to employee attrition, we have also implemented, and continue to implement, certain cost reduction initiatives to better align our operating expenses with our revenue, including reducing our headcount and consolidating certain facilities.

Results of Operations

Revenue

	Year Ended December 31,			2015 to 2016		2014 to 2015	
	2016	2015	2014	% Change		% Change	
	(in thousands)						
Revenue by type:							
Online game	\$547,291	\$590,755	\$537,619	(7)%	10	%
Advertising and other	194,129	173,962	152,791	12	%	14	%
Total revenue	\$741,420	\$764,717	\$690,410	(3)%	11	%

2016 Compared to 2015.

Total revenue decreased \$23.3 million in 2016 as compared to 2015 as a result of a decrease in online game revenue, offset by an increase in advertising and other revenue. Bookings increased \$54.6 million in 2016 due to increases in both online game and advertising and other bookings resulting from new game launches in 2016. ABPU increased from \$0.093 in 2015 to \$0.111 in 2016, and average MUP increased from 0.9 million in 2015 to 1.1 million in 2016, while average DAUs decreased from 21 million in 2015 to 19 million in 2016.

Online game revenue decreased \$43.5 million in 2016 as compared to 2015. This decrease was primarily attributable to decreases in revenue from FarmVille 2, FarmVille 2: Country Escape and Hit It Rich! Slots, in the amounts of \$49.1 million, \$38.9 million and \$24.4 million, respectively, due to the overall decay rate in bookings and audience metrics in these games. The overall decrease in online game revenue was offset by increases in revenue from Empires & Allies, CSR Racing 2, Black Diamond Slots and Willy Wonka and the Chocolate Factory Slots in the amounts of \$31.2 million, \$18.3 million, \$17.4 million and \$16.6 million, respectively. Online game revenue increased for Empires & Allies and Black Diamond Slots as these games were launched in May 2015 and September 2015, respectively, while online game revenue increased for Willy Wonka and the Chocolate Factory Slots and CSR Racing 2 as these games were launched in March 2016 and June 2016, respectively. All other games accounted for the remaining net decrease of \$14.6 million.

The decrease in online game revenue was supplemented by changes in estimated average life of durable virtual goods. During 2016, changes in our estimated average life of durable virtual goods for various games resulted in a decrease in revenue and income from operations of \$0.1 million, which is the result of adjusting the remaining recognition period of deferred revenue generated in prior periods at the time of a change in estimate. During 2015, changes in our estimated average life of durable virtual goods resulted in an increase in revenue and income from operations of \$1.0 million. We also recognized \$4.0 million of revenue and income from operations in 2016 due to changes in our estimated average life of durable virtual goods for games that have been discontinued, as there is no further service obligation after the closure of these games. For the same period in the prior year, we recognized \$9.9 million in revenue and income from operations for games that have been discontinued. These changes in estimates did not impact our reported earnings per share in 2016, and had a \$0.01 per share impact on our reported earnings per share in 2015.

International revenue as a percentage of total revenue was 32% and 34% in 2016 and 2015, respectively.

In 2016, Zynga Poker, Wizard of Oz Slots, Hit It Rich! Slots and FarmVille 2 were our top revenue-generating games and comprised 19%, 13%, 12% and 11%, respectively, of our online game revenue for the period. No other game generated more than 10% of our online game revenue during 2016. In 2015, FarmVille 2, Zynga Poker, Hit It Rich! Slots, FarmVille 2: Country Escape and Wizard of Oz Slots were our top online game revenue-generating games and comprised 19%, 18%, 16%, 14% and 10%, respectively, of our online game revenue for the period. No other game generated more than 10% of our online game revenue during 2015.

Consumable virtual goods accounted for 48% and 46% of online game revenue in 2016 and 2015, respectively. Durable virtual goods accounted for 52% and 54% of online game revenue in 2016 and 2015, respectively. The estimated weighted-average life of durable virtual goods was 9 months in 2016 and 10 months in 2015.

Advertising and other revenue increased \$20.2 million from 2015 to 2016 primarily due to a \$19.7 million increase in in-game display ads as a result of better optimization and performance on mobile platforms driving higher effective cost per thousand impressions (“eCPM”). The increases in in-game display ads were driven by the Company’s transition from web to mobile, as mobile revenue as a percentage of total revenue grew from 64% in 2015 to 77% in 2016 and mobile bookings as a percentage of total bookings grew from 68% in 2015 to 80% in 2016. The increase was also attributed to a \$2.5 million increase in in-game offers, engagement ads and other advertising revenue. These increases were offset by a \$2.0 million decrease in in-game sponsorships, which were historically more prevalent in our web

games, such as FarmVille.

2015 Compared to 2014.

Total revenue increased \$74.3 million in 2015 as compared to 2014 as a result of increases in both online game revenue and advertising and other revenue. Bookings increased \$5.7 million in 2015 due to growth in advertising bookings, offset by a decline in online game bookings from existing games as a result of declines in audience metrics and the lack of successful new launches to offset these declines. ABPU increased from \$0.074 (\$0.071 as reported) in 2014 to \$0.093 in 2015, due to the decline in average DAUs. Average DAUs decreased from 26 million (27 million as reported) in 2014 to 21 million in 2015 and MUPs decreased from 1.2 million (1.4 million as reported) in 2014 to 0.9 million in 2015.

Online game revenue increased \$53.1 million in 2015 as compared to 2014. This increase is primarily attributable to increases in online game revenue from FarmVille 2: Country Escape, Wizard of Oz Slots and Hit It Rich! Slots, in the amounts of \$60.6 million, \$58.3 million and \$44.6 million, respectively. Online game revenue increased for FarmVille 2: Country Escape and Wizard of Oz

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Slots as these games were launched in April 2014 and November 2014, respectively, while online game revenue increased for Hit It Rich! Slots as the game did not launch on all platforms and devices until May 2014. The increase in online game revenue was partially offset by decreases in online game revenue from FarmVille 2, FarmVille and Zynga Poker (web) in the amounts of \$38.2 million, \$19.2 million and \$17.3 million, respectively, due to the overall decay rate in bookings and audience metrics in these games. Moreover, there was a \$14.9 million decrease in online game revenue for Ayakashi as this game was discontinued in the second quarter of 2015. All other games accounted for the remaining net decrease of \$20.8 million.

International revenue as a percentage of total revenue was 34% and 38% in 2015 and 2014, respectively.

In 2015, FarmVille 2, Zynga Poker, Hit It Rich! Slots, FarmVille 2: Country Escape and Wizard of Oz Slots were our top online game revenue-generating games and comprised 19%, 18%, 16%, 14% and 10%, respectively, of our online game revenue for the period. No other game generated more than 10% of our online game revenue during 2015. In 2014, FarmVille 2 and Zynga Poker were our top online game revenue-generating games and comprised 28% and 23%, respectively, of our online game revenue for the period. No other game generated more than 10% of our online game revenue during 2014.

Consumable virtual goods accounted for 46% and 38% of online game revenue in 2015 and 2014, respectively. Durable virtual goods accounted for 54% and 62% of online game revenue in 2015 and 2014, respectively. The estimated weighted-average life of durable virtual goods was 10 months in 2015 and 12 months in 2014. During 2015, changes in our estimated average life of durable virtual goods for various games resulted in an increase in revenue, income from operations and net income of \$1.0 million, which is the result of adjusting the remaining recognition period of deferred revenue generated in prior periods at the time of a change in estimate. We also recognized \$9.9 million of revenue and income from operations in 2015 due to changes in our estimated average life of durable goods for games that were discontinued, as there is no further service obligation after the closure of these games. These changes in estimates and discontinuance of games resulted in a \$0.01 per share impact on our reported earnings per share in 2015. For 2014, changes in our estimated average life of durable virtual goods resulted in a decrease in revenue, income from operations and net income of \$1.2 million. These changes in estimates did not impact our reported earnings per share in 2015.

Advertising and other revenue increased \$21.2 million from 2014 to 2015 primarily due to a \$27.4 million increase in in-game display ads as a result of better optimization and performance on mobile platforms. The increase was also attributed to an \$8.3 million increase in in-game offers, engagement ads and other advertising revenue which was primarily due to an increase in engagement ads on our mobile games. The increases in in-game display ads and engagement ads were driven by the Company's transition from web to mobile, as mobile revenue as a percentage of total revenue grew from 44% in 2014 to 64% in 2015 and mobile bookings as a percentage of total bookings grew from 51% in 2014 to 68% in 2015. These increases were offset by a \$12.1 million decrease in licensing revenue driven by the final licensing payment from a strategic partner in 2014 and a \$2.4 million decrease in in-game sponsorships, which were historically more prevalent in our web games, such as CityVille and FarmVille.

Cost of revenue

	Year Ended December 31,			2015 to 2016 % Change	2014 to 2015 % Change
	2016	2015	2014		
	(in thousands)				
Cost of revenue	\$238,546	\$235,985	\$213,570	1	%
				10	%

2016 Compared to 2015. Cost of revenue increased \$2.6 million in 2016 as compared to 2015. The increase was primarily attributable to a \$28.6 million increase in payment processing fees from bookings generated from mobile payment processors, offset by a \$13.4 million decrease in hosting costs due to data center migration and a \$12.5 million decrease in depreciation expense due to the consolidation of data center facilities and the related disposition of certain data center assets in prior periods.

2015 Compared to 2014. Cost of revenue increased \$22.4 million in 2015 as compared to 2014. The increase was primarily attributable to a \$27.1 million increase in payment processing fees from bookings generated from mobile payment processors, a \$14.4 million increase in hosting costs due to data center migration and a \$12.2 million increase in royalty expense for licensed intellectual property, offset by a \$26.4 million decrease in depreciation expense due to the consolidation of data center facilities and the related disposition of certain data center assets in prior periods, a \$3.9 million decrease in headcount-related expense and a \$3.6 million decrease in third party customer service expense which is in line with the discontinuance of certain games.

Research and development

	Year Ended December 31,			2015 to 2016		2014 to 2015	
	2016	2015	2014	% Change		% Change	
	(in thousands)						
Research and development	\$320,300	\$361,931	\$396,553	(12))%	(9)%

2016 Compared to 2015. Research and development expenses decreased \$41.6 million in 2016 as compared to 2015. The decrease was primarily attributable to a \$15.1 million decrease in the estimated fair value of the contingent consideration liabilities for our acquisitions (we recorded a net expense of \$6.1 million in 2015 for Spooky Cool Labs and Rising Tide and a net benefit of \$9.1 million in 2016 for Rising Tide, Zindagi and PuzzleSocial), a \$14.0 million decrease in restructuring expense and a \$10.3 million decrease in stock-based expense.

2015 Compared to 2014. Research and development expenses decreased \$34.6 million in 2015 as compared to 2014. The decrease was primarily attributable to a \$24.1 million decrease in headcount-related expense and a \$23.3 million decrease in the estimated fair value of the contingent consideration liabilities due to the settlement of the contingent consideration liability for Spooky Cool in the first quarter of 2015, offset by a \$10.9 million increase in stock-based expense.

Sales and marketing

	Year Ended December 31,			2015 to 2016		2014 to 2015	
	2016	2015	2014	% Change		% Change	
	(in thousands)						
Sales and marketing	\$183,637	\$169,573	\$157,364	8	%	8	%

2016 Compared to 2015. Sales and marketing expenses increased \$14.1 million in 2016 as compared to 2015. The increase was primarily attributable to a \$12.0 million increase in player acquisition costs spent on newer titles such as CSR Racing 2, Willy Wonka and the Chocolate Factory Slots and Wizard of Oz: Magic Match and a \$4.8 million increase in head-count related expense.

2015 Compared to 2014. Sales and marketing expenses increased \$12.2 million in 2015 as compared to 2014. The increase was primarily attributable to an \$18.8 million increase in player acquisition costs spent on newer titles such as Wizard of Oz Slots and Empires & Allies, a \$2.6 million increase in marketing software costs and a \$1.6 million increase in stock-based expense, offset by an \$11.3 million decrease in other marketing costs.

General and administrative

	Year Ended December 31,			2015 to 2016		2014 to 2015	
	2016	2015	2014	% Change		% Change	
	(in thousands)						
General and administrative	\$92,509	\$143,284	\$167,664	(35))%	(15)%

2016 Compared to 2015. General and administrative expenses decreased \$50.8 million in 2016 as compared to 2015. The decrease was primarily attributable to an \$18.7 million decrease in restructuring expense, a \$12.7 million decrease in stock-based expense, a \$7.3 decrease in head-count related expense and a \$4.9 million decrease in third party consulting and legal expenses.

2015 Compared to 2014. General and administrative expenses decreased \$24.4 million in 2015 as compared to 2014. The decrease was primarily attributable to a \$21.8 million decrease in third party consulting and legal expenses and a \$10.0 million decrease in stock-based expense, offset by an \$8.5 million increase in restructuring expense.

Impairment of intangible assets

In the third quarter of 2016, we recorded \$20.6 million of impairment on intangible assets. Our updated financial forecast as of September 30, 2016, indicated a reduction of future undiscounted cash flows for certain games associated with developed technology previously acquired from Rising Tide and Zindagi. As a result, we performed an impairment analysis and determined the estimated fair values of Rising Tide's and Zindagi's intangible assets to be \$18.2 million and \$2.4 million lower, respectively, than their carrying values as of September 30, 2016.

Interest income

	Year Ended December 31,			2015 to 2016	2014 to 2015
	2016	2015	2014	% Change	% Change
	(in thousands)				
Interest income	\$3,057	\$2,568	\$3,266	19	% (21)%

2016 Compared to 2015. Interest income increased \$0.5 million in 2016. The increase was primarily attributed to a slightly higher rate of return on our cash and cash equivalents in 2016.

2015 Compared to 2014. Interest income decreased \$0.7 million in 2015. The decrease was primarily attributed to lower marketable security balances in 2015 compared to 2014.

Other income (expense), net

	Year Ended December 31,			2015 to 2016	2014 to 2015
	2016	2015	2014	% Change	% Change
	(in thousands)				
Other income (expense), net	\$6,461	\$13,306	\$8,248	NM	NM

2016 Compared to 2015. Other income (expense), net decreased \$6.8 million in 2016 as compared to 2015. The decrease was primarily attributable to a \$6.2 million gain recorded in the first quarter of 2015 related to the sale of an equity investment.

2015 Compared to 2014. Other income (expense), net increased \$5.1 million 2015 as compared to 2014. The increase was attributable to a \$4.8 million increase of other income which was primarily related to the sale of an equity investment in the first quarter of 2015 and a \$1.2 million increase in net sublease rental income.

Provision for (benefit from) income taxes

	Year Ended December 31,			2015 to 2016	2014 to 2015
	2016	2015	2014	% Change	% Change
	(in thousands)				
Provision for (benefit from) income taxes	\$3,442	\$(8,672)	\$(7,327)	NM	NM

2016 Compared to 2015. The provision for income taxes increased by \$12.1 million in 2016 as compared to 2015. The increase was primarily attributable to an incremental benefit of \$2.7 million recorded in the fourth quarter of 2015 related to a reduction in tax risk reserves that did not recur and a \$6.4 million reduction in benefit being recognized for the release of our U.S. valuation allowance related to the acquisition of PuzzleSocial as compared to the U.S. valuation allowance release related to the acquisition of Rising Tide for the same period in the prior year. In addition, there was a net \$3.0 million increase in foreign tax expense related to changes in our jurisdictional mix of earnings

between the two periods.

2015 Compared to 2014. The benefit from income taxes increased \$1.3 million in 2015 as compared to 2014. This increase was primarily attributable to the net \$2.7 million benefit recorded in 2015 related to a reduction in tax risk reserves and the net incremental benefit of \$2.5 million recorded in connection with current year tax purchase accounting, offset by \$3.7 million of net tax expense related to changes in estimated jurisdictional mix of earnings between the two periods.

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Quarterly Results of Operations Data

The following tables set forth our unaudited quarterly consolidated statements of operations data in dollars for each of the eight quarters ended December 31, 2016 (certain items may not reconcile due to rounding). We also present other financial and operations data and a reconciliation of revenue to bookings for the same periods. We have prepared the quarterly consolidated statements of operations data on a basis consistent with the audited consolidated financial statements included 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 that 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 elsewhere in this Annual Report on Form 10-K. The results of historical periods are not necessarily indicative of the results of operations for a full year or any future period.

	For the Three Months Ended							
	Dec 31,	Sep 30,	Jun 30,	Mar 31,	Dec 31,	Sep 30,	Jun 30,	Mar 31,
	2016	2016	2016	2016	2015	2015	2015	2015
(in thousands, except per share data)								
Consolidated Statements								
of Operations Data:								
Online game	\$140,157	\$134,254	\$135,823	\$137,057	\$129,463	\$151,168	\$162,161	\$147,963
Advertising and other	50,383	48,170	45,912	49,664	56,306	44,569	37,757	35,330
Total revenue	190,540	182,424	181,735	186,721	185,769	195,737	199,918	183,293
Costs and expenses:								
Cost of revenue	62,629	62,675	56,103	57,139	63,397	57,187	57,779	57,622
Research and development	92,417	73,913	66,233	87,737	85,099	78,416	90,896	107,520
Sales and marketing	46,860	49,802	40,631	46,344	53,066	43,549	41,119	31,839
General and administrative	23,095	21,656	25,374	22,384	39,333	25,765	37,805	40,381
Impairment of intangible assets	-	20,677	-	-	-	-	-	-
Total costs and expenses	225,001	228,723	188,341	213,604	240,895	204,917	227,599	237,362
Income (loss) from operations	(34,461)	(46,299)	(6,606)	(26,883)	(55,126)	(9,180)	(27,681)	(54,069)
Net income (loss)	\$(35,432)	\$(41,737)	\$(4,446)	\$(26,558)	\$(51,198)	\$3,052	\$(26,868)	\$(46,496)
Earnings (loss) per share								
- basic	\$(0.04)	\$(0.05)	\$(0.01)	\$(0.03)	\$(0.06)	\$0.00	\$(0.03)	\$(0.05)
Earnings (loss) per share								
- diluted	\$(0.04)	\$(0.05)	\$(0.01)	\$(0.03)	\$(0.06)	\$0.00	\$(0.03)	\$(0.05)

For the Three Months Ended							
Dec 31,	Sep 30,	Jun 30,	Mar 31,	Dec 31,	Sep 30,	Jun 30,	Mar 31,
2016	2016	2016	2016	2015	2015	2015	2015
(dollars in thousands)							

Other Financial and

Operations Data:								
Bookings	\$201,532	\$196,723	\$174,653	\$181,625	\$182,104	\$175,979	\$174,462	\$167,410

For the Three Months Ended

Dec	Sep		Mar	Dec	Sep		Mar
31,	30,	Jun 30,	31,	31,	30,	Jun 30,	31,

2016	2016	2016	2016	2015	2015	2015	2015
(users and payers in millions)							

Other Financial and

Operations Data:

Average DAUs	18	18	18	19	18	19	21	25
Average MAUs	63	66	61	68	68	75	83	100
Average MUPs ⁽¹⁾	1.2	1.3	0.9	1.0	0.8	0.9	1.0	1.1
ABPU	\$0.120	\$0.116	\$0.107	\$0.103	\$0.110	\$0.100	\$0.091	\$0.076

For the Three Months Ended

Dec	Sep	Jun	Mar	Dec	Sep	Jun	Mar
31,	30,	30,	31,	31,	30,	30,	31,

2016	2016	2016	2016	2015	2015	2015	2015
(users in millions)							

Average MUUs ⁽¹⁾	56	57	50	56	48	51	60	71
As Reported ⁽²⁾	N/A	N/A	N/A	N/A	N/A	N/A	62	73

⁽¹⁾ Average monthly unique payer bookings represent the monthly average amount of bookings for the applicable quarter that we received through payment methods for which we can quantify the number of unique payers and excludes bookings from certain payment methods for which we cannot quantify the number of unique payers. Also excluded are bookings from advertising. For the three months ended December 31, 2016 and September 30, 2016, bookings from Daily Celebrity Crossword and Vegas Diamond Slots are excluded. For the three months ended March 31, 2016 and June 30, 2016 bookings from Black

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Diamond Casino, Vegas Diamond Slots, Yummy Gummy and Crazy Kitchen are excluded. For all quarters in 2015, bookings from CSR Racing, CSR Classics and Clumsy Ninja are excluded.

(2) In the third quarter of 2015, the company made a modification to its calculation of MUUs to further reduce duplication of users of both web and mobile platforms. The “As Reported” numbers represent average MUUs disclosed prior to the modification in the third quarter of 2015.

	For the Three Months Ended							
	Dec 31,	Sep 30,	Jun 30,	Mar 31,	Dec 31,	Sep 30,	Jun 30,	Mar 31,
	2016	2016	2016	2016	2015	2015	2015	2015
	(in thousands)							
Reconciliation of Revenue to								
Bookings:								
Revenue	\$190,540	\$182,424	\$181,735	\$186,721	\$185,769	\$195,737	\$199,918	\$183,293
Change in deferred revenue	10,992	14,299	(7,082)	(5,096)	(3,665)	(19,758)	(25,456)	(15,883)
Bookings	\$201,532	\$196,723	\$174,653	\$181,625	\$182,104	\$175,979	\$174,462	\$167,410

Liquidity and Capital Resources

	Year Ended December 31,		
	2016	2015	2014
	(in thousands)		
Consolidated Statements of Cash Flows Data:			
Acquisition of property and equipment	\$(10,313)	\$(7,832)	\$(9,201)
Depreciation and amortization	41,770	54,315	82,894
Cash flows provided by (used in) operating activities	60,016	(44,447)	(4,511)
Cash flows provided by (used in) investing activities	204,103	749,573	(344,159)
Cash flows provided by (used in) financing activities	(150,327)	(93,545)	15,119

As of December 31, 2016, we had cash and cash equivalents of \$852.5 million, which consisted of cash, money market funds, corporate debt securities and U.S. government and government agency debt securities. In 2016, we made capital expenditures of \$10.3 million, which included hardware and software to support business operations.

In October 2015, we authorized the 2015 Share Repurchase Program. In the fourth quarter of 2015, we repurchased 37.9 million shares of our Class A common stock under the repurchase program at a weighted average price of \$2.60 per share for a total of \$98.9 million. In the first quarter of 2016, we repurchased 42.2 million shares of our Class A common stock at a weighted average price of \$2.40 for a total of \$101.9 million, completing the repurchase plan put in place during the fourth quarter of 2015.

In November 2016, we authorized the 2016 Share Repurchase Program. In the fourth quarter of 2016, we repurchased 12.3 million shares of our Class A common stock under the repurchase program at a weighted average price of \$2.76 per share for a total of \$34.2 million.

Operating Activities

2016 Compared to 2015. After our net loss of \$108.2 million is adjusted to exclude non-cash items, operating activities provided \$60.0 million of cash during 2016 primarily due to higher bookings. Significant non-cash items included stock-based expense of \$107.5 million, depreciation and amortization of \$41.8 million and impairment of intangible assets of \$20.6 million. Stock-based expense decreased \$24.1 million primarily due to stock option grants related to the NaturalMotion acquisition fully vesting during 2015 and the first half of 2016 and a decrease in expense from 2015 forfeited awards. Depreciation and amortization decreased by \$12.5 million primarily due to the consolidation of data facilities and the related disposition of certain data center assets. Changes in our operating assets and liabilities decreased \$0.1 million in 2016 primarily due to changes in deferred revenue of \$13.1 million, offset by changes in other liabilities of \$12.8 million. The contingent consideration liability for Rising Tide was settled during the fourth quarter of 2016 for \$10.2 million. As of December 31, 2015, the fair value of the contingent consideration was \$18.5 million. As a result of settling the full contingent consideration, the change in other liabilities reported within operating activities includes the non-cash portion of \$8.3 million, with the remaining \$10.2 million reported within financing activities.

2015 Compared to 2014. After our net loss of \$121.5 million is adjusted to exclude non-cash items, operating activities used \$44.4 million of cash during 2015. Significant non-cash items included stock-based expense of \$131.6 million and depreciation and amortization of \$54.3 million. Stock-based expense increased \$2.3 million primarily due to an increase in grants awarded in 2015 compared to 2014. Depreciation and amortization decreased by \$28.6 million primarily due to the consolidation of data facilities and the related disposition of certain data center assets and intangible assets that were fully amortized in 2015. Net cash used in operating activities increased \$39.9 million when compared to 2014. The increase in net cash used in operating activities was primarily due to

changes in our operating assets and liabilities in 2015, including changes of \$64.8 million and \$34.5 million in deferred revenue and other liabilities, respectively, offset by changes of \$10.9 million and \$10.1 million in accounts payable and accounts receivable, respectively.

2014 Compared to 2013. After our net loss of \$225.9 million is adjusted to exclude non-cash items, operating activities used \$4.5 million of cash during 2014. Significant non-cash items included stock-based expense of \$129.2 million and depreciation and amortization of \$82.9 million. Depreciation and amortization decreased by \$46.2 million as a result of fixed assets that were fully depreciated and disposed of and intangible assets that were fully amortized in 2014. Stock-based expense increased by \$44.8 million primarily due to grants related to the NaturalMotion acquisition. Net cash provided by operating activities declined \$33.2 million when compared to 2013, primarily due to changes in our operating assets and liabilities in 2014, including changes of \$24.6 million and \$5.4 million in other liabilities and income tax receivable, respectively, partially offset by changes of \$16.5 million and \$6.4 million in accounts receivable and accounts payable, respectively.

Investing Activities

2016 Compared to 2015. Investing activities resulted in cash inflow of \$204.1 million during 2016. The primary inflow of cash associated with investing activities was \$244.8 million of sales and maturities of marketable securities. The primary outflow of cash was \$33.6 million for business acquisitions, net of cash acquired, primarily due to the acquisition of Zindagi in the first quarter of 2016 for closing consideration of \$12.5 million (net of prepaid compensation expense of \$2.5 million, which was reported in operating activities) and the acquisition of PuzzleSocial in the third quarter of 2016 for closing consideration of \$19.4 million (net of cash acquired of \$0.6 million). Capital expenditures were \$10.3 million in 2016, which mainly related to the investment in hardware and software to support business operations. We expect capital expenditures of approximately \$16.0 million in 2017.

2015 Compared to 2014. Investing activities resulted in cash inflow of \$749.6 million during 2015. The primary inflows of cash associated with investing activities were \$766.1 million of sales and maturities of marketable securities, net of purchases. The primary outflows of cash were \$20.0 million for the acquisition of Rising Tide, net of cash acquired, in the third quarter of 2015. Capital expenditures were \$7.8 million in 2015, which mainly related to the investment in hardware and software to support business operations.

2014 Compared to 2013. Investing activities used \$344.2 million during 2014. The primary outflow of cash associated with investing activities was the business acquisition of NaturalMotion for which \$391.0 million was paid in cash. The primary cash inflows were \$47.7 million for the sales and maturities of marketable securities, net of purchases. Capital expenditures were \$9.2 million in 2014, which mainly related to the investment in hardware and software to support business operations.

Financing Activities

2016 Compared to 2015. Financing activities used \$150.3 million during 2016. The primary outflow of cash associated with financing activities was \$142.6 million of repurchases of Class A common stock in the first and fourth quarters of 2016, of which \$4.0 million of share repurchases were recorded in accounts payable and other current liabilities in the amounts of \$1.4 million and \$2.6 million, respectively, and will be paid in the first quarter of 2017. The contingent consideration liability for Rising Tide was settled during the fourth quarter of 2016 for \$10.2 million, which is reported as an outflow within financing activities.

2015 Compared to 2014. Financing activities used \$93.5 million during 2015. The primary outflow of cash associated with financing activities was the repurchases of Class A common stock of \$88.4 million in the fourth quarter of 2015. The remaining \$10.5 million of share repurchases were recorded in accounts payable and other current liabilities in the amounts of \$3.5 million and \$7.0 million, respectively, and were paid in the first quarter of 2016.

2014 Compared to 2013. Financing activities provided approximately \$15.1 million during 2014, the primary inflow of cash was \$16.4 million of cash receipts from exercises of employee stock options and employee stock purchase plan.

Credit Facility

On November 2, 2016, the Company voluntarily terminated its Amended and Restated Revolving Credit Agreement, dated as of June 20, 2013, as amended on July 1, 2015 (as amended, the "Credit Agreement") among the Company, the lenders party thereto and Morgan Stanley Senior Funding, Inc., as the administrative agent. Prior to its termination, the Credit Agreement provided the Company with a \$200 million revolving line of credit. The Credit Agreement was terminated because it no longer served the Company's needs and allows the Company to save costs otherwise incurred in connection with maintaining the line of credit. The pay-off amount in connection with the termination of the Credit Agreement was \$0.1 million and primarily consisted of commitment fees. The Company did not incur any early termination penalties in connection with the termination. As of December 31, 2016, we had not drawn down any amounts under the credit facility and were in compliance with these covenants.

Off-Balance Sheet Arrangements

We did not have any off-balance sheet arrangements in 2016, 2015 and 2014.

Contractual Obligations

	Total	2017	2018-2019	2020-2021	2022 and thereafter
	(in thousands)				
Lease commitments	\$15,721	\$5,405	\$7,711	\$2,572	\$33
Licensor commitments	45,175	27,442	15,733	2,000	—
Marketing commitments ⁽¹⁾	11,149	—	899	10,250	—
Other purchase commitments	13,766	9,898	3,592	276	—
Total contractual obligations	\$85,811	\$42,745	\$27,935	\$15,098	\$33

⁽¹⁾The amounts represented in the table above reflect our minimum cash obligations for the respective calendar years based on contractual terms, but do not necessarily represent the periods in which they will be expensed in the Company's consolidated statement of operations.

We do not have any capital lease obligations, and all of our property, equipment and software has been purchased with cash.

Lease Commitments

Our lease commitments consist of operating leases for facilities.

Licensor Commitments

Licensor commitments include minimum guarantee royalty payments due to licensors for use of their brands, properties and other licensed content in our games.

Marketing Commitments

Marketing commitments consist of specified spend amounts related to marketing our products.

Other Purchase Commitments

We have entered into several contracts for hosting of data systems and other services.

Contingent Consideration Liability

Under the terms of the agreements with Zindagi and PuzzleSocial, the maximum amount of additional consideration that could be earned and payable by us is \$60.0 million and \$42.0 million, respectively. The amounts payable are contingent upon the achievement of certain performance targets. As of December 31, 2016, the contingent consideration liability is \$0.2 million for Zindagi and \$0.7 million for PuzzleSocial.

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts in our consolidated financial statements and related notes. Our significant accounting policies are described in Note 1 to our consolidated financial statements included in this Annual Report. We have identified below our critical accounting policies and estimates that we believe require the greatest amount of judgment. These estimates and judgments have a significant impact on our consolidated financial statements. Actual results could differ materially from those estimates. The accounting policies that reflect our more significant estimates and judgments and that we believe are the most critical to fully understand and evaluate our reported financial results include the following:

- Revenue recognition
- Income taxes
- Business combinations
- Stock-based expense

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◆ Goodwill and indefinite-lived intangible assets
◆ Impairment of long-lived assets
◆ Licenses and royalties
Revenue Recognition

We derive revenue from the sale of virtual goods associated with our online games and the sale of advertising.

Online Game

We operate our games as live services that allow players to play for free. Within these games, players can purchase virtual currency to obtain virtual goods to enhance their game-playing experience. Players can pay for our virtual currency using Facebook local currency payments when playing our games through the Facebook platform. On platforms other than Facebook, players purchase our virtual currency and/or virtual goods through various widely accepted payment methods offered in the games, including PayPal, Apple iTunes accounts, Google Wallet and credit cards. We also sell existing inventory of game cards that are initially recorded as a customer deposit liability which is included in other current liabilities on the consolidated balance sheet, net of fees retained by retailers and distributors. Upon redemption of a game card in one of our games and delivery of the purchased virtual currency to the player, these amounts are reclassified to deferred revenue. Advance payments from customers that are non-refundable and relate to non-cancellable contracts that specify our obligations are recorded to deferred revenue. All other advance payments that do not meet these criteria are recorded as customer deposits.

We recognize revenue when all of the following conditions are satisfied: there is persuasive evidence of an arrangement; the service has been provided to the player; the collection of our fees is reasonably assured; and the amount of fees to be paid by the player is fixed or determinable. For purposes of determining when the service has been provided to the player, we have determined that an implied obligation exists to the paying player to continue displaying the purchased virtual goods within the online game over their estimated life or until they are consumed. Accordingly, we categorize our virtual goods as either consumable or durable. The proceeds from the sale of virtual goods are initially recorded in deferred revenue. Consumable virtual goods represent goods that can be consumed by a specific player action. Common characteristics of consumable goods may include virtual goods that are no longer displayed on the player's game board after a short period of time, do not provide the player any continuing benefit following consumption or often times enable a player to perform an in-game action immediately. For the sale of consumable virtual goods, we recognize revenue as the goods are consumed, which approximates one month. Durable virtual goods represent virtual goods that are accessible to the player over an extended period of time. We recognize revenue from the sale of durable virtual goods ratably over the estimated average playing period of paying players for the applicable game, which represents our best estimate of the average life of durable virtual goods. If we do not have the ability to differentiate revenue attributable to durable virtual goods from consumable virtual goods for a specific game we recognize revenue on the sale of durable and consumable virtual goods for that game ratably over the estimated average period that paying players typically play that game.

We have had sufficient data to separately account for consumable and durable virtual goods for substantially all of our web games, thus allowing us to recognize revenue related to consumable goods upon consumption for our web-based games. However, for our standalone mobile games, we do not have the requisite data to separately account for consumable and durable virtual goods and have therefore recorded mobile revenue ratably over the estimated average payer life. We expect that in future periods there will be changes in the mix of durable and consumable virtual goods sold, reduced virtual good sales in some existing games, changes in estimates in average paying payer life and/or changes in our ability to make such estimates. When such changes occur, and in particular if more of our revenue in any period is derived from goods for which revenue is recognized over the estimated average playing period, or that period increases on average, the amount of revenue that we recognize in a future period may be reduced, perhaps significantly.

On a quarterly basis, we determine the estimated average playing period for paying players by game beginning at the time of a payer's first purchase in that game and ending on a date when that paying player is no longer playing the game. To determine when paying players are no longer playing a given game, we analyze monthly cohorts of paying players for that game who made their first in-game payment between six and 18 months prior to the beginning of each quarter and determine whether each player within the cohort is an active or inactive player as of the date of our analysis. To determine which players are inactive, we analyze the dates that each paying player last logged into that game. We determine a paying player to be inactive once they have reached a period of inactivity for which it is probable (defined as at least 80%) that a player will not return to a specific game. For the payers deemed inactive as of our analysis date we analyze the dates they last logged into that game to determine the rate at which inactive players stopped playing. Based on these dates we then project a date at which all paying players for each monthly cohort are expected to cease playing our games. We then average the time periods from first purchase date and the date the last player is expected to cease playing the game for each of the monthly cohorts to determine the total playing period for that game. To determine the estimated average playing period we then divide this total playing period by two. The use of this "average" approach is supported by our observations that paying players typically become inactive at a relatively consistent rate for our games. If future data indicates paying players do not become inactive at a relatively consistent rate, we

will modify our calculations accordingly. When a new game is launched and only a limited period of paying player data is available for our analysis, then we also consider other factors, such as the estimated average playing period for other recently launched games with similar characteristics, to determine the estimated average playing period.

Future usage patterns may differ from historical usage patterns and therefore the estimated average playing periods may change in the future. We assess the estimated average playing period for paying players and the estimated average life of our virtual goods quarterly. Changes in our estimated average life of durable virtual goods during 2016 for various games resulted in a decrease in revenue, income from operations and net income of \$0.1 million, which is the result of adjusting the remaining recognition period of deferred revenue generated in prior periods at the time of a change in estimate. These changes in estimates did not impact our reported earnings per share in 2016.

Our players utilize Facebook's local currency-based payments program to purchase virtual currency in our games. Under the terms of our agreement with Facebook, Facebook remits to us 70% of the price we request to be charged to the game player for each transaction. We recognize revenue net of the amounts retained by Facebook related to Facebook local currency-based payments because Facebook may choose to alter our recommended price, for example by offering a discount or other incentives to players playing on their platform. Additionally, we do not receive information from Facebook indicating the amount of such discounts offered to our paying players or regarding the actual cash paid by our players to Facebook. Accordingly, we are unable to determine the gross amount paid by our players to Facebook.

For revenue earned through certain mobile platforms, including iOS and Android, we recognize online game revenue based on the gross amount paid by the player because we are the primary obligor and we have the contractual right to determine the price to be paid by the player. We record the related platform and payment processing fees as cost of revenue in the period incurred.

We estimate chargebacks from our third-party web and mobile payment processors to account for potential future chargebacks based on historical data and record such amounts as a reduction of revenue.

Advertising

We have contractual relationships with agencies, advertising brokers and certain advertisers for advertisements within our games. We generally report our advertising revenue net of amounts retained by advertising networks, agencies, and brokers because we are not the primary obligor in our arrangements, we do not set the pricing, and we do not establish or maintain the relationship with the advertiser. However, certain advertising arrangements that are directly between us and the end advertisers are recognized gross equal to the price paid to us by the end advertiser since we are the primary obligor and we determine the price.

We recognize advertising revenue for engagement advertisements and offers, mobile advertisements, branded virtual goods and sponsorships and other advertisements as advertisements are delivered to customers as long as evidence of the arrangement exists (executed contract), the price is fixed or determinable, and we have assessed collectability as reasonably assured. Certain branded in-game sponsorships that involve virtual goods are deferred and recognized over the estimated life of the branded virtual good or as consumed, similar to online game revenue. Price is determined to be fixed or determinable when there is a fixed price in the applicable evidence of the arrangement, which may include a master contract, insertion order, or a third party statement of activity. For engagement advertisements and offers, mobile advertisements, and other advertisements, delivery occurs when the advertisement has been displayed or the offer has been completed by the customer, as evidenced by third party verification reports supporting the number of advertisements displayed or offers completed. For branded virtual goods and sponsorships, we determine the delivery criteria has been met based on delivery information primarily from third parties.

Income Taxes

We account for income taxes using an asset and liability approach, which requires the recognition of taxes payable or refundable for the current year and deferred tax liabilities and assets for the future tax consequences of events that have been recognized in our financial statements or tax returns. The measurement of current and deferred tax assets and liabilities is based on provisions of enacted tax laws; the effects of future changes in tax laws or rates are not anticipated. If necessary, the measurement of deferred tax assets is reduced by the amount of any tax benefits that are not expected to be realized based on available evidence. We account for uncertain tax positions by reporting a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in a tax return. We recognize interest and penalties, if any, related to unrecognized tax benefits in provision for income taxes.

Business Combinations

In line with our growth strategy, we have completed acquisitions to expand our social games and mobile offerings, obtain employee talent, and expand into new markets. We account for acquisitions of entities that include inputs and processes and have the ability to create outputs as business combinations. We allocate the purchase price of the acquisition, which includes the estimated

acquisition date fair value of contingent consideration, to the tangible assets, liabilities and identifiable intangible assets acquired based on their estimated fair values. The excess of the purchase price over those fair values is recorded as goodwill. Determining the fair value of such items requires judgment, including estimating future cash flows or estimating the cost to recreate an acquired asset. If actual results are lower than estimates, we could be required to record impairment charges in the future. Acquired intangible assets are amortized over their estimated useful lives. Intangible assets with indefinite lives are not amortized but rather tested for impairment annually, or more frequently if circumstances exist which indicate an impairment may exist.

Acquisition-related expenses and restructuring costs are expensed as incurred. During the one-year period beginning with the acquisition date, we may record certain purchase accounting adjustments related to the fair value of assets acquired and liabilities assumed against goodwill. After the final determination of the fair value of assets acquired or liabilities assumed, any subsequent adjustments are recorded to our consolidated statements of operations. We record changes in the fair value of contingent consideration liabilities within operating expenses in our consolidated statement of operations each reporting period.

Software Development Costs

We review internal use software development costs associated with new games or updates to existing games in accordance with ASC 350-40, Intangibles-Goodwill and Other-Internal Use Software on a quarterly basis. Our studio teams follow an agile development process, wherein the preliminary project stage remains ongoing until just prior to worldwide launch, at which time final feature selection occurs. As such, these costs are expensed to research and development in our consolidated statement of operations.

Stock-Based Expense

We recognize stock-based expense for restricted stock units (“ZSUs”) based on grant date fair value on a ratable basis over the requisite service period for the entire award.

We estimate the fair value of stock options using the Black-Scholes option-pricing model. This model requires the use of the following assumptions: expected volatility of our Class A common stock, which is based on our own calculated four year historical rate; expected life of the option award, which we elected to calculate using the simplified method; expected dividend yield, which is 0%, as we have not paid and do not have any plans to pay dividends on our common stock; and the risk-free interest rate, which is based on the U.S. Treasury yield curve in effect at the time of grant with maturities equal to the grant’s expected life. We changed the basis of estimating our expected volatility in the fourth quarter of 2015 from using peer group data in the industry in which we do business to using our own calculated rate as we now have sufficient historical data (four years of historical trading activity) that we believe provides a reasonable basis for our estimate. Option grants generally vest over four to five years, with 25% to 20% vesting after one year and the remainder vesting monthly thereafter over 36 to 48 months, respectively. The options have a contractual term of 10 years. If any of the assumptions used in the Black-Scholes model changes significantly, stock-based expense for future awards may differ materially compared with the awards granted previously. We record stock-based expense for stock options on a ratable basis over the vesting term.

For stock options issued to non-employees, including consultants, we record expense related to stock options equal to the fair value of the options calculated using the Black-Scholes model over the service performance period. The fair value of options granted to non-employees is re-measured over the vesting period and recognized as an expense over the period the services are received.

Stock-based expense is recorded net of estimated forfeitures so that expense is recorded for only those stock-based awards that we expect to vest. We estimate forfeitures based on our historical forfeiture of equity awards adjusted to reflect future changes in facts and circumstances, if any. We will revise our estimated forfeiture rate if actual forfeitures differ from our initial estimates.

Goodwill and Indefinite-Lived Intangible Assets

Goodwill and indefinite-lived intangible assets are carried at cost and are evaluated annually for impairment, or more frequently if circumstances exist that indicate that impairment may exist.

When conducting our annual goodwill impairment assessment, we perform a quantitative evaluation of whether goodwill is impaired using the two-step impairment test. The first step is comparing the fair value of our reporting unit to its carrying value. We consider our consolidated entity to be our single reporting unit for this analysis. If step one indicates that impairment potentially exists, the second step is performed to measure the amount of impairment, if any. We record the amount by which the carrying value of the goodwill exceeds its implied fair value, if any, as impairment. For our annual goodwill impairment analysis performed in the fourth quarter of 2016, our estimates of fair value were based on the market approach, which estimated the fair value of our reporting unit based on the company's market capitalization. The result of the impairment analysis showed that the estimated fair value of the reporting unit exceeded its carrying value. Accordingly, we concluded goodwill was not impaired.

We test recoverability of indefinite-lived intangible assets using a qualitative approach on whether it is more likely than not that the fair value of the intangible asset exceeds its carrying value. If the asset is considered impaired, the amount of any impairment is measured as the difference between the carrying value and the fair value of the impaired asset.

Impairment of Long-Lived Assets

Long-lived assets, including other intangible assets (excluding indefinite-lived intangible assets), are reviewed for impairment whenever events or changes in circumstances indicate an asset's carrying value may not be recoverable. If such circumstances are present, we assess the recoverability of the long-lived assets by comparing the carrying value to the undiscounted future cash flows associated with the related assets. If the future net undiscounted cash flows are less than the carrying value of the assets, the assets are considered impaired and an expense, equal to the amount required to reduce the carrying value of the assets to the estimated fair value, using a discounted future cash flow approach, is recorded in the consolidated statements of operations. Significant judgment is required to estimate the amount and timing of future cash flows and the relative risk of achieving those cash flows.

Assumptions and estimates about future values and remaining useful lives are complex and often subjective. They can be affected by a variety of factors, including external factors such as industry and economic trends, and internal factors such as changes in our business strategy and our internal forecasts. For example, if our future operating results do not meet current forecasts or if we experience a continued decline in our market capitalization, we may be required to record future impairment charges for goodwill and/or acquired intangible assets. Impairment charges could materially decrease our future net income and result in lower asset values on our balance sheet.

Licenses and Royalties

We obtain licenses from third parties for use of their brands, properties and other licensed content in our games (e.g. Hit It Rich! Slots). Our licensing agreements include minimum guarantee royalty payments, which are due over the term of the agreement and are recoupable against future royalty obligations that would otherwise become payable. These advance payments are capitalized as prepaid royalties when paid and amortization commences when the licensed product is launched in our game. Amortization is recorded in cost of revenue and is calculated as (1) the contractual royalty rate based on actual net product sales as defined in the licensing agreement or (2) the straight-line method over the remaining estimated useful life of the licensed product, whichever is greater.

Each quarter, we evaluate the recoverability of our prepaid royalties as well as any unrecognized guarantees not yet paid to determine amounts that we deem unlikely to be recouped through product sales. To evaluate the future recoverability of prepaid royalties and guarantees, we consider the terms of the agreement, game development plans, forecasted and actual financial performance of the game as well as other qualitative factors such as the success of similar games and similar genres published by the Company. To the extent that this evaluation indicates that the remaining prepaid and guaranteed royalty payments are not recoverable, the Company records an impairment charge in the period that impairment is indicated. Any impairment losses determined before the launch of a product are expensed to research and development in our consolidated statement of operations, while any impairment losses determined post-launch are expensed to cost of revenue.

Recent Accounting Pronouncements

For information with respect to recent accounting pronouncements and the impact of these pronouncements on our consolidated financial statements, see Note 1 – “Overview and Summary of Significant Accounting Policies” in the notes to the consolidated financial statements included elsewhere in this Annual Report on Form 10-K.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

Interest Rate Fluctuation Risk

Our cash and cash equivalents and marketable securities consist of cash, money market funds, U.S. government debt securities and corporate debt securities. The primary objective of our investment activities is to preserve principal, ensure liquidity and maximize income without significantly increasing risk. Our available-for-sale investments consist of U.S. government and corporate debt securities which may be subject to market risk due to changes in prevailing interest rates that may cause the fair values of our investments to fluctuate. Based on a sensitivity analysis, we have determined that a hypothetical 100 basis points increase in interest rates would have resulted in a decrease in the fair values of our investments of approximately \$0.4 million as of December 31, 2016. Such losses would only be realized if we sold the investments prior to maturity.

Foreign Currency Exchange Risk

We have foreign currency risks related to our revenue and operating expenses incurred outside the U.S. and denominated in currencies other than the functional currency of the entities in which they are recorded. Accordingly, we are subject to fluctuations due to changes in foreign currency exchange rates, particularly changes in the Euro, Chinese Yuan, Japanese Yen, British Pound, Canadian Dollar, Australian Dollar and Indian Rupee. The volatility of exchange rates depends on many factors that we cannot forecast with reliable accuracy. Although we have experienced and will continue to experience fluctuations in our net income (loss) as a result of transaction gains (losses) related to revaluing certain cash balances, trade accounts receivable, trade accounts payable, current liabilities and intercompany balances that are denominated in currencies other than the U.S. dollar, we believe such a change would not have a material impact on our results of operations.

Inflation Risk

We do not believe that inflation has had a material effect on our business, financial condition or results of operations. If our costs were to become subject to significant inflationary pressures, we may not be able to fully offset such higher costs through price increases. Our inability or failure to do so could harm our business, financial condition and results of operations.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Zynga Inc.

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

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Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Zynga Inc.

We have audited the accompanying consolidated balance sheets of Zynga Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive income (loss), stockholders' equity and cash flows for each of the three years in the period ended December 31, 2016. Our audits also included in the financial statement schedule listed in the Index at Item 15(a)2. These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Zynga Inc. at December 31, 2016 and 2015, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2016, in conformity with U.S. generally accepted accounting principles. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, present fairly in all material respects the information set forth therein.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Zynga Inc.'s internal control over financial reporting as of December 31, 2016, 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 February 17, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Jose, CA

February 17, 2017

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Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of Zynga Inc.

We have audited Zynga Inc.'s internal control over financial reporting as of December 31, 2016, 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”). Zynga Inc.'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 conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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.

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.

In our opinion, Zynga Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the 2016 consolidated financial statements of Zynga Inc. and our report dated February 17, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Jose, CA

February 17, 2017

Zynga Inc.

Consolidated Balance Sheets

(In thousands, except par value)

	December 31, 2016	December 31, 2015
Assets		
Current assets:		
Cash and cash equivalents	\$852,467	\$742,217
Marketable securities	—	245,033
Accounts receivable, net of allowance of \$0 at December 31, 2016 and December 31, 2015	77,260	79,610
Income tax receivable	296	5,233
Restricted cash	6,199	209
Other current assets	29,254	39,988
Total current assets	965,476	1,112,290
Goodwill	613,335	657,671
Other intangible assets, net	25,430	64,016
Property and equipment, net	269,439	273,221
Restricted cash	3,050	986
Other long-term assets	29,119	16,446
Total assets	\$1,905,849	\$2,124,630
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	\$23,999	\$29,676
Income tax payable	1,889	—
Other current liabilities	75,754	77,691
Deferred revenue	141,998	128,839
Total current liabilities	243,640	236,206
Deferred revenue	158	204
Deferred tax liabilities	5,791	6,026
Other non-current liabilities	75,596	95,293
Total liabilities	325,185	337,729
Stockholders' equity:		
Common stock, \$0.00000625 par value, and additional paid in capital - authorized shares: 2,020,517; shares outstanding: 886,850 shares (Class A, 770,269, Class B, 96,064 Class C, 20,517) as of December 31, 2016 and 903,617 (Class A, 769,533, Class B, 113,567, Class C, 20,517) as of December 31, 2015		
	3,349,714	3,234,551
Treasury stock	—	(98,942)
Accumulated other comprehensive income (loss)	(128,694)	(52,388)
Accumulated deficit	(1,640,356)	(1,296,320)

Total stockholders' equity	1,580,664	1,786,901
Total liabilities and stockholders' equity	\$1,905,849	\$2,124,630

See accompanying notes.

Zynga Inc.

Consolidated Statements of Operations

(In thousands, except per share data)

	Year Ended December 31,		
	2016	2015	2014
Revenue:			
Online game	\$547,291	\$590,755	\$537,619
Advertising and other	194,129	173,962	152,791
Total revenue	741,420	764,717	690,410
Costs and expenses:			
Cost of revenue	238,546	235,985	213,570
Research and development	320,300	361,931	396,553
Sales and marketing	183,637	169,573	157,364
General and administrative	92,509	143,284	167,664
Impairment of intangible assets	20,677	—	—
Total costs and expenses	855,669	910,773	935,151
Income (loss) from operations	(114,249)	(146,056)	(244,741)
Interest income	3,057	2,568	3,266
Other income (expense), net	6,461	13,306	8,248
Income (loss) before income taxes	(104,731)	(130,182)	(233,227)
Provision for (benefit from) income taxes	3,442	(8,672)	(7,327)
Net income (loss)	\$(108,173)	\$(121,510)	\$(225,900)
Net income (loss) per share attributable to common stockholders			
Basic	\$(0.12)	\$(0.13)	\$(0.26)
Diluted	\$(0.12)	\$(0.13)	\$(0.26)
Weighted average common shares used to compute net income (loss)			
per share attributable to common stockholders:			
Basic	878,827	913,511	874,509
Diluted	878,827	913,511	874,509

See accompanying notes.

Zynga Inc.

Consolidated Statements of Comprehensive Income (Loss)

(In thousands)

	Year Ended December 31,		
	2016	2015	2014
Net income (loss)	\$(108,173)	\$(121,510)	\$(225,900)
Other comprehensive income (loss):			
Change in foreign currency translation adjustment	(76,410)	(23,480)	(27,522)
Net change on unrealized gains (losses) on available-for-sale			
investments, net of tax	104	267	(607)
Other comprehensive income (loss):	(76,306)	(23,213)	(28,129)
Comprehensive income (loss):	\$(184,479)	\$(144,723)	\$(254,029)

See accompanying notes.

Zynga Inc.

Consolidated Statements of Stockholders' Equity

(In thousands)

	Common Shares	Stock Amount	Additional Paid-In Capital	Treasury Stock	OCI	Retained Earnings (Accumulated Deficit)	Total Stockholders Equity
Balances at December 31, 2013	832,309	\$ 5	\$2,823,738	\$—	\$(1,046)	\$(945,426)	\$ 1,877,271
Exercise of stock options, warrants and ESPP	11,461	—	16,421	—	—	—	16,421
Vesting of ZSUs, net	22,582	—	(429)	(789)	—	—	(1,218)
Issuance of common stock in connection with business							
acquisitions	39,754	—	131,158	—	—	—	131,158
Cancellation of unvested restricted common stock	(200)	—	—	—	—	—	—
Stock-based expense	—	—	126,856	—	—	—	126,856
Vesting of common stock following the early exercise of options	—	—	341	—	—	—	341
Retirement of treasury stock, net of repurchases	(46)	—	—	789	—	(789)	—
Tax cost (benefit) from stock-based expense	—	—	(1,108)	—	—	—	(1,108)
Net income (loss)	—	—	—	—	—	(225,900)	(225,900)
Other comprehensive income (loss)	—	—	—	—	(28,129)	—	(28,129)
Balances at December 31, 2014	905,860	\$ 5	\$3,096,977	\$—	\$(29,175)	\$(1,172,115)	\$ 1,895,692
Exercise of stock options and ESPP	7,075	—	7,567	—	—	—	7,567
Vesting of ZSUs, net	27,966	1	(2,130)	(772)	—	—	(2,901)
Contributed capital, related to common control acquisition	—	—	1,854	—	—	(1,963)	(109)
Stock-based expense	717	—	129,591	—	—	—	129,591
Vesting of common stock following the early exercise of options	—	—	170	—	—	—	170
Repurchases of common stock	(38,001)	—	—	(98,902)	—	—	(98,902)
Retirements of treasury stock	—	—	—	732	—	(732)	—
Tax cost (benefit) from stock-based expense	—	—	516	—	—	—	516
Net income (loss)	—	—	—	—	—	(121,510)	(121,510)

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Other comprehensive income (loss)	—	—	—	—	(23,213)	—	(23,213)
Balances at December 31, 2015	903,617	\$ 6	\$3,234,545	\$(98,942)	\$(52,388)	\$(1,296,320)	\$ 1,786,901
Exercise of stock options and ESPP	6,989	—	5,921	—	—	—	5,921
Vesting of ZSUs, net	30,794	—	(2,582)	(841)	—	—	(3,423)
Stock-based expense	—	—	111,824	—	—	—	111,824
Repurchases of common stock	(54,550)	—	—	(136,080)	—	—	(136,080)
Retirements of treasury stock	—	—	—	235,863	—	(235,863)	—
Net income (loss)	—	—	—	—	—	(108,173)	(108,173)
Other comprehensive income (loss)	—	—	—	—	(76,306)	—	(76,306)
Balances at December 31, 2016	886,850	\$ 6	\$3,349,708	\$—	\$(128,694)	\$(1,640,356)	\$ 1,580,664

Zynga Inc.

Consolidated Statements of Cash Flows

(In thousands)

	Year Ended December 31,		
	2016	2015	2014
Operating activities:			
Net income (loss)	\$(108,173)	\$(121,510)	\$(225,900)
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Depreciation and amortization	41,770	54,315	82,894
Stock-based expense	107,461	131,575	129,233
(Gain) loss from sales of investments, assets and other, net	26	(5,558)	(1,610)
Tax benefits (costs) from stock-based awards	—	989	(86)
Excess tax (benefits) costs from stock-based awards	—	(989)	86
Accretion and amortization on marketable securities	323	5,711	10,061
Change in deferred income taxes and other	(1,988)	(12,693)	(10,982)
Impairment of intangible assets	20,677	—	—
Changes in operating assets and liabilities:			
Accounts receivable, net	3,834	10,148	(16,489)
Income tax receivable	2,425	(1,929)	5,433
Other assets	(4,926)	(16,167)	971
Accounts payable	(3,613)	10,934	(6,393)
Deferred revenue	13,113	(64,762)	3,643
Income tax payable	1,889	—	—
Other liabilities	(12,802)	(34,511)	24,628
Net cash provided by (used in) operating activities	60,016	(44,447)	(4,511)
Investing activities:			
Purchases of marketable securities	—	(101,091)	(758,509)
Sales and maturities of marketable securities	244,837	867,198	806,232
Acquisition of property and equipment	(10,313)	(7,832)	(9,201)
Business acquisitions, net of cash acquired	(33,630)	(20,023)	(392,411)
Proceeds from sale of property and equipment	3,209	814	5,059
Proceeds from sale of equity method investment	—	10,507	—
Other investing activities, net	—	—	4,671
Net cash provided by (used in) investing activities	204,103	749,573	(344,159)
Financing activities:			
Taxes paid related to net share settlement of equity awards	(3,422)	(2,902)	(1,216)
Repurchases of common stock	(142,596)	(88,409)	—
Proceeds from employee stock purchase plan and exercise of stock options	5,921	7,567	16,421
Excess tax benefits (costs) from stock-based awards	—	989	(86)
Acquisition-related contingent consideration payment	(10,230)	(10,790)	—
Net cash provided by (used in) financing activities	(150,327)	(93,545)	15,119
Effect of exchange rate changes on cash and cash equivalents	(3,542)	(667)	(669)
Net increase (decrease) in cash and cash equivalents	110,250	610,914	(334,220)

Cash and cash equivalents, beginning of period	742,217	131,303	465,523
Cash and cash equivalents, end of period	\$852,467	\$742,217	\$131,303

See accompanying notes.

Zynga Inc.

Notes to Consolidated Financial Statements

1. Overview and Summary of Significant Accounting Policies

Organization and Description of Business

Zynga Inc. (“Zynga” or “we” or the “Company”) is a leading provider of social game services. We develop, market and operate social games as live services played on mobile platforms such as iOS and Android and social networking sites such as Facebook. Generally, all of our games are free to play, and we generate revenue through the in-game sale of virtual goods and advertising services. Our operations are headquartered in San Francisco, California, and we have several operating locations in the U.S. as well as various international office locations in North America, India and Europe.

We completed our initial public offering in December 2011 and our Class A common stock is listed on the NASDAQ Global Select Market under the symbol “ZNGA.”

Basis of Presentation and Consolidation

The accompanying consolidated financial statements are presented in accordance with United States generally accepted accounting principles (“U.S. GAAP”). The consolidated financial statements include the operations of us and our wholly owned subsidiaries. All significant intercompany balances and transactions have been eliminated in the consolidation.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts in the consolidated financial statements and notes thereto. Significant estimates and assumptions reflected in the financial statements include, but are not limited to, the estimated lives of virtual goods that we use for revenue recognition, useful lives of property and equipment and intangible assets, accrued liabilities, income taxes, accounting for business combinations, stock-based expense and evaluation of goodwill, intangible assets, and long-lived assets for impairment. Actual results could differ materially from those estimates.

Changes in our estimated average life of durable virtual goods during 2016 for various games resulted in a decrease in revenue and income from operations of \$0.1 million, which is the result of adjusting the remaining recognition period of deferred revenue generated in prior periods at the time of a change in estimate. For the same period in the prior year, changes in our estimated average life of durable virtual goods resulted in an increase in revenue and income from operations of \$1.0 million. We also recognized \$4.0 million of revenue and income from operations in 2016 due to changes in our estimated average life of durable goods for games that have been discontinued, as there is no further service obligation after the closure of these games. For the same period in the prior year, we recognized \$9.9 million for games that have been discontinued. These changes in estimates did not impact our reported earnings per share in 2016, and had a \$0.01 per share impact on our reported earnings per share in 2015.

Segments

We have one operating segment with one business activity, developing and monetizing social games. Our Chief Operating Decision Maker (“CODM”), our Chief Executive Officer, manages our operations on a consolidated basis for purposes of allocating resources. When evaluating performance and allocating resources, the CODM reviews financial information presented on a consolidated basis, accompanied by disaggregated bookings information for our games.

Revenue Recognition

We derive revenue from the sale of virtual goods associated with our online games and the sale of advertising.

Online Game

We operate our games as live services that allow players to play for free. Within these games, players can purchase virtual currency to obtain virtual goods to enhance their game-playing experience. Players can pay for our virtual currency using Facebook local currency payments when playing our games through the Facebook platform. On platforms other than Facebook, players purchase our virtual currency and/or virtual goods through various widely accepted payment methods offered in the games, including PayPal, Apple iTunes accounts, Google Wallet and credit cards. We also sell existing inventory of game cards that are initially recorded as a customer deposit liability which is included in other current liabilities on the consolidated balance sheet, net of fees retained by retailers and distributors. Upon redemption of a game card in one of our games and delivery of the purchased virtual currency to the

player, these amounts are reclassified to deferred revenue. Advance payments from customers that are non-refundable and relate to non-cancellable contracts that specify our obligations are recorded to deferred revenue. All other advance payments that do not meet these criteria are recorded as customer deposits.

We recognize revenue when all of the following conditions are satisfied: there is persuasive evidence of an arrangement; the service has been provided to the player; the collection of our fees is reasonably assured; and the amount of fees to be paid by the player is fixed or determinable. For purposes of determining when the service has been provided to the player, we have determined that an implied obligation exists to the paying player to continue displaying the purchased virtual goods within the online game over their estimated life or until they are consumed. Accordingly, we categorize our virtual goods as either consumable or durable. The proceeds from the sale of virtual goods are initially recorded in deferred revenue. Consumable virtual goods represent goods that can be consumed by a specific player action. Common characteristics of consumable goods may include virtual goods that are no longer displayed on the player's game board after a short period of time, do not provide the player any continuing benefit following consumption or often times enable a player to perform an in-game action immediately. For the sale of consumable virtual goods, we recognize revenue as the goods are consumed, which approximates one month. Durable virtual goods represent virtual goods that are accessible to the player over an extended period of time. We recognize revenue from the sale of durable virtual goods ratably over the estimated average playing period of paying players for the applicable game, which represents our best estimate of the average life of durable virtual goods. If we do not have the ability to differentiate revenue attributable to durable virtual goods from consumable virtual goods for a specific game we recognize revenue on the sale of durable and consumable virtual goods for that game ratably over the estimated average period that paying players typically play that game.

We have had sufficient data to separately account for consumable and durable virtual goods for substantially all of our web games, thus allowing us to recognize revenue related to consumable goods upon consumption for our web-based games. However, for our standalone mobile games, we do not have the requisite data to separately account for consumable and durable virtual goods and have therefore recorded mobile revenue ratably over the estimated average payer life. We expect that in future periods there will be changes in the mix of durable and consumable virtual goods sold, reduced virtual good sales in some existing games, changes in estimates in average paying payer life and/or changes in our ability to make such estimates. When such changes occur, and in particular if more of our revenue in any period is derived from goods for which revenue is recognized over the estimated average playing period, or that period increases on average, the amount of revenue that we recognize in a future period may be reduced, perhaps significantly.

On a quarterly basis, we determine the estimated average playing period for paying players by game beginning at the time of a payer's first purchase in that game and ending on a date when that paying player is no longer playing the game. To determine when paying players are no longer playing a given game, we analyze monthly cohorts of paying players for that game who made their first in-game payment between six and 18 months prior to the beginning of each quarter and determine whether each player within the cohort is an active or inactive player as of the date of our analysis. To determine which players are inactive, we analyze the dates that each paying player last logged into that game. We determine a paying player to be inactive once they have reached a period of inactivity for which it is probable (defined as at least 80%) that a player will not return to a specific game. For the payers deemed inactive as of our analysis date we analyze the dates they last logged into that game to determine the rate at which inactive players stopped playing. Based on these dates we then project a date at which all paying players for each monthly cohort are expected to cease playing our games. We then average the time periods from first purchase date and the date the last player is expected to cease playing the game for each of the monthly cohorts to determine the total playing period for that game. To determine the estimated average playing period we then divide this total playing period by two. The use of this "average" approach is supported by our observations that paying players typically become inactive at a relatively consistent rate for our games. If future data indicates paying players do not become inactive at a relatively consistent rate, we will modify our calculations accordingly. When a new game is launched and only a limited period of paying player data is available for our analysis, then we also consider other factors, such as the estimated average playing period for other recently launched games with similar characteristics, to determine the estimated average playing

period.

Future usage patterns may differ from historical usage patterns and therefore the estimated average playing periods may change in the future. We assess the estimated average playing period for paying players and the estimated average life of our virtual goods quarterly. Changes in our estimated average life of durable virtual goods during 2016 for various games resulted in a decrease in revenue, income from operations and net income of \$0.1 million, which is the result of adjusting the remaining recognition period of deferred revenue generated in prior periods at the time of a change in estimate. These changes in estimates did not impact our reported earnings per share in 2016.

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Our players utilize Facebook's local currency-based payments program to purchase virtual currency in our games. Under the terms of our agreement with Facebook, Facebook remits to us 70% of the price we request to be charged to the game player for each transaction. We recognize revenue net of the amounts retained by Facebook related to Facebook local currency-based payments because Facebook may choose to alter our recommended price, for example by offering a discount or other incentives to players playing on their platform. Additionally, we do not receive information from Facebook indicating the amount of such discounts offered to our paying players or regarding the actual cash paid by our players to Facebook. Accordingly, we are unable to determine the gross amount paid by our players to Facebook.

For revenue earned through certain mobile platforms, including iOS and Android, we recognize online game revenue based on the gross amount paid by the player because we are the primary obligor and we have the contractual right to determine the price to be paid by the player. We record the related platform and payment processing fees as cost of revenue in the period incurred.

We estimate chargebacks from our third-party web and mobile payment processors to account for potential future chargebacks based on historical data and record such amounts as a reduction of revenue.

Advertising

We have contractual relationships with agencies, advertising brokers and certain advertisers for advertisements within our games. We generally report our advertising revenue net of amounts retained by advertising networks, agencies, and brokers because we are not the primary obligor in our arrangements, we do not set the pricing, and we do not establish or maintain the relationship with the advertiser. However, certain advertising arrangements that are directly between us and the end advertiser are recognized gross equal to the price paid to us by the end advertiser since we are the primary obligor and we determine the price.

We recognize advertising revenue for engagement advertisements and offers, mobile advertisements, branded virtual goods and sponsorships and other advertisements as advertisements are delivered to customers as long as evidence of the arrangement exists (executed contract), the price is fixed or determinable, and we have assessed collectability as reasonably assured. Certain branded in-game sponsorships that involve virtual goods are deferred and recognized over the estimated life of the branded virtual good or as consumed, similar to online game revenue. Price is determined to be fixed or determinable when there is a fixed price in the applicable evidence of the arrangement, which may include a master contract, insertion order, or a third party statement of activity. For engagement advertisements and offers, mobile advertisements, and other advertisements, delivery occurs when the advertisement has been displayed or the offer has been completed by the customer, as evidenced by third party verification reports supporting the number of advertisements displayed or offers completed. For branded virtual goods and sponsorships, we determine the delivery criteria has been met based on delivery information primarily from third parties.

Multiple-Element Arrangements

We allocate arrangement consideration in multiple-deliverable revenue arrangements at the inception of an arrangement to all deliverables based on the relative selling price method, generally based on our best estimate of selling price. We offer certain promotions to customers from time to time that include the sale of in-game virtual currency via the sale of a game card and other deliverables such as a limited edition in-game virtual good.

Cost of Revenue

Amounts recorded as cost of revenue relate to direct expenses incurred in order to generate online game revenue. Such costs are recorded as incurred. Our cost of revenue consists primarily of hosting and data center costs related to operating our games, including depreciation, consulting costs primarily related to third-party provisioning of customer support services, payment processing fees, licensing fees, salaries, benefits and stock-based expense for our customer

support and infrastructure teams. Cost of revenue also includes amortization expense related to purchased technology of \$24.4 million, \$23.9 million and \$21.4 million 2016, 2015 and 2014 respectively.

Cash and Cash Equivalents

Cash equivalents consist of cash on hand, money market funds, commercial paper, corporate bonds and U.S. government-issued obligations with maturities of 90 days or less from the date of purchase.

Marketable Securities and Non-Marketable Securities

Marketable securities consist of U.S. government-issued obligations and corporate debt securities. Management determines the appropriate classification of marketable securities at the time of purchase and evaluates such determination at each balance sheet date. The fair value of marketable securities is determined as the exit price in the principal market in which we would transact. Based on our

intentions regarding our marketable securities, all marketable securities are classified as available-for-sale and are carried at fair value with unrealized gains and losses recorded as a separate component of other comprehensive income, net of income taxes. Realized gains and losses are determined using the specific-identification method and are reflected as a component of other income (expense), net in the consolidated statements of operations when they are realized. When we determine that a decline in fair value is other than temporary, the cost basis of the individual security is written down to the fair value as a new cost basis and the amount of the write-down is accounted for as a realized loss in other income (expense), net. The new cost basis will not be adjusted for subsequent recoveries in fair value. Determination of whether declines in fair value are other than temporary requires judgment regarding the amount and timing of recovery. No such impairments of marketable securities have been recorded in any of the periods presented.

For non-marketable securities in which we exercise significant influence on the equity to which these non-marketable securities relate, we apply the equity method of accounting. Our non-marketable securities are subject to periodic impairment reviews. In the first quarter of 2015, we sold our only equity method investment and recorded a \$6.2 million gain in other income in our consolidated statement of operations.

As of December 31, 2016, we did not have any marketable securities or equity method investments.

Restricted Cash

Restricted cash consists of collateral for royalty agreements and funds held in escrow in accordance with the terms of our business acquisition agreements.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded and carried at the original invoiced amount less an allowance for any potential uncollectible amounts. We review accounts receivable regularly and make estimates for the allowance for doubtful accounts when there is doubt as to our ability to collect individual balances. In evaluating our ability to collect outstanding receivable balances, we consider many factors, including the age of the balance, the customer's payment history and current creditworthiness, and current economic trends. Bad debts are written off after all collection efforts have ceased. We do not require collateral from our customers.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Depreciation is recorded using the straight-line method over the estimated useful lives of the assets. Leasehold improvements are amortized over the shorter of the estimated useful lives of the improvements or the lease term.

Business Combinations

We account for acquisitions of entities that include inputs and processes and have the ability to create outputs as business combinations. We allocate the purchase price of the acquisition, which includes the estimated acquisition date fair value of contingent consideration, to the tangible assets, liabilities, and identifiable intangible assets acquired based on their estimated fair values. The excess of the purchase price over those fair values is recorded as goodwill. Acquisition-related expenses and restructuring costs are expensed as incurred. During the measurement period, we record adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill. After the measurement period, which could be up to one year after the transaction date, subsequent adjustments are recorded to our consolidated statements of operations. We record changes in the fair value of contingent consideration liabilities within operating expenses in our consolidated statement of operations each reporting period.

Software Development Costs

We review internal use software development costs associated with new games or updates to existing games in accordance with ASC 350-40, Intangibles-Goodwill and Other-Internal Use Software on a quarterly basis. Our studio teams follow an agile development process, wherein the preliminary project stage remains ongoing until just prior to worldwide launch, at which time final feature selection occurs. As such, these costs are expensed to research and development in our consolidated statement of operations. For the year ended December 31, 2016, we did not capitalize any software development costs.

Goodwill and Indefinite-Lived Intangible Assets

Goodwill and indefinite-lived intangible assets are carried at cost and are evaluated annually for impairment, or more frequently if circumstances exist that indicate that impairment may exist.

When conducting our annual goodwill impairment assessment, we perform a quantitative evaluation of whether goodwill is impaired using the two-step impairment test. The first step is comparing the fair value of our reporting unit to its carrying value. We consider the enterprise to be the reporting unit for this analysis. If step one indicates that impairment potentially exists, the second step is performed to measure the amount of impairment, if any. We record the amount by which the carrying value of the goodwill exceeds its implied fair value, if any, as impairment.

We test recoverability of indefinite-lived intangible assets using a qualitative approach on whether it is more likely than not that the fair value of the intangible asset exceeds its carrying value. If the asset is considered impaired, the amount of any impairment is measured as the difference between the carrying value and the fair value of the impaired asset.

Other Intangible Assets

Other intangible assets are carried at cost less accumulated amortization. Amortization is recorded over the estimated useful lives of the assets, generally 12 to 60 months.

Impairment of Long-Lived Assets

Long-lived assets, including other intangible assets (excluding indefinite-lived intangible assets), are reviewed for impairment whenever events or changes in circumstances indicate an asset's carrying value may not be recoverable. If such circumstances are present, we assess the recoverability of the long-lived assets by comparing the carrying value to the undiscounted future cash flows associated with the related assets. If the future net undiscounted cash flows are less than the carrying value of the assets, the assets are considered impaired and an expense, equal to the amount required to reduce the carrying value of the assets to the estimated fair value, is recorded as impairment of intangible assets in the consolidated statements of operations. Significant judgment is required to estimate the amount and timing of future cash flows and the relative risk of achieving those cash flows.

Assumptions and estimates about future values and remaining useful lives are complex and often subjective. They can be affected by a variety of factors, including external factors such as industry and economic trends, and internal factors such as changes in our business strategy and our internal forecasts. For example, if our future operating results do not meet current forecasts, we may be required to record future impairment charges for acquired intangible assets. Impairment charges could materially decrease our future net income and result in lower asset values on our balance sheet. In the third quarter of 2016, we recorded an \$18.2 million and \$2.4 million impairment charge associated with developed technology previously acquired from Rising Tide and Zindagi, respectively. There were no impairment charges in 2015 and 2014.

Licenses and Royalties

We obtain licenses from third parties for use of their brands, properties and other licensed content in our games (e.g. Hit It Rich! Slots). Our licensing agreements include minimum guarantee royalty payments, which are due over the term of the agreement and are recoupable against future royalty obligations that would otherwise become payable. These advance payments are capitalized as prepaid royalties when paid and amortization commences when the licensed product is launched in our game. Amortization is recorded in cost of revenue and is calculated as (1) the contractual royalty rate based on actual net product sales as defined in the licensing agreement or (2) the straight-line method over the remaining estimated useful life of the licensed product, whichever is greater.

Each quarter, we evaluate the realization of our prepaid royalties as well as any unrecognized guarantees not yet paid to determine amounts that we deem unlikely to be realized through product sales. To evaluate the future recoverability of prepaid royalties and guarantees, we consider the terms of the agreement, game development plans, forecasted and

actual financial performance of the game as well as other qualitative factors such as the success of similar games and similar genres published by the Company. To the extent that this evaluation indicates that the remaining prepaid and guaranteed royalty payments are not recoverable, the Company records an impairment charge in the period that impairment is indicated. Any impairment losses determined before the launch of a product are expensed to research and development in our consolidated statement of operations, while any impairment losses determined post-launch are expensed to cost of revenue.

Stock-Based Expense

We recognize stock-based expense for ZSUs based on grant date fair value on a ratable basis over the requisite service period for the entire award.

We estimate the fair value of stock options using the Black-Scholes option-pricing model. This model requires the use of the following assumptions: expected volatility of our Class A common stock, which is based on our own calculated four year historical

rate; expected life of the option award, which we elected to calculate using the simplified method; expected dividend yield, which is 0%, as we have not paid and do not have any plans to pay dividends on our common stock; and the risk-free interest rate, which is based on the U.S. Treasury yield curve in effect at the time of grant with maturities equal to the grant's expected life. We changed the basis of estimating our expected volatility in the fourth quarter of 2015 from using peer group data in the industry in which we do business to using our own calculated rate as we now have sufficient historical data (four years of historical trading activity) that we believe provides a reasonable basis for our estimate. Option grants generally vest over four to five years, with 25% to 20% vesting after one year and the remainder vesting monthly thereafter over 36 to 48 months, respectively. The options have a contractual term of 10 years. If any of the assumptions used in the Black-Scholes model changes significantly, stock-based expense for future awards may differ materially compared with the awards granted previously. We record stock-based expense for stock options on a ratable basis over the vesting term.

For stock options issued to non-employees, including consultants, we record expense related to stock options equal to the fair value of the options calculated using the Black-Scholes model over the service performance period. The fair value of options granted to non-employees is re-measured over the vesting period and recognized as an expense over the period the services are received.

Stock-based expense is recorded net of estimated forfeitures so that expense is recorded for only those stock-based awards that we expect to vest. We estimate forfeitures based on our historical forfeiture of equity awards adjusted to reflect future changes in facts and circumstances, if any. We will revise our estimated forfeiture rate if actual forfeitures differ from our initial estimates.

Income Taxes

We account for income taxes using an asset and liability approach, which requires the recognition of taxes payable or refundable for the current year and deferred tax liabilities and assets for the future tax consequences of events that have been recognized in our financial statements or tax returns. The measurement of current and deferred tax assets and liabilities is based on provisions of enacted tax laws; the effects of future changes in tax laws or rates are not anticipated. If necessary, the measurement of deferred tax assets is reduced by the amount of any tax benefits that are not expected to be realized based on available evidence. We account for uncertain tax positions by reporting a liability for unrecognized tax benefits resulting from uncertain tax positions taken or expected to be taken in a tax return. We recognize interest and penalties, if any, related to unrecognized tax benefits in the provision for income tax.

Foreign Currency Transactions

Generally, the functional currency of our international subsidiaries is the U.S. dollar or the local currency that the international subsidiary operates in. For these subsidiaries where the U.S. dollar is not the functional currency, foreign currency denominated monetary assets and liabilities are re-measured into U.S. dollars at current exchange rates and foreign currency denominated nonmonetary assets and liabilities are re-measured into U.S. dollars at historical exchange rates. Gains or losses from foreign currency re-measurement and settlements are included in other income (expense), net in the consolidated statements of operations. For foreign subsidiaries where the functional currency is the local currency, we use the period-end exchange rates to translate assets and liabilities, and the average exchange rates to translate revenues and expenses into U.S. dollars. We record translation gains and losses in accumulated other comprehensive income (loss) as a component of stockholders' equity.

Concentration of Credit Risk and Significant Customers

Financial instruments, which potentially expose us to concentrations of credit risk, consist primarily of cash and cash equivalents and accounts receivable. Substantially all of our cash and cash equivalents are maintained with three financial institutions with high credit standings. We perform periodic evaluations of the relative credit standing of these institutions.

Accounts receivable are unsecured and represent amounts due to us based on contractual obligations where a signed and executed contract or click-through agreement exists. In cases where we are aware of circumstances that may impair a specific customer's ability to meet its financial obligations, we record a specific allowance as a reduction to the accounts receivable balance to reduce it to its net realizable value.

Apple, Google and Facebook are significant distribution, marketing, promotion and payment platforms for our social games. A significant portion of our 2016, 2015 and 2014 revenue was generated from players who accessed our games through these platforms. As of December 31, 2016 and December 31, 2015, 27% and 17% of our accounts receivable, respectively, were amounts owed to us by Apple, 23% and 14% of our accounts receivable, respectively, were amounts owed to us by Google and 12% and 17% of our accounts receivable, respectively, were amounts owed to us by Facebook.

Advertising Expense

Costs for advertising are expensed as incurred. Advertising costs, which are included in sales and marketing expense, primarily consisting of player acquisition costs, totaled \$132.5 million, \$128.9 million and \$101.7 million for 2016, 2015 and 2014 respectively.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board (“FASB”) issued Accounting Standards Update (“ASU”) 2014-09, “Revenue from Contracts with Customers (Topic 606),” which requires revenue to be recognized when promised goods or services are transferred to customers in an amount that reflects the consideration that is expected to be received for those goods or services. ASU 2014-09 supersedes the existing revenue recognition guidance in “Revenue Recognition (Topic 605)”. In July 2015, the FASB voted to amend ASU 2014-09 by approving a one-year deferral of the effective date. Accordingly, ASU 2014-09, as amended, becomes effective for annual reporting periods beginning after December 15, 2017. The standard permits the use of either a full retrospective or modified retrospective (cumulative effect) transition method and we have preliminarily concluded to apply the modified retrospective approach when we adopt the standard in the first quarter of 2018.

Based on our initial assessment, the impact of the application of the new standard will likely result in a change in timing of our revenue recognition for software licensing related to NaturalMotion technology, which is currently recognized as revenue over time, rather than at a point in time. Under the new standard, we will be required to estimate the standalone selling price of software licenses separate from any associated maintenance services and recognize revenue for the license when control is transferred. While software licensing related to NaturalMotion is not material to our revenue, this will likely result in an acceleration in revenue recognition compared to the current method. Another key change in the standard that impacts our revenue recognition relates to the explicit collectability threshold a contract must meet before revenue can be recognized. For certain advertising arrangements where we have assessed that collectability is not reasonably assured due to unfavorable payment terms or a history of slow collections, the current practice is to defer revenue recognition until payment is received. However, under the new standard, we will be required to make an assessment of collectability at the inception of the contract and if deemed probable for collection, recognize revenue as advertisements are delivered, which will result in an acceleration in revenue recognition compared to the current method. While we are still completing our assessment for the population of advertisers under consideration, we do not expect this change to have a material impact on our revenue. The Company is evaluating other possible impacts on its consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, “Leases (Topic 842),” which requires a lessee to recognize assets and liabilities on the balance sheet for leases with lease terms greater than 12 months. For lessors, accounting for leases will remain substantially the same as in prior periods. The standard is effective in the first quarter of 2019 and early adoption is permitted. While the Company expects adoption of this new standard to increase reported assets and liabilities, we are currently in the process of evaluating the timing of adoption of ASU 2016-02 as well as the full impact on our consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, “Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting,” to simplify the accounting for share-based payment transactions, including income taxes and classification in the statement of cash flows. Under the standard, the income tax effects of awards are required to be recognized in the income statement when the awards vest or are settled, as opposed to in additional paid-in capital under the current guidance. The standard also provides an option to recognize gross share-based compensation expense with actual forfeitures recognized as they occur, which the Company has elected to

adopt. In the first quarter of 2017, the Company will apply a modified retrospective transition method to account for the changes under the standard related to income taxes and the policy election for recording forfeitures as they occur.

In August 2016, the FASB issued ASU 2016-15, “Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments,” which provides guidance on specific issues related to how certain cash receipts and cash payments are classified in the statement of cash flows, with the objective of reducing diversity in practice. This guidance will be effective first quarter of 2018 and early adoption is permitted. We are currently in the process of evaluating the timing of adoption of ASU 2016-15 as well as the impact on our consolidated financial statements and related disclosures.

In November 2016, the FASB issued ASU 2016-18, “Statement of Cash Flows (Topic 230): Restricted Cash,” which requires companies to include amounts generally described as restricted cash and restricted cash equivalents in cash and cash equivalents when reconciling beginning-of-period and end-of-period total amounts shown on the statement of cash flows, with the objective of reducing diversity in practice. This guidance will be effective first quarter of 2018 and early adoption is permitted. We are currently in the process of evaluating the timing of adoption of ASU 2016-18 as well as the impact on our consolidated financial statements and related disclosures.

2. Cash and Investments

Cash and investments consist of the following (in thousands):

	December 31, 2016	December 31, 2015
Cash and cash equivalents:		
Cash	\$ 123,382	\$ 162,495
Money market funds	439,330	362,587
Commercial paper	235,783	160,151
Corporate bonds	33,985	16,995
U.S. government and government agency debt securities	19,987	39,989
Total cash and cash equivalents	\$ 852,467	\$ 742,217
Marketable securities:		
U.S. government and government agency debt securities	\$ —	\$ 144,986
Corporate debt securities	—	100,047
Total	\$ —	\$ 245,033

The following tables summarize our amortized cost, gross unrealized gains and losses and fair value of our available-for-sale investments in marketable securities (in thousands) as of December 31, 2015 (we had no available-for-sale investments in marketable securities as of December 31, 2016):

	December 31, 2015			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Aggregate Fair Value
U.S. government and government agency debt securities	\$ 145,066	\$ —	\$ (80)	\$ 144,986
Corporate debt securities	100,093	12	(58)	100,047
Total	\$245,159	\$ 12	\$ (138)	\$ 245,033

The estimated fair value of available-for-sale marketable securities as of December 31, 2015, classified by their contractual maturities was as follows (in thousands):

	December 31, 2015
Due within one year	\$ 245,033
After one year through three years	—
Total	\$ 245,033

Changes in market interest rates and bond yields cause certain of our investments to fall below their cost basis, resulting in unrealized losses. As of December 31, 2016, we had unrealized losses of \$27 thousand related to investments that had a fair value of \$34.0 million. As of December 31, 2015, we had unrealized losses of \$0.1 million related to investments that had a fair value of \$199.1 million. None of these investments were in a material continuous unrealized loss position for more than 12 months.

	December 31, 2016		December 31, 2015	
	Fair Value	Unrealized loss	Fair Value	Unrealized loss
U.S. government and government agency debt securities	\$—	\$ —	\$137,485	\$ (80)
Corporate debt securities	33,984	(27)	61,622	(58)
Total	\$33,984	\$ (27)	\$199,107	\$ (138)

As of December 31, 2016 and 2015, we did not consider any of our marketable securities to be other-than-temporarily impaired. When evaluating our investments for other-than-temporary impairment, we review factors such as the length of time and extent to which fair value has been below its cost basis, the financial condition of the issuer, our ability and intent to hold the security to maturity and whether it is more likely than not that we will be required to sell the investment before recovery of its cost basis.

3. Fair Value Measurements

Cash equivalents and short-term marketable securities, consisting of money market funds, U.S. government and government agency debt securities and corporate debt securities, are carried at fair value, which is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between knowledgeable and willing market participants.

Our contingent consideration liability represents the estimated fair value of the additional consideration payable in connection with our acquisitions of Rising Tide, Zindagi and PuzzleSocial. The amount payable is contingent upon the achievement of certain performance targets. We estimated the acquisition date fair value of the contingent consideration payable using discounted cash flow models, and applied a discount rate that appropriately captured a market participant's view of the risk associated with the obligations. The significant unobservable inputs used in the fair value measurement of the acquisition-related contingent consideration payable were forecasted future cash flows and the timing of those cash flows and the risk-adjusted discount rate. Significant changes in actual and forecasted future cash flows may result in significant charges or benefits to our future operating expenses. We recorded the change in estimated fair value of the contingent consideration liabilities for our acquisitions as a net benefit of \$9.1 million for 2016 and net expense of \$6.1 million for 2015 within research and development expense in our consolidated statement of operations.

In the third quarter of 2015, we acquired Rising Tide. Under the terms of the agreement, the contingent consideration of up to \$140.0 million was potentially payable based on the achievement of certain future performance targets during the three year period following the acquisition date. We initially estimated the acquisition date fair value of the contingent consideration payable using discounted cash flow models, and applied a risk-adjusted discount rate that appropriately captured a market participant's view of the risk associated with the obligations. In the fourth quarter of 2016, we executed an amended agreement with Rising Tide. Under the terms of the amendment, the maximum amount payable by the Company is \$10.2 million, of which \$5.1 million was held in escrow and recorded to restricted cash and other current liabilities, to fully settle the consideration liability related to Rising Tide. The contingent consideration liability was \$18.5 million as of December 31, 2015; thus, we recorded a net benefit of \$8.3 million within research and development in our consolidated statement of operations in 2016.

In the first quarter of 2016, we acquired Zindagi. Under the terms of the agreement, the contingent consideration of up to \$60.0 million may be payable based on the achievement of certain future performance targets during the three year period following the acquisition date. We initially estimated the acquisition date fair value of the contingent consideration payable using discounted cash flow models, and applied a risk-adjusted discount rate that appropriately captured a market participant's view of the risk associated with the obligations. As of December 31, 2016, the current contingent consideration liability is \$0.2 million. The contingent consideration liability was \$1.3 million as of March 31, 2016; thus, we recorded a benefit of \$1.1 million within research and development in our consolidated statement of operations in 2016.

In the third quarter of 2016, we acquired PuzzleSocial. Under the terms of the agreement, the contingent consideration of up to \$42.0 million may be payable based on the achievement of certain future performance targets during the two and a half year period following the acquisition date. We initially estimated the acquisition date fair value of the contingent consideration payable using discounted cash flow models, and applied a risk-adjusted discount rate that appropriately captured a market participant's view of the risk associated with the obligations. As of December 31, 2016, the current contingent consideration liability is \$0.7 million. The contingent consideration liability for PuzzleSocial was \$0.4 million as of September 30, 2016; thus, we expensed \$0.3 million within research and development in our consolidated statement of operations in 2016.

Fair value is a market-based measurement that should be determined based on assumptions that knowledgeable and willing market participants would use in pricing an asset or liability. The valuation techniques used to measure the fair value of the Company's debt instruments and all other financial instruments, all of which have counterparties with high

credit ratings, were valued based on quoted market prices or model driven valuations using significant inputs derived from or corroborated by observable market data. We use a three-tier value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1 — Observable inputs that reflect quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 — Includes inputs, other than Level 1 inputs, that are directly or indirectly observable in the marketplace.

Level 3 — Unobservable inputs that are supported by little or no market activity.

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The composition of our financial assets and liabilities among the three Levels of the fair value hierarchy are as follows (in thousands):

	December 31, 2016			Total
	Level 1	Level 2	Level 3	
Assets:				
Money market funds ⁽¹⁾	\$439,330	\$—	\$—	\$439,330
U.S. government and government agency debt securities ⁽¹⁾	—	19,987	—	19,987
Corporate debt securities ⁽¹⁾	—	269,768	—	269,768
Total	\$439,330	\$289,755	\$—	\$729,085
Liabilities				
Contingent consideration	\$—	\$—	\$901	\$901

	December 31, 2015			Total
	Level 1	Level 2	Level 3	
Assets:				
Money market funds ⁽¹⁾	\$362,587	\$—	\$—	\$362,587
U.S. government and government agency debt securities ⁽¹⁾	—	184,975	—	184,975
Corporate debt securities ⁽¹⁾	—	277,193	—	277,193
Total	\$362,587	\$462,168	\$—	\$824,755
Liabilities				
Contingent consideration	\$—	\$—	\$18,490	\$18,490

⁽¹⁾Includes amounts classified as cash and cash equivalents.

4. Property and Equipment

Property and equipment consist of the following (in thousands):

	December 31, 2016	December 31, 2015
Computer equipment	\$ 27,046	\$ 36,373
Software	31,102	30,950
Land	89,130	89,130
Building	197,689	195,372
Furniture and fixtures	10,494	10,348
Leasehold improvements	8,071	7,748

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	363,532	369,921
Less accumulated depreciation	(94,093)	(96,700)
Total property and equipment, net	\$ 269,439	\$ 273,221

During the fourth quarter of 2015, we completed the exit of one of our data centers in Santa Clara, and initiated the sale of certain computer data center equipment, resulting in the assets meeting held for sale criteria. Accordingly, these assets were written down to their fair value and reclassified from property and equipment to other current assets, with \$83.9 million and \$80.7 million being reclassified from computer equipment and accumulated depreciation respectively, for a net amount of \$3.2 million. The \$3.2 million reflects the fair value of the assets less estimated costs to sell. During the first and second quarter of 2016, \$0.4 million and \$1.2 million of the assets meeting held for sale criteria were sold, respectively. During the second quarter of 2016, we finalized the sale of these assets and decreased the fair value of the assets less estimated costs to sell to \$2.9 million, resulting in a loss of \$0.3 million, which was recorded in other income (expense), net in our consolidated statement of operations. During the third quarter of 2016, we collected \$1.3 million in cash related to the remaining balance of assets meeting the held for sale criteria.

5. Acquisitions

2016 Acquisitions

Acquisition of Zindagi

On January 1, 2016, we acquired the assets of Zindagi, a provider of social games, for purchase consideration of approximately \$13.8 million, which consisted of cash paid of \$12.5 million (net of prepaid compensation expense of \$2.5 million) and contingent consideration with a fair value of \$1.3 million as of March 31, 2016 (see Note 3 – “Fair Value Measurements” for changes in this estimate). The contingent consideration may be payable based on the achievement of certain future performance targets during the three year period following the acquisition date and could be up to \$60.0 million. We will record changes in the fair value of contingent consideration liabilities within operating expenses in our consolidated statement of operations each future reporting period.

We acquired Zindagi to accelerate our ability to execute against new opportunities in Slots and other game genres.

The following table summarizes the purchase date fair value of net tangible and intangible assets acquired from Zindagi (in thousands, unaudited):

	Total
Developed technology, useful life of 3 years	\$3,257
Goodwill	10,503
Total	\$13,760

Goodwill, which is deductible for tax purposes, represents the excess of the purchase price over the fair value of the net tangible and intangible assets acquired, and is primarily attributable to the assembled workforce of the acquired business and expected synergies at the time of the acquisition.

Acquisition of PuzzleSocial

On July 1, 2016, we acquired 100% of the equity interests of PuzzleSocial, a provider of mobile crossword puzzle games, for purchase consideration of approximately \$20.4 million, which consisted of cash paid of \$20.0 million and contingent consideration with a fair value of \$0.4 million as of September 30, 2016 (see Note 3 – “Fair Value Measurements” for changes in this estimate). The contingent consideration may be payable based on the achievement of certain future performance targets during the two and a half year period following the acquisition date and could be up to \$42.0 million. We will record changes in the fair value of contingent consideration liabilities within operating expenses in our consolidated statement of operations each future reporting period.

We acquired PuzzleSocial as their crossword puzzle game complements our existing Words With Friends franchise with a similar audience of word game players.

The following table summarizes the purchase date fair value of net tangible and intangible assets acquired from PuzzleSocial (in thousands, unaudited):

	Total
Developed technology, useful life of 4.5 years	\$6,923

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Customer base, useful life of 1 year	3,499
Net tangible assets acquired (liabilities assumed)	2,144
Goodwill	11,811
Deferred tax liabilities	(3,948)
Total	\$20,429

Goodwill, which is not deductible for tax purposes, represents the excess of the purchase price over the fair value of the net tangible and intangible assets acquired, and is primarily attributable to the assembled workforce of the acquired business and expected synergies at the time of the acquisition.

The information above provides a reasonable basis for estimating the fair values of assets acquired and liabilities assumed, however, the preliminary measurements of fair value are subject to change including in the area of income taxes payable and deferred taxes which may change subject to the completion of certain tax returns.

Transaction costs incurred by the Company in connection with the Zindagi and PuzzleSocial acquisitions, including professional fees, were \$0.5 million, of which \$0.2 million was included in our statement of operations in 2015 related to the Zindagi acquisition and the remaining \$0.3 million was included in our statement of operations in 2016.

The results of operations for the acquisitions of Zindagi and PuzzleSocial have been included in our consolidated statement of operations since the dates of acquisition. Pro forma results of operations related to our acquisitions have not been presented as it is not material to our 2016 consolidated statements.

2015 Acquisitions

Acquisition of Rising Tide

On September 11, 2015, we acquired Rising Tide, a provider of social games, for purchase consideration of approximately \$44.2 million, which consisted of cash paid of \$22.4 million and contingent consideration with a fair value of \$21.8 million as of September 30, 2015 (see Note 3 – “Fair Value Measurements” for changes in this estimate). Under the terms of the original agreement, the contingent consideration may be payable based on the achievement of certain future performance targets during the three year period following the acquisition date and could be up to \$140.0 million. In the fourth quarter of 2016, we executed an amended agreement with Rising Tide. Under the terms of the amendment, the maximum amount payable by the Company is \$10.2 million, of which \$5.1 million was held in escrow and recorded to restricted cash and other current liabilities, to fully settle the consideration liability related to Rising Tide. The contingent consideration liability was \$18.5 million as of December 31, 2015; thus, we recorded a net benefit of \$8.3 million within research and development in our consolidated statement of operations in 2016.

We acquired Rising Tide to expand our footprint in the social casino games space.

The following table summarizes the acquisition date fair value of net tangible and intangible assets acquired from Rising Tide (in thousands, unaudited):

	Total
Developed technology, useful life of 5 years	\$27,000
Net tangible assets acquired (liabilities assumed)	2,445
Goodwill	25,050
Deferred tax liabilities	(10,300)
Total	\$44,195

Goodwill, which is not deductible for tax purposes, represents the excess of the purchase price over the fair value of the net tangible and intangible assets acquired, and is primarily attributable to the assembled workforce of the acquired business and expected synergies at the time of the acquisition.

Transaction costs incurred by the Company in connection with the acquisition, including professional fees, were \$0.9 million and are included in our statement of operations in 2015.

The results of operations for the acquisition of Rising Tide have been included in our consolidated statement of operations since the date of acquisition. Pro forma results of operations related to our acquisition have not been presented as it is not material to our 2015 consolidated statements.

6. Goodwill and Other Intangible Assets

Changes in the carrying value of goodwill from December 31, 2014 to December 31, 2016 are as follows (in thousands):

Goodwill – December 31, 2014	\$650,778
Additions	25,050
Foreign currency translation and other adjustments ⁽¹⁾	(18,157)
Goodwill – December 31, 2015	657,671
Additions	23,191
Foreign currency translation and other adjustments ⁽¹⁾	(67,527)
Goodwill – December 31, 2016	\$613,335

⁽¹⁾The decreases are primarily related to translation losses on goodwill associated with the acquisition of NaturalMotion denominated in British pounds. Also includes the impact of adjustments to goodwill resulting from changes in net assets (liabilities) acquired and other adjustments, pursuant to our business combinations policy. The details of our acquisition-related intangible assets are as follows (in thousands):

	December 31, 2016		
	Gross Carrying Value	Accumulated Amortization	Net Book Value
Developed technology	\$150,826	\$ (132,123)	\$18,703
Trademarks, branding and domain names	16,290	(10,063)	6,227
Acquired lease intangibles	5,708	(5,208)	500
Total	\$172,824	\$ (147,394)	\$25,430

Our updated financial forecast as of September 30, 2016, indicated a reduction of future undiscounted cash flows for certain games associated with developed technology previously acquired from Rising Tide and Zindagi. As a result, we performed an impairment analysis and determined the estimated fair values of Rising Tide's and Zindagi's intangible assets to be \$18.2 million and \$2.4 million lower, respectively, than their carrying values as of September 30, 2016. Accordingly, we recorded this amount as an impairment charge in our consolidated statements of operations for the nine months ended September 30, 2016.

	December 31, 2015		
	Gross Carrying Value	Accumulated Amortization	Net Book Value
Developed technology	\$174,970	\$ (118,940)	\$56,030
Trademarks, branding and domain names	16,290	(9,210)	7,080
Acquired lease intangibles	5,708	(4,802)	906
Total	\$196,968	\$ (132,952)	\$64,016

These assets include \$6.1 million of indefinite-lived intangible assets. The remaining assets (excluding the indefinite-lived intangible assets) were, and continue to be, amortized on a straight-line basis. As of December 31, 2016, the weighted-average remaining useful lives of all identified acquired intangible assets are 2.4 years for developed technology, 0.2 years for trademarks, branding, and domain names, and 3.3 years for acquired lease intangibles. Amortization expense of intangible assets for 2016, 2015 and 2014 were \$29.0 million, \$27.4 million and \$24.6 million, respectively. As of December 31, 2016, future amortization expense related to the intangible assets is expected to be recognized as shown below (in thousands):

Year ending December 31:	
2017	\$9,718
2018	4,446
2019	2,811
2020	2,199
2021 and thereafter	136
Total	\$19,310

7. Income Taxes

Income (loss) before income tax expense (benefit) consists of the following for the periods shown below (in thousands):

	Year Ended December 31,		
	2016	2015	2014
United States	\$(62,037)	\$(83,432)	\$(132,280)
International	(42,694)	(46,750)	(100,947)
Total	\$(104,731)	\$(130,182)	\$(233,227)

Income tax expense (benefit) consists of the following for the periods shown below (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Current:			
Federal	\$(30)	\$(30)	\$(132)
State	2	(2,863)	(16)
Foreign	7,178	3,817	2,777
Total current tax expense	7,150	924	2,629
Deferred:			
Federal	(2,809)	(8,818)	(6,888)
State	(20)	(504)	(353)
Foreign	(879)	(274)	(2,715)
Total deferred tax expense (benefit)	(3,708)	(9,596)	(9,956)
Provision for (benefit from) income taxes	\$3,442	\$(8,672)	\$(7,327)

The reconciliation of federal statutory income tax provision (benefit) to our effective income tax provision is as follows (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Expected benefit at U.S. federal statutory rate	\$(36,656)	\$(45,564)	\$(81,630)
State income taxes - net of federal benefit	2	(2,863)	(2,681)
Income taxed at foreign rates	20,112	18,406	33,417
Equity-based compensation	4,295	1,125	2,865
Tax reserve for uncertain tax positions	2,382	1,827	19
Change in valuation allowance	14,786	17,526	37,202
Impact of change in tax rates	69	(18)	25
Acquisition costs	110	650	2,981
Contingent consideration	(2,781)	—	—
Other	1,123	239	475
	\$3,442	\$(8,672)	\$(7,327)

We have not provided U.S. income taxes and foreign withholding taxes on the undistributed earnings of our profitable foreign subsidiaries as of December 31, 2016 because we intend to permanently reinvest such earnings outside the U.S. If these foreign earnings were to be repatriated in the future, the related U.S. tax liability may be reduced by any foreign income taxes previously paid on these earnings. As of December 31, 2016, the cumulative amount of earnings upon which U.S. income taxes have not been provided is approximately \$24.0 million.

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

	Year Ended December	
	31,	2015
	2016	
Deferred tax assets:		
Net operating loss carryforwards	\$53,474	\$44,551
Tax credit carryforwards	52,564	47,978
Acquired intangible assets	22,714	13,524
Equity based compensation	16,087	24,930
Accrued expenses	8,605	11,593
Other accrued compensation	5,059	1,664
Charitable contributions	4,495	3,930
State taxes	3,168	2,321
Deferred revenue	481	1,309
Other	—	434
Valuation allowance	(164,907)	(151,808)
Net deferred tax assets	\$1,740	\$426
Deferred tax liabilities:		
Deferred rent	(69)	(675)
Depreciation	(7,215)	(5,777)
Other	(247)	—
Net deferred tax liabilities	(7,531)	(6,452)
Net deferred taxes	\$(5,791)	\$(6,026)

Due to our history of net operating losses, we believe it is more likely than not that certain federal, state, and foreign deferred tax assets will not be realized as of December 31, 2016. The valuation allowance as of December 31, 2016 and December 31, 2015 was \$164.9 million and \$151.8 million, respectively. The increase in valuation allowance for 2016 is primarily related to net operating losses generated and acquired during the current year.

Net operating loss and tax credit carryforwards as of December 31, 2016 are as follows (in thousands):

	Amount	Expiration years
Net operating losses, federal	\$427,475	2027 - 2036
Net operating losses, state	340,766	2017 - 2036
Tax credits, federal	86,116	2030-2036
Tax credits, state	78,035	2019 - indefinite
Net operating losses, foreign	9,552	2033 - indefinite
Tax credits, foreign	548	indefinite

Excess tax benefits associated with stock option exercises and other equity awards are credited to stockholders' equity in the period cash taxes payable is reduced. As of December 31, 2016, the portion of net operating loss carryforwards related to stock awards is \$474.7 million, the benefit of which will be credited to additional paid-in capital when realized. The federal and state net operating loss carryforwards are subject to various annual limitations under Section 382 of the Internal Revenue Code and similar state provisions.

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

December 31, 2013	\$ 133,491
Additions based on tax positions related to 2014	7,738
Additions for tax positions of prior years	171
Reductions for tax positions of prior years	(511)
December 31, 2014	\$ 140,889
Additions based on tax positions related to 2015	8,876
Additions for tax positions of prior years	82
Reductions for tax positions of prior years	(2,817)
Decreases related to settlements of prior year tax positions	(4,185)
December 31, 2015	\$ 142,845
Additions based on tax positions related to 2016	9,043
Additions for tax positions of prior years	68
Reductions for tax positions of prior years	(856)
December 31, 2016	\$ 151,100

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 operations. The amount of interest and penalties accrued as of December 31, 2016 and 2015 was \$0.7 million and \$0.6 million, respectively.

If the balance of gross unrecognized tax benefits of \$151.1 million as of December 31, 2016 was realized in a future period, this would result in a tax benefit of \$10.3 million within our provision of income taxes at such time.

We classify uncertain tax positions as non-current income tax liabilities unless expected to be paid within one year or otherwise directly related to an existing deferred tax asset, in which case the uncertain tax position is recorded net of the asset on the balance sheet. As of December 31, 2016, \$98.3 million of our gross unrecognized tax benefits were recorded as a reduction of the related deferred tax assets and the remaining \$52.8 million of our gross unrecognized tax benefits were recorded as long-term liabilities in our consolidated balance sheets.

We file income tax returns in the U.S. federal jurisdiction as well as many U.S. states and certain foreign jurisdictions. The material jurisdictions in which we are subject to potential examination include the U.S., United Kingdom, and Ireland. We are subject to examination in these jurisdictions for all years since our inception in 2007. Fiscal years outside the normal statute of limitation remain open to audit by tax authorities due to tax attributes generated in those early years which have been carried forward and may be audited in subsequent years when utilized. We do not expect any material changes to our unrecognized tax benefits within the next twelve months.

8. Other Current Liabilities

Other current liabilities consist of the following (in thousands):

December 31, December 31,

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	2016	2015
Accrued accounts payable	\$ 24,119	\$ 31,700
Accrued compensation liability	22,554	16,278
Accrued restructuring liability	4,987	9,859
Other current liabilities	24,094	19,854
Total other current liabilities	\$ 75,754	\$ 77,691

Accrued compensation liability represents employee bonus and other payroll withholding expenses. Accrued restructuring liability represents amounts payable related to our restructuring plans. Other current liabilities include various expenses that we accrue for transaction taxes, customer deposits and accrued vendor expenses.

9. Restructuring

During 2016, we recorded total restructuring charges of \$1.9 million which were classified within our consolidated statement of operations as follows: \$0.1 million in research and development and \$1.8 million in general and administrative.

Q2 2015 Restructuring Plan

During the second quarter of 2015, our Board of Directors authorized, and we implemented a restructuring plan (the “Q2 2015 restructuring plan”) that included a reduction in work force as part of the overall plan to reduce the Company’s long-term cost structure. As a result of ongoing initiatives associated with restructuring, we recorded a charge of \$0.9 million in 2016, which is included in operating expenses in our consolidated statement of operations. The remaining liability related to our Q2 2015 restructuring plan as of December 31, 2016 was \$19.4 million and is expected to be paid out over the next 5.4 years.

The following table presents the activity for each quarter of 2016 and for full year 2016 related to the Q2 2015 restructuring plan (in thousands):

	Three Months Ended				Twelve Months Ended
	March 31, 2016	June 30, 2016	September 30, 2016	December 31, 2016	
Restructuring liability - beginning of period	\$26,406	\$25,089	\$ 21,837	\$ 20,808	\$ 26,406
Restructuring expense and adjustments	456	417	50	3	926
Cash payments, net of receipts	(1,773)	(3,669)	(1,079)	(1,423)	(7,944)
Restructuring liability (Q2 2015 Plan) - end of period	\$25,089	\$21,837	\$ 20,808	\$ 19,388	\$ 19,388

Q1 2014 Restructuring Plan

The following table presents the activity for each quarter of 2016 and for full year 2016 related to a restructuring plan put in place in the first quarter of 2014 (in thousands):

	Three Months Ended				Twelve Months Ended
	March 31, 2016	June 30, 2016	September 30, 2016	December 31, 2016	
Restructuring liability - beginning of period	\$2,290	\$1,525	\$ 2,184	\$ 16	\$ 2,290
Restructuring expense and adjustments	16	1,267 ⁽¹⁾	(104)	(202)	977
Cash payments, net of receipts	(781)	(608)	(2,064)	218	(3,235)
Restructuring liability (Q1 2014 Plan) - end of period	\$1,525	\$2,184	\$ 16	\$ 32	\$ 32

⁽¹⁾A \$1.3 million adjustment was recorded in the second quarter of 2016 to increase our restructuring liability as a result of revising the expected income from a subtenant in a data center facility we had previously vacated in the

first quarter of 2014.

Other Restructuring Plans

The following table presents the activity for each quarter of 2016 and for full year 2016 related to all other remaining historical restructuring plans from prior years (in thousands):

	Three Months Ended				Twelve Months Ended December 31, 2016
	March 31, 2016	June 30, 2016	September 30, 2016	December 31, 2016	
Restructuring liability - beginning of period	\$332	\$(82)	\$ 83	\$ 67	\$ 332
Restructuring expense and adjustments	(10)	18	6	7	21
Cash payments, net of receipts	(404)	147	(22)	(23)	(302)
Restructuring liability (Other Plans) - end of period	\$(82) ⁽¹⁾	\$83	\$ 67	\$ 51	\$ 51

⁽¹⁾The liability is a net receivable due to the timing of sublease income for restructured data center space in Virginia.

10. Stockholders' Equity

Common Stock

Our three classes of common stock are Class A common stock, Class B common stock and Class C common stock. The following are the rights and privileges of our classes of common stock:

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Dividends. The holders of outstanding shares of our Class A, Class B and Class C common stock are entitled to receive dividends out of funds legally available at the times and in the amounts that our Board of Directors may determine.

Voting Rights. Holders of our Class A common stock are entitled to one vote per share, holders of our Class B common stock are entitled to seven votes per share and holders of our Class C common stock are entitled to 70 votes per share. In general, holders of our Class A common stock, Class B common stock and Class C common stock will vote together as a single class on all matters submitted to a vote of stockholders, unless otherwise required by law. Delaware law could require either our Class A common stock, Class B common stock or our Class C 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; and

¶ If we were to seek to amend our Certificate of Incorporation in a manner that altered or changed the powers, preferences or special rights of a class of stock in a manner that affected its holders adversely.

Liquidation. Upon our liquidation, dissolution or winding-up, the assets legally available for distribution to our stockholders would be distributable ratably among the holders of our Class A common stock, Class B common stock and Class C common stock.

Preemptive or Similar Rights. None of our Class A common stock, Class B common stock and Class C common stock is entitled to preemptive rights, and neither is subject to redemption.

Conversion. Our Class A common stock is not convertible into any other shares of our capital stock. Each share of our Class B common stock and Class C common stock is convertible at any time at the option of the holder into one share of our Class A common stock. In addition, after the closing of the initial public offering, upon sale or transfer of shares of either Class B common stock or Class C common stock, whether or not for value, each such transferred share shall automatically convert into one share of Class A common stock, except for certain transfers described in our amended and restated certificate of incorporation. Our Class B common stock and Class C common stock will convert automatically into Class A common stock on the date on which the number of outstanding shares of Class B common stock and Class C common stock together represent less than 10% of the aggregate combined voting power of our capital stock. Once transferred and converted into Class A common stock, the Class B common stock and Class C common stock may not be reissued.

Stock Repurchases

In October 2015, we authorized the 2015 Share Repurchase Program. In the fourth quarter of 2015, we repurchased 37.9 million shares of our Class A common stock under the repurchase program at a weighted average price of \$2.60 per share for a total of \$98.9 million. In the first quarter of 2016, we repurchased 42.2 million shares of our Class A common stock at a weighted average price of \$2.40 for a total of \$101.9 million, completing the repurchase plan put in place during the fourth quarter of 2015. All of our stock repurchases under the under the program were made through open market purchases under Rule 10b5-1 plans.

In November 2016, we authorized the 2016 Share Repurchase Program. In the fourth quarter of 2016, we repurchased 12.3 million shares of our Class A common stock under the repurchase program at a weighted average price of \$2.76 per share for a total of \$34.2 million.

Equity Incentive Plans and Stock-Based Expense

In 2007, we adopted the 2007 Equity Incentive Plan (the “2007 Plan”) for the purpose of granting stock options and ZSUs to employees, directors and non-employees. Concurrent with the effectiveness of our initial public offering on December 15, 2011, we adopted the 2011 Equity Incentive Plan (the “2011 Plan”), and all remaining common shares

reserved for future grant or issuance under the 2007 Plan were added to the 2011 Plan. The 2011 Plan was adopted for purposes of granting stock options and ZSUs to employees, directors and non-employees. The number of shares of our Class A common stock reserved for future issuance under our 2011 Plan will automatically increase on January 1 of each year, beginning on January 1, 2012, and continuing through and including January 1, 2021, by 4% of the total number of shares of our capital stock outstanding as of December 31 of the preceding calendar year.

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The following table presents the weighted-average grant date fair value of stock options and the related assumptions used to estimate the fair value in our consolidated financial statements:

	Year Ended December 31,		
	2016	2015	2014
Expected term, in years	6	6	5
Risk-free interest rates	1.53 %	1.65 %	1.31 %
Expected volatility	50 %	53 %	56 %
Dividend yield	—	—	—
Weighted-average estimated fair value of options granted during the year	\$1.30	\$1.51	\$3.44

We recorded stock-based expense related to grants of employee and consultant stock options, restricted stock and ZSUs in our consolidated statements of operations as follows (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Cost of revenue	\$3,720	\$4,547	\$4,623
Research and development	84,236	94,548	83,673
Sales and marketing	7,254	7,501	5,927
General and administrative	12,251	24,979	35,010
Total stock-based expense	\$107,461	\$131,575	\$129,233

As of December 31, 2016, total unamortized stock-based expense relating to ZSUs amounted to \$130.0 million over a weighted-average recognition period of 3.0 years.

Stock-based expense for performance-based ZSUs granted in connection with our executive compensation plan is recorded based on the achievement of certain performance milestones. In 2016, no expense was recorded in connection with shares granted under our executive compensation plan.

As of December 31, 2016, total unrecognized stock-based expense of \$26.2 million and \$1.7 million related to unvested stock options and restricted shares of common stock, respectively, is expected to be recognized over a weighted-average recognition period of approximately 4.43 and 0.16 years, respectively.

The following table shows stock option activity for 2016 (in thousands, except weighted-average exercise price and remaining contractual term):

Outstanding Options	Weighted-	Aggregate	Weighted-
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	Stock Options	Average Exercise Price	Intrinsic Value of Stock Options Outstanding	Average Contractual Term (in years)
Balance as of December 31, 2015	23,215	\$ 1.93	\$ 35,949	5.36
Granted	21,300	2.63		
Forfeited and cancelled	(3,635)	6.33		
Exercised	(4,022)	0.34		
Balance as of December 31, 2016	36,858	\$ 2.08	\$ 26,411	6.81
As of December 31, 2016				
Exercisable options	15,768	\$ 1.30	\$ 24,892	3.28
Vested and expected to vest	27,521	\$ 1.88	\$ 25,815	5.89

The aggregate intrinsic value of options exercised during 2016, 2015 and 2014 was \$8.1 million, \$9.1 million, and \$25.1 million, respectively. The total grant date fair value of options that vested during the years ended December 31, 2016, 2015, and 2014 was \$6.0 million, \$10.2 million, and \$6.6 million, respectively.

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The following table shows a summary of ZSU activity for 2016 (in thousands, except weighted-average fair value and remaining term):

	Shares	Outstanding ZSUs Weighted- Average Grant Date Fair Value	Aggregate Intrinsic Value of Unvested ZSUs
Unvested as of December 31, 2015	62,436	\$ 3.06	\$ 167,328
Granted	42,260	2.41	
Vested	(32,357)	2.74	
Forfeited and cancelled	(12,887)	3.59	
Unvested as of December 31, 2016	59,452	\$ 2.66	\$ 152,792

2011 Employee Stock Purchase Plan

Our 2011 Employee Stock Purchase Plan (“2011 ESPP”), was approved by our Board of Directors in September 2011 and by our stockholders in November 2011 and amended in August 2012. On December 31, 2016, the maximum number of shares of our Class A common stock that were authorized to be issued under our 2011 ESPP was 73.3 million shares. The number of shares of our Class A common stock reserved for future issuance under our 2011 ESPP will automatically increase on January 1 of each year, beginning on January 1, 2012, and continuing through and including January 1, 2021, by the lesser of 2% of the total number of shares of our capital stock outstanding as of December 31 of the preceding calendar year or 25,000,000 shares.

Our 2011 ESPP permits participants to purchase shares of our Class A common stock through payroll deductions up to 15% of their earnings. Unless otherwise determined by the administrator, the purchase price of the shares will be 85% of the lower of the fair market value of our Class A common stock on the first day of an offering or on the date of purchase. The ESPP offers a twelve-month look-back. The ESPP contains an automatic reset feature such that if the fair market value of our Class A common stock has decreased from the original offering date, the offering will automatically terminate and all participants will be re-enrolled in the new, lower-priced offering. Participants may end their participation at any time during an offering and will be refunded their accrued contributions that have not yet been used to purchase shares. Participation ends automatically upon termination of employment.

As of December 31, 2016, there were \$2.4 million of employee contributions withheld by the Company. In 2016, the Company recognized \$1.9 million of stock-based expense related to the 2011 ESPP.

Common Stock Reserved for Future Issuance

As of December 31, 2016, we had reserved shares of common stock for future issuance as follows (in thousands):

	December 31, 2016
Stock options outstanding	36,858

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ZSUs outstanding	59,452
2011 Equity Incentive Plan	99,447
2011 Employee Stock Purchase Plan	78,013
	273,770

Accumulated Other Comprehensive Income (loss)

The components of accumulated other comprehensive income, net of taxes, were as follows (in thousands):

	Foreign Currency Translation	Unrealized Gains (Losses) on Available- for-Sale Securities	Total
Balance as of December 31, 2014	\$(28,781)	\$ (394)	\$(29,175)
Other comprehensive income (loss) before reclassifications	(23,480)	307	(23,173)
Amounts reclassified from accumulated other comprehensive income (loss)	—	(40)	(40)
Net current-period other comprehensive income (loss)	(23,480)	267	(23,213)
Balance as of December 31, 2015	\$(52,261)	\$ (127)	\$(52,388)
Other comprehensive income (loss) before reclassifications	(76,410)	105	(76,305)
Amounts reclassified from accumulated other comprehensive income (loss)	—	(1)	(1)
Net current-period other comprehensive income (loss)	(76,410)	104	(76,306)
Balance as of December 31, 2016	\$(128,671)	\$ (23)	\$(128,694)

11. Net Income (Loss) Per Share of Common Stock

We compute net income (loss) per share of common stock using the two-class method required for participating securities. Prior to the date of the initial public offering, we considered all series of our convertible preferred stock to be participating securities due to their non-cumulative dividend rights. Additionally, we consider shares issued upon the early exercise of options subject to repurchase and unvested restricted shares to be participating securities, because holders of such shares have non-forfeitable dividend rights in the event we declare a dividend for common shares. In accordance with the two-class method, net income allocated to these participating securities, which include participation rights in undistributed net income, is subtracted from net income (loss) to determine total net income (loss) to be allocated to common stockholders.

Basic net income (loss) per share is computed by dividing net income (loss) attributable to common stockholders by the weighted-average number of common shares outstanding during the period. In computing diluted net income (loss) attributable to common stockholders, net income (loss) is re-allocated to reflect the potential impact of dilutive securities, including stock options, warrants, unvested restricted stock and unvested ZSUs. Diluted net income (loss) per share is computed by dividing net income (loss) attributable to common stockholders by the weighted-average number of common shares outstanding, including potential dilutive securities. For periods in which we have generated a net loss or there is no income attributable to common stockholders, we do not include stock options, warrants and unvested ZSUs in our calculation of diluted net income (loss) per share, as the impact of these awards is anti-dilutive.

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The following table sets forth the computation of basic and diluted net income (loss) per share of common stock (in thousands, except per share data):

	Year Ended December 31,								
	2016			2015			2014		
	Class A	Class B	Class C	Class A	Class B	Class C	Class A	Class B	Class C
BASIC:									
Net income (loss) attributable to common stockholders	\$(92,988)	\$(12,660)	\$(2,525)	\$(103,628)	\$(15,153)	\$(2,729)	\$(189,732)	\$(30,869)	\$(5,300)
Weighted-average common shares outstanding	755,460	102,850	20,517	779,071	113,923	20,517	734,493	119,499	20,517
Basic net income (loss) per share	\$(0.12)	\$(0.12)	\$(0.12)	\$(0.13)	\$(0.13)	\$(0.13)	\$(0.26)	\$(0.26)	\$(0.26)
DILUTED:									
Net income (loss) attributable to common stockholders-basic	\$(92,988)	\$(12,660)	\$(2,525)	\$(103,628)	\$(15,153)	\$(2,729)	\$(189,732)	\$(30,869)	\$(5,300)
Reallocation of net income (loss) as a result of									
conversion of Class C shares to Class A shares	(2,525)	—	—	(2,729)	—	—	(5,300)	—	—
Reallocation of net income (loss) as a result of									
conversion of Class B shares to Class A shares	(12,660)	—	—	(15,153)	—	—	(30,869)	—	—
Net income (loss) attributable to common stockholders-diluted	\$(108,173)	\$(12,660)	\$(2,525)	\$(121,510)	\$(15,153)	\$(2,729)	\$(225,901)	\$(30,869)	\$(5,300)
Weighted-average common shares-									
outstanding basic	755,460	102,850	20,517	779,071	113,923	20,517	734,493	119,499	20,517
	20,517	—	—	20,517	—	—	20,517	—	—

Conversion of Class C to Class A common shares									
outstanding									
Conversion of Class B to Class A common shares									
outstanding	102,850	—	—	113,923	—	—	119,499	—	—
Weighted-average common shares outstanding-									
diluted	878,827	102,850	20,517	913,511	113,923	20,517	874,509	119,499	20,517
Diluted net income (loss) per share	\$(0.12)	\$(0.12)	\$(0.12)	\$(0.13)	\$(0.13)	\$(0.13)	\$(0.26)	\$(0.26)	\$(0.26)

The following weighted-average employee equity awards were excluded from the calculation of diluted net income (loss) per share because their effect would have been anti-dilutive for the periods presented (in thousands):

	Year Ended December 31,		
	2016	2015	2014
Stock options and employee stock purchase plan	28,380	29,412	42,454
Restricted shares	3,899	8,716	12,624
ZSUs	61,183	63,764	59,141
Total	93,462	101,892	114,219

12. Commitments and Contingencies

Lease Commitments

We have entered into operating leases for facilities. As of December 31, 2016, future minimum lease payments related to these leases are as follows (in thousands):

Year ending December 31:	
2017	\$5,405
2018	4,158
2019	3,553
2020	1,920
2021	652
2022 and thereafter	33
	\$15,721

Rent expense on operating leases for facilities, excluding data center hosting expense, for 2016, 2015 and 2014 totaled \$5.3 million, \$4.5 million, and \$4.5 million, respectively.

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Licensor and Marketing Commitments

We have entered into several contracts with licensors that contain minimum guarantee payments and marketing commitments that may not be dependent on any deliverables. As of December 31, 2016, future minimum guarantee royalty payments due to licensors and marketing commitments for the licensed products are as follows (in thousands):

Year ending December 31:	
2017	\$27,442
2018	8,849
2019	7,783
2020	2,250
2021 and thereafter	10,000
	\$56,324

The amounts represented in the table above for marketing commitments reflect our minimum cash obligations for the respective calendar years based on contractual terms, but do not necessarily represent the periods in which they will be expensed in the Company's consolidated statement of operations.

Other Purchase Commitments

We have entered into several contracts for hosting of data systems and other services. As of December 31, 2016, future minimum purchase commitments that have initial or remaining non-cancelable terms December 31, 2016 are as follows (in thousands):

Year ending December 31:	
2017	\$9,898
2018	2,646
2019	946
2020 and thereafter	276
	\$13,766

Credit Facility

On November 2, 2016, the Company voluntarily terminated the Credit Agreement. Prior to its termination, the Credit Agreement provided the Company with a \$200 million revolving line of credit. The Credit Agreement was terminated because it no longer served the Company's needs and allows the Company to save costs otherwise incurred in connection with maintaining the line of credit. The pay-off amount in connection with the termination of the Credit Agreement was \$0.1 million and primarily consisted of commitment fees. The Company did not incur any early termination penalties in connection with the termination.

Legal Matters

On April 4, 2013, a purported class action captioned Lee v. Pincus, et al. was filed in the Court of Chancery of the State of Delaware against the Company, and certain of our current and former directors, officers, and executives. The complaint alleges that the defendants breached fiduciary duties in connection with the release of certain lock-up

agreements entered into in connection with the Company's initial public offering. The complaint further states that "Zynga is named as a defendant herein solely because it is a party to agreements underlying and relating to the Secondary Offering." The plaintiff seeks to represent a class of certain of the Company's shareholders who were subject to the lock-up agreements and who were not permitted to sell shares in an April 2012 secondary offering. On January 17, 2014, the plaintiff filed an amended complaint. On March 6, 2014, the defendants filed motions to dismiss the amended complaint and a motion to stay discovery while the motions to dismiss were pending. On November 14, 2014, the court denied the motion to dismiss brought by the Company and the directors and granted the motion to dismiss brought by the underwriters who had been named as defendants.

On June 24, 2015, certain of the defendants filed a motion for relief from the court's November 14, 2014 decision denying the defendants' motion to dismiss the complaint. Briefing on the motion for relief from the court's November 14, 2014 decision is complete. A hearing date has not been set. On August 19, 2015, the parties agreed to voluntarily dismiss three individual director defendants from the case.

Plaintiff filed a motion for class certification on July 13, 2015, and, after briefing was completed, the court held a hearing on plaintiff's motion on November 20, 2015. On December 30, 2015, the court granted plaintiff's motion for class certification. On July 27, 2016, the court entered a scheduling order setting a trial date of October 9, 2017.

A mediation session was conducted on September 20, 2016. The parties reached an agreement in principle to settle Lee v. Pincus, et al. as to all defendants for \$10.0 million. The parties filed a stipulation of settlement with the court on December 15, 2016. The settlement, which remains subject to notice to the class and court approval, would be funded entirely by insurance and lead to the dismissal of all claims against the defendants. Accordingly, and also because no claim for damages is asserted against the Company in the Lee action, the Company is not considered the obligor in the matter, and there would be no impact to the Company's financial statements if the final settlement is consistent with the current agreement. Given its preliminary nature, it remains possible that the parties' settlement agreement may not result in a final settlement, and that the assessment of the possibility of loss or adverse effect on our financial condition, if any, could therefore change in the near term.

Since August 3, 2012, eight stockholder derivative lawsuits have been filed in State or Federal courts in California and Delaware purportedly on behalf of the Company against certain current and former directors and executive officers of the Company. The derivative plaintiffs allege that the defendants breached their fiduciary duties and violated California Corporations Code section 25402 in connection with our initial public offering in December 2011, secondary offering in April 2012, and allegedly made false or misleading statements regarding the Company's business and financial projections.

Beginning on August 3, 2012, three of the actions were filed in San Francisco County Superior Court. On October 2, 2012, the court consolidated those three actions as In re Zynga Shareholder Derivative Litigation, Lead Case CGC-12-522934. On March 14, 2013, the plaintiffs filed a First Amended Complaint in that consolidated California state action. On March 21, 2013, the court endorsed a stipulation among the parties staying the action pending the ruling on the motion to dismiss in a related federal securities class action. On March 24, 2014, the court endorsed a stipulation among the parties staying the action pending a ruling on a motion to dismiss the First Amended Complaint in the federal securities class action. On April 24, 2015, the court endorsed a stipulation among the parties staying the action until the Delaware Chancery Court ruled on the defendants' motion to stay or dismiss in the action described below. On May 2, 2016, the court endorsed a stipulation among the parties staying the action until final resolution of plaintiff's appeal in the Delaware derivative action (discussed below). That stay expired and the parties filed a joint status report on January 20, 2017. The court scheduled a status conference for March 8, 2017.

Beginning on August 16, 2012, four stockholder derivative actions were filed in the U.S. District Court for the Northern District of California. On December 3, 2012, the court consolidated these four actions as In re Zynga Inc. Derivative Litigation, Lead Case No. 12-CV-4327-JSW. On March 11, 2013, the court endorsed a stipulation among the parties staying the action pending the ruling on the motion to dismiss in a related federal securities class action. On March 21, 2014, the court issued an order continuing the stay pending a ruling on a motion to dismiss the First Amended Complaint in the federal securities class action. On April 27, 2015, the court endorsed a stipulation among the parties staying the action until the Delaware Chancery Court ruled on the defendants' motion to stay or dismiss in the action described below. On April 27, 2016, the court endorsed a stipulation among the parties staying the action until final resolution of plaintiff's appeal in the Delaware derivative action (discussed below). On January 26, 2017, the court endorsed a stipulation among the parties providing for a further stay of this action until July 14, 2017.

On April 4, 2014, a derivative action was filed in the Court of Chancery of the State of Delaware captioned Sandys v. Pincus, et al. Case No. 9512-CB. On December 9, 2014, the defendants filed a motion to stay or dismiss the action. The court held a hearing on defendants' motion on November 17, 2015, and on February 29, 2016, the court granted nominal defendant Zynga's motion to dismiss. On March 29, 2016, plaintiff filed a notice of appeal of the court's order dismissing the action. Briefing is complete and oral argument on plaintiff's appeal was held on October 19, 2016. On December 5, 2016, the Delaware Supreme Court reversed the Court of Chancery's dismissal and remanded the case for further proceedings. The court has not yet set a schedule for further proceedings in this action.

The derivative actions include claims for, among other things, unspecified damages in favor of the Company, certain corporate actions to purportedly improve the Company's corporate governance, and an award of costs and expenses to the derivative plaintiffs, including attorneys' fees. Because the derivative actions are in the early stages of the litigation

process, we are not in a position to assess whether any loss or adverse effect on our financial condition is probable or remote or to estimate the range of potential loss, if any.

On February 3, 2017, our Board of Directors established a special litigation committee (the “Special Litigation Committee”) currently consisting of Janice Roberts and Carol Mills to investigate the claims asserted against certain former and current officers and directors of the Company in the shareholder derivative suits described above (collectively, the “Derivative Litigation”). The Special Litigation Committee will determine what actions are appropriate and in the best interests of the Company, and decide whether it is in the best interests of the Company to pursue, dismiss or consensually resolve the claims asserted in the Derivative Litigation. The Special Litigation Committee’s findings and determinations shall be final and not subject to review by our Board of Directors and in all respects shall be binding upon the Company.

The Company is, at various times, also party to various other legal proceedings and claims which arise in the ordinary course of business. In addition, we may receive notifications alleging infringement of patent or other intellectual property rights. Adverse results

in any such litigation, legal proceedings or claims may include awards of substantial monetary damages, costly royalty or licensing agreements, or orders preventing us from offering certain games, features, or services, and may also result in changes in our business practices, which could result in additional costs or a loss of revenue for us and could otherwise harm our business. Although the results of such litigation cannot be predicted with certainty, we believe that the amount or range of reasonably possible losses related to such pending or threatened litigation will not have a material adverse effect on our business, operating results, cash flows, or financial condition should such litigation be resolved unfavorably. We recognize legal expenses as incurred.

13. Geographical Information

The following represents our revenue based on the geographic location of our players (in thousands):

Revenue

	Year Ended December 31,		
	2016	2015	2014
United States	\$507,473	\$506,268	\$426,906
All other countries ⁽¹⁾	233,947	258,449	263,504
Total revenue	\$741,420	\$764,717	\$690,410

⁽¹⁾No country, other than the U.S., exceeded 10% of our total revenue for any periods presented. The following represents our property and equipment, net by location (in thousands):

Property and equipment, net

	Year Ended December 31,		
	2016	2015	2014
United States	\$267,324	\$269,721	\$294,708
All other countries	2,115	3,500	3,211
Total property and equipment, net	\$269,439	\$273,221	\$297,919

14. Subsequent Events

Share Repurchase Program

From January 1, 2017 to February 16, 2017, we repurchased 10.6 million shares of our Class A common stock under the 2016 Share Repurchase Program at a weighted average price of \$2.60 per share for a total of \$27.8 million.

Acquisition of Solitaire Mobile Gaming Application

On February 14, 2017, we purchased Solitaire mobile game applications from Harpan LLC for approximately \$42.5 million in cash. As the initial accounting for the business combination is incomplete as of the date of this filing, we will record the preliminary purchase price allocation in the first quarter of 2017.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Annual Report on Form 10-K. The term “disclosure controls and procedures,” as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that

information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Based on the evaluation of our disclosure controls and procedures as of December 31, 2016, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at the reasonable assurance level.

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) of the Exchange Act. Our management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 Framework). Based on this evaluation, management concluded that our internal control over financial reporting was effective as of December 31, 2016. Management reviewed the results of its assessment with our Audit Committee. The effectiveness of our internal control over financial reporting as of December 31, 2016 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in its report which is included in Item 8 under the caption "Report of Ernst & Young, LLP, Independent Registered Public Accounting Firm" which is incorporated herein by reference.

Changes in Internal Control over Financial Reporting

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 quarter ended December 31, 2016 that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Limitations on Effectiveness of Controls and Procedures

In designing and evaluating the disclosure controls and procedures, 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 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 Zynga's Proxy Statement for its 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2016.

Our Board of Directors has adopted a Code of Business Conduct and Ethics applicable to all officers, directors and employees, which is available on our website (www.zynga.com) under "Corporate Governance." We will provide a copy of these documents to any person, without charge, upon request, by writing to us at Zynga Inc., Investor Relations Department, 699 Eighth Street, San Francisco, California 94103. We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of our Code of Business Conduct and Ethics by posting such information on our website at the address and the location specified above.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference to Zynga's Proxy Statement for its 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2016.

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 Zynga's Proxy Statement for its 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2016.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated by reference to Zynga's Proxy Statement for its 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2016.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated by reference to Zynga's Proxy Statement for its 2017 Annual Meeting of Stockholders to be filed with the SEC within 120 days after the end of the fiscal year ended December 31, 2016.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) Documents filed as part of this report:

1. Consolidated Financial Statements: See Index to Consolidated Financial Statements under Item 8 on page 52 of this Annual Report on Form 10-K.

2. Financial Statements Schedule:
Schedule II: Valuation and Qualifying Accounts

	Balance at Beginning of Year	Charged to Expenses/ Against Revenue	Write-Offs Net of Recoveries	Balance at End of Year
Allowance for Doubtful Accounts and Sales Credits				
Year Ended December 31, 2016	\$ —	—	\$ —	\$ —
Year Ended December 31, 2015	\$ —	—	\$ —	\$ —
Year Ended December 31, 2014	\$ —	—	\$ —	\$ —

All other schedules have been omitted because they are not required, not applicable, or the required information is otherwise included.

3. Exhibits:

Exhibit No.	Description of Exhibit	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
3.1	Seventeenth Amended and Restated Certificate of Incorporation of Zynga Inc.	8-K	001-35375	3.1	06/11/2014	
3.2	Second Amended and Restated Bylaws of Zynga Inc.	8-K	001-35375	3.1	3/1/2016	
4.1	Form of Zynga Inc. Class A Common Stock Certificate	S-1/A	333-175298	4.1	11/4/2011	
10.1	Fifth Amended and Restated Investor Rights Agreement, by and between Zynga Inc., the investors listed on Schedule A thereto and Mark Pincus, dated February 18, 2011	S-1/A	333-175298	10.1	8/11/2011	
10.2+	Zynga Inc. 2007 Equity Incentive Plan	S-1/A	333-175298	10.2	12/2/2011	
10.3+		S-1/A	333-175298	10.3	11/17/2011	

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	Forms of Stock Option Agreement and Stock Option Exercise Agreement under 2007 Equity Incentive Plan				
10.4+	Forms of Notice of Restricted Stock Unit Award and Restricted Stock Unit Agreement under 2007 Equity Incentive Plan	S-1/A	333-175298	10.26	11/17/2011
10.5+	Zynga Inc. 2011 Equity Incentive Plan	DEF 14A	001-35378	Appendix A	4/28/2015
10.6+	Forms of Stock Option Grant Notice and Option Agreement under 2011 Equity Incentive Plan	S-1/A	333-175298	10.5	11/17/2011
10.7+	Forms of Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement under 2011 Equity Incentive Plan	10-Q	001-35375	10.3	5/8/2012
10.8+	Form of 2011 Equity Incentive Plan Performance Cash Award Agreement	8-K	001-35375	10.1	4/4/2013
10.9+	Zynga Inc. 2011 Employee Stock Purchase Plan	S-1/A	333-175298	10.20	12/2/2011

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Exhibit No.	Description of Exhibit	Incorporated by Reference				Filed Herewith
		Form	File No.	Exhibit	Filing Date	
10.10+	Form of Indemnification Agreement made by and between Zynga Inc. and each of its directors and executive officers	S-1/A	333-175298	10.6	11/17/2011	
10.11+	Zynga Inc. Non-Employee Director Compensation Policy	10-Q	001-35375	10.1	11/7/2014	
10.12+	Zynga Inc. Change in Control Severance Benefit Plan	10-K	001-35375	10.12	2/19/2016	
10.13+	Amended and Restated Offer Letter, between Zynga Inc. and Mark Pincus	S-1/A	333-175298	10.10	11/17/2011	
10.14+	Amended and Restated Offer Letter, between Zynga Inc. and Mark Pincus	8-K	001-35375	10.2	3/1/2016	
10.15+	Offer Letter, between Zynga Inc. and Frank Gibeau	8-K	001-35375	10.1	3/1/2016	
10.16+	Offer Letter, between Zynga Inc. and Matthew Bromberg	10-Q	001-35375	101	8/5/2016	
10.17+	Offer Letter between Zynga Inc. and Bernard Kim	10-Q	001-35375	10.2	8/5/2016	
10.18+	Offer letter between Zynga Inc. and Gerard Griffin	8-K	001-35375	10.1	9/30/2016	
10.19+	Offer letter between Zynga Inc. and Devang Shah	10-K	001-35375	10.17	2/21/2014	
10.20+	Retention Agreement between Zynga Inc. and Devang Shah	8-K	001-35375	10.1	4/27/2015	
10.21†	Developer addendum by and between Facebook, Inc., and Zynga Inc. dated May 14, 2010 and Amendment No.1 to Developer Addendum, dated October 13, 2011	S-1/A	333-175298	10.15	11/17/2011	
10.22†	Amendment No. 2 to Developer Addendum by and between Facebook, Inc. and Zynga Inc., dated April 25, 2012	10-Q	001-35375	10.1	7/30/2012	
10.23#	Amendment No. 3 to Developer Addendum by and between Facebook, Inc., Facebook Ireland Limited, Zynga Inc., Zynga Game Ireland Limited and Zynga Luxembourg S.à.r.L, dated November 28, 2012	10-K	001-35375	10.30	02/25/2013	
10.24†	Developer Addendum No. 2 by and between Facebook, Inc., Facebook Ireland Limited and Zynga Inc., dated December 26, 2010	S-1/A	333-175298	10.16	11/4/2011	
10.25†	Amendment No. 1 to Developer Addendum No. 2 by and between Facebook, Inc., Facebook Ireland Limited and Zynga Inc., dated June 12, 2012	10-Q	001-35375	10.2	7/30/2012	
10.26†	Amendment No. 2 to Developer Addendum No. 2 by and between Facebook, Inc., Facebook Ireland Limited and Zynga Inc., dated July 2, 2012	10-Q	001-35375	10.3	7/30/2012	
10.27†	Amendment No. 3 to Developer Addendum No. 2 by and between Facebook, Inc., Facebook Ireland Limited, Zynga Inc. and Zynga Game Ireland Limited, dated November 28, 2012	10-K	001-35375	10.34	02/25/2013	
10.28	Warrant to Purchase Class B Common Stock, dated July 31, 2009, issued to Allen & Company LLC.	S-1/A	333-175298	10.18	7/18/2011	

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Exhibit No.	Description of Exhibit	Incorporated by Reference			Filing Date	Filed Herewith
		Form	File No.	Exhibit		
10.29	Amended and Restated Revolving Credit Agreement, dated as of July 21, 2011 and amended and restated as of June 20, 2013, among Zynga Inc., as Borrower, the Lenders party thereto and Morgan Stanley Senior Funding, Inc., as Administrative Agent	8-K	001-35375	10.1	6/24/2013	
10.30	First Amendment to the Amended and Restated Revolving Credit Agreement, dated as of July 1, 2015, among Zynga Inc., as Borrower, the Lenders party thereto and Morgan Stanley Senior Funding, Inc., as Administrative Agent	8-K	001-35375	10.1	7/2/2015	
10.31	Office Lease by and between Chip Factory Commercial LLC and Zynga Inc., dated January 2008; Amendment to Lease, dated November 1, 2008; and Amendment to Lease, dated February 1, 2011	S-1/A	333-175298	10.22	8/11/2011	
21.1	List of subsidiaries					X
23.1	Consent of Independent Registered Public Accounting Firm					X
24.1	Power of Attorney (included in signature page)					X
31.1	Certification of the Chief Executive Officer of Zynga Inc. pursuant to rule 13a-14 under the Securities Exchange Act of 1934					X
31.2	Certification of the Chief Financial Officer of Zynga Inc. pursuant to rule 13a-14 under the Securities Exchange Act of 1934					X
32.1•	Certification of the Chief Executive Officer and Chief Financial Officer of Zynga Inc. 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					
101.SCH*	XBRL Taxonomy Extension Schema Document					
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document					
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document					
101.LAB*	XBRL Taxonomy Extension Labels Linkbase Document					
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document					

+Indicates management contract or compensatory plan.

€Confidential treatment has been granted for certain information contained in this exhibit. Such information has been omitted and was filed separately with the Securities and Exchange Commission.

¶The certifications attached as Exhibit 32.1 accompany this Annual Report on Form 10-K pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and shall not be deemed “filed” by the Registrant for purposes of Section 18 of the Securities Exchange Act of 1934, as amended.

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 on February 17, 2017.

ZYNGA INC.

By: /s/ Gerard Griffin
Gerard Griffin

Chief Financial Officer and Principal Accounting Officer

(On behalf of Registrant)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Gerard Griffin and Devang Shah, and each of them, as his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his 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 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 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 below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Mark Pincus Mark Pincus	Chairman of the Board	February 17, 2017
/s/ Frank Gibeau Frank Gibeau	Chief Executive Officer and Director (Principal Executive Officer)	February 17, 2017
/s/ Gerard Griffin Gerard Griffin	Chief Financial Officer and Principal Accounting Officer (Principal Financial and Accounting Officer)	February 17, 2017
/s/ John Doerr John Doerr	Director	February 17, 2017
/s/ Regina E. Dugan Regina E. Dugan	Director	February 17, 2017
/s/ William "Bing" Gordon William "Bing" Gordon	Director	February 17, 2017
/s/ Louis J. Lavigne, Jr. Louis J. Lavigne, Jr.	Director	February 17, 2017
/s/ Sunil Paul Sunil Paul	Director	February 17, 2017
/s/ Ellen F. Siminoff Ellen F. Siminoff	Director	February 17, 2017
/s/ Carol G. Mills Carol G. Mills	Director	February 17, 2017

/s/ Janice M. Roberts Director
Janice M. Roberts

February 17,
2017