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## King Digital Entertainment

*The player comes first in everything we do. Player is King.*

– King Digital Entertainment, IPO Prospectus

In mid-2015, Riccardo Zacconi, CEO of King Digital Entertainment, the world's leading maker of casual games for mobile devices, was in King's Stockholm studio, reflecting that it had been only 12 years since he cofounded the company with five other entrepreneurs. Now, Activision Blizzard (Activision), one of the largest game publishers in the world, had offered to acquire King for almost \$6 billion. King's board needed to respond.

Launched as a provider of video games for web portals, King had managed to survive and thrive despite industry upheavals, as the locus of casual gaming shifted from portals to social platforms and then to mobile devices. *Candy Crush Saga*, in which players matched candies to win points and defeat obstacles, was the franchise that launched King's meteoric growth. Debuting on social platforms in April 2012 and on mobile devices six months later, by the end of 2012, *Candy Crush* had over 10 million downloads. Fueled by this success, King had gone public in March 2014. However, King's shares closed below their offering price on the first day of trading and had never made up the lost ground – despite the enormous popularity of King's games. According to industry estimates, the company's games were played by 470 million monthly active users around the world.<sup>1</sup>

As mobile gaming continued to expand, Zacconi believed the company could capitalize on its leadership position. Activision's offer to acquire King was compelling, but did it reflect this upside? The offer was 20% below King's IPO price, though it represented a 20% premium over King's recent trading range. Was this the right time to sell?

### Online Casual Gaming

The rapid expansion of Facebook and other online social networks after 2004 set the stage for a new chapter in electronic gaming history. Games published on social platforms encouraged players to interact with friends, enabling the games to reach wide audiences rapidly. In 2009, Zynga's farming

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simulation game, *Farmville*, had attracted more than 10 million players just six weeks after launch.<sup>2</sup> In the same time frame, the introduction of smartphones further lifted the electronic game industry and broadened its audience. In contrast to console games that often targeted hard-core male players, social and mobile gaming had greater appeal to casual female gamers, who were drawn to less immersive games that could be played in short bursts throughout the day. By 2014, female gamers represented 42% of the global mobile gaming population.<sup>3</sup>

The shift to casual gaming on mobile devices went hand in hand with the growth of the “free-to-play” business model, in which companies earned revenues not from the sale of hardware and software or from subscription payments, but rather from in-game purchases and advertising.<sup>4</sup> In 2015, in-game purchases accounted for 90% of revenues earned by mobile games (see **Exhibits 1 to 6** for industry data).

The shift to online and mobile games—in particular, free-to-play games—made the industry less stable.<sup>5</sup> Games quickly became hits but also contracted rapidly when users switched to other offerings. By late 2015, the mobile gaming industry was consolidating, despite attracting a steady stream of new entrants as it grew.<sup>6</sup> The electronic game industry overall was led by a small number of players that focused mostly on mobile games, including King, Supercell, and Zynga, along with traditional video game publishers like Activision Blizzard and Electronic Arts, whose portfolios included console games in addition to casual offerings (see **Exhibit 7**).<sup>7</sup>

## King’s Saga

King was founded in 2003 when Zacconi and five of his acquaintances and former colleagues, Toby Rowland, Sebastian Knutsson, Thomas Hartwig, Lars Markgren, and Patrik Stymne, pooled funds to start a gaming company, Midasplayer, in London and Stockholm (see **Exhibit 8** for founder and executive profiles). Midasplayer developed tournament games that could be integrated into web portals. Users played these games for real money, with Midasplayer claiming 25% of every tournament jackpot.

With losses mounting, Co-CEOs Zacconi and Rowland asked for help from Melvyn Morris, former CEO of online dating company uDate, where they had both worked. With Midasplayer on the brink of failure, Morris provided €500,000 and became its chairman. Revenues climbed from €2.3 million in 2004 to €10.8 million in 2005, when Midasplayer reported its first profit, raised a second venture round of €34 million from Apax Partners and Index Ventures, and changed its name to King.<sup>8</sup>

**First saga game** In 2008, co-CEO Rowland left to pursue other interests, and Zacconi became sole CEO. King was facing a challenge as the rise of Facebook diverted online gamers away from Yahoo! and other web portals, where King had built its franchise. Morris urged King’s management to explore games for social platforms. In response, Zacconi split King’s creative talent into five teams, each testing a different game format that might appeal to Facebook users.

The pivot required some major technological changes. Chief Technology Officer Hartwig recalled, “For eight years we had been developing our tournament-based platform. But we couldn’t leverage that old platform to offer games on Facebook: the platform had too much technical debt and its technology was too old. We developed a completely new platform, which we still use today to power our games.”

The five teams developed and launched five games, four of which gained traction. One was *Bubble Witch Saga*, in which players had to gather three or more colored bubbles and then burst them with a

limited number of moves. Available for free, the game allowed players to progress faster by asking other Facebook users for help or by purchasing virtual goods.<sup>9</sup> Launched in 2011, *Bubble Witch Saga* outperformed the other three Facebook games and attracted a broad audience. Chief Creative Officer Knutsson remarked, “After we saw success with that format, we plugged it into some of our existing games. We created a reusable framework that became the basis for many future games.” With such framework recycling, King’s developers did not have to rethink the conceptual structure of each new game. They could focus instead on gameplay and production quality.

**Candy Crush** By late 2011, King’s managers realized that mobile gaming was gaining serious traction. In July 2012, King introduced a mobile app for *Bubble Witch Saga*, which enabled players to synchronize gameplay across Facebook and mobile devices. King’s smartphone breakthrough came with the launch of *Candy Crush Saga*. By mid-2013, the game had attracted nearly 50 million daily active users (DAUs).<sup>10</sup> Hartwig noted, “We used to have monthly planning meetings to discuss server capacity. When *Candy Crush* peaked, those meetings became biweekly and then daily.” During that period, King also saw huge growth in employees. At year-end 2012, the company had 338 employees; one year later, it had 665.

King continued to launch new games on both Facebook and mobile devices. In 2013, it introduced *Farm Heroes Saga* and *Papa Pear Saga* (see **Exhibit 9** for a list of games and **Exhibit 10** for game categories). King’s gross bookings grew from \$43 million in Q3 2012 to \$481 million in Q2 2013. In Q4 2013, gross bookings were \$632 million, of which 73% were generated by mobile users and 78% by *Candy Crush Saga* alone. That quarter, 4% of King’s 304 million monthly unique users (MUUs) purchased virtual items; these users spent an average of \$17.32 per month (see **Exhibits 11** and **12** for key financial and operating data).

**IPO and beyond** On March 25, 2014, King sold 22,200,000 shares at \$22.50 per share in a public offering on the New York Stock Exchange that valued the company at around \$7 billion. King’s Vice President for the *Candy Crush* franchise, Tjodolf Somme stad, commented, “There was a sense of achievement, of course, but also some concerns, like ‘How will this change us?’ and ‘Chapter One complete: what’s next?’”

King’s IPO had been the first significant offering in the gaming industry since 2011, when Zynga had gone public. Zynga’s shares had fallen by 75% the following year, cooling investor interest in other gaming companies.<sup>11</sup> Moreover, investors had found King’s opening valuation rich for a company whose revenue was derived largely from one popular game.<sup>12</sup> Even though King had 180 games in its portfolio, many investors did not believe the company could replicate *Candy Crush*’s success.

Swings in King’s share price (see **Exhibit 13**) did not discourage the team. The company continued to release novel upgrades for existing titles as well as new games. In mid-2014, King launched a version of *Candy Crush Saga* designed for the mainland China market, after reaching a distribution agreement with Tencent, which had over 220 million monthly active users (MAUs).<sup>13</sup> King also launched *Bubble Witch 2 Saga*, a sequel to the company’s first Facebook hit, with more colorful characters and dynamic visuals. A few months later, King announced a worldwide Facebook launch of a sister title to *Candy Crush* called *Candy Crush Soda Saga*. By Q4 2014, bookings for games other than *Candy Crush Saga* were 55% of overall volume, compared to 22% one year earlier (see **Exhibit 14**).

By 2015, King employed approximately 2,000 people in 13 locations, with offices in San Francisco, Malta, Seoul, Tokyo, Shanghai, and Bucharest, and game studios in Stockholm, Malmo (Sweden), London, Barcelona, Berlin, Singapore, and Seattle. King’s senior management was also distributed across multiple locations. Management saw the company’s dispersed team and global orientation as important to its success. Hartwig said, “We started in Sweden, a small market, so it was clear that we

would need to expand. We put in place a multilingual service and thought about payments in multiple currencies. Thinking internationally since day one has helped us grow.”

## King’s Business Model

King’s games were easy to learn but hard to master, blending challenge and progress to provide a sense of achievement and to motivate continued play through a saga’s levels. The games typically included a puzzle element, meaning a logical or conceptual challenge. They could be played in a few minutes and were accessible on a wide range of devices. For user convenience, King’s games were synchronized across platforms. Players could switch between devices and continue wherever they left off. Built for smartphone lifestyles, the games provided “bite-sized entertainment” that could be accessed, interrupted, and resumed several times a day.

King’s games were targeted largely to women 25 to 45 years old. Knutsson explained, “I ask our developers to channel their inner female. Most developers are male and look at games with a competitive console mind-set. That mind-set might not be an appealing feature to a female player; she might be looking more for collaboration and shared social expression.”

All of King’s games were offered as free downloads; players could theoretically play through every level without spending any money. The company’s revenues derived from building high-frequency play and then monetizing active users by selling virtual goods. For King’s top games, Knutsson explained, “Anything that improves the user experience, the quality of the game, and the willingness to come back tends to be linearly correlated with increasing revenue. Revenue comes from game quality, players’ loyalty, and user engagement rather than getting new users to spend as quickly as possible.”

Virtual items available for purchase included additional time or extending the duration of a game session, skill enhancements, and access to content, such as unlocking new game levels. Most virtual items were “consumable” – designed to be used immediately – and priced at approximately \$1 each. King had recently put less emphasis on “durable” virtual items, which could be used over extended periods of gameplay and typically cost \$5 to \$30. Durables accounted for only 1% of King’s revenue in 2013, down from 13% the prior year. The company also had discontinued advertising after 2012, when such sales accounted for 10% of revenue. In 2014, King aimed to increase user engagement and revenue with more “live ops,” special events that gave players the chance to win rewards by completing additional quests available only for short periods of time.

**Marketing** King enjoyed a virtuous cycle where users played its games across various devices, sharing their gaming experiences through social networks and word of mouth with friends. The resulting virality meant that the company could attract new players with modest marketing expenses.

Marketing expenditures to drive player acquisition and retention followed a data-centric, rules-based approach aimed at maximizing return on investment (ROI). When King launched a new game, it built awareness through in-game cross-promotion, mainly through in-app pop-up windows inviting users to download a new game, before commencing paid marketing. Zacconi explained, “We target cross-promotion using a tool that algorithmically predicts what types of new games a given user will like.” King’s Chief Marketing Officer, Alex Dale, explained, “We first get as many people in the game for free, for example with cross-promotion or word of mouth, and then we start spending marketing money, not the other way round.” King scaled marketing campaigns according to each game’s performance. “We take a disciplined approach, running lots of experiments with control groups,” Dale

continued. “If a game has good monetization and has a good trend in viral installs, we will keep spending.”

Brand recognition was enhanced by social interaction. The company entered into licensing and merchandising agreements that built brand awareness, such as, for example, the 2013 partnership with Happy Socks for socks inspired by *Candy Crush Saga* or the 2014 collaboration with Zara Terez for a fashion line of printed leggings, skirts, and dresses.

## Organizational Structure and Culture

As it scaled rapidly after *Candy Crush*'s debut, King struggled to recruit employees. Especially for creative and developer talent, King had exhausted pools of qualified talent in its original Stockholm location. In response, leadership had set up offices and studios in multiple countries.

Rapid scaling had also motivated King to establish more rigorous recruiting processes. Chief Operating Officer Stephane Kurgan recalled, “At our peak, we were on track to quadruple head count within 12 months. This can create a huge drag on product development, because we first had to train the new people. We had to put in place processes for recruiting and onboarding or risk breaking the company.” Zacconi recalled, “Upon joining us in 2011, the first thing that Stephane introduced was rigor in recruiting. Every candidate needed an executive sponsor and had to go through six interviews; Stephane and I signed off on every offer. We did that for a long time. Eventually, I stepped out of the process, but he is still vetting each of our hires.” Prospective employees were assessed by a cross-functional mix of managers. Kurgan explained, “When you grow very quickly, you need cultural homogeneity.”

Another crucial aspect of rapid scaling was robust communication. King management achieved this in part through its Info Market: periodic, large-scale, all-hands events that allowed employees to get to know one another, share ideas, learn from external speakers, and, as Kurgan explained, “create a massive amount of energy.” Originally held twice a year, the Info Markets became annual events starting in 2015 due to the logistical challenges and expense of bringing together 2,000 employees.

King had also formalized its top leadership meetings. Top executives met once a quarter, while the layer below, comprised of 60 to 70 senior managers, also met quarterly for one or two days to align around mission. “We encourage travel by our leadership,” noted Kurgan. Zacconi added, “Culture is not a bottom-up but rather a top-down process, and leaders have to live it.”

King's culture emphasized open debate. Zacconi explained, “When innovating, you should always question what someone does, without assuming that you do it better, and you should self-criticize. When companies grow fast, gifted doers become managers. You need to step back and ask, ‘Where are we focusing our best resources, on managing or on creating?’”

**The studios** King's seven in-house game studios created, developed, enhanced, and supported its games. Each studio managed one or more live games and one or more games in development. Each studio's 80 to 90 employees typically were divided into teams of 8 to 12 people. Hartwig explained:

Small, empowered, cross-functional teams are key to our success; they can get stuff done and be creative. Our teams include game designers, artists, developers, a producer, and a business performance manager. That unit comes up with a game concept based on a hypothesis of customer needs, develops the idea initially with a paper sketch, and then, through experimental iterations with internal and then external customers, improves it until eventually the game goes live. In effect, each game team is a mini company.

Directors in each studio—including an art director, game design director, and technical director—supported the teams and coordinated efforts with the other studios. Knutsson explained, “Directors cascade learning from team to team. If two teams are working on similar challenges, directors often encourage them to meet.” Centralized functional leadership also helped facilitate information sharing.

King’s studios coordinated their innovation efforts. Knutsson noted, “We want them to operate independently and have control of their games, but they cannot have total freedom in terms of prioritizing their development efforts and launch dates. We do not want too many game teams focusing on the same opportunities.”

King’s game studios relied on the company’s proprietary technology infrastructure which, besides offering synchronized cross-platform gameplay for users, provided the studios with an integrated development and service platform. The platform featured a common player database, tools for tracking user engagement and for network marketing, and a repository of code that was shared across King’s saga games. Any King developer could access, view, and compile every line of code written anywhere in the company. According to King’s IPO prospectus, this shared infrastructure had driven “speed to market, low cost, and organic scalability”<sup>14</sup> as King opened new studios. The infrastructure had likewise allowed King to “maintain robust service levels for our users while scaling our operations with far lower levels of capital investment than many of our industry peers.”<sup>15</sup>

## King’s Game Development Process

Knutsson described the essence of game development as solving a problem: “You try to create an experience, figure out how to provide that experience in the simplest and best way, so that as many people as possible will find it easy to understand how it works. Then you test to see if it is as fun as it was meant to be. You iterate to improve the experience.” Sommestad added, “We are very test-driven and numbers-driven. We test a lot and learn as fast as possible. When we find something that works, we do more of that until it stops working. Of course, we also get inspired by what’s happening in the market.” Zacconi added:

We generate about 35 billion events a day, so optimizing our game economies and our network economy is one fantastic quantitative problem. There is a huge amount of work going into innovation in free-to-play, focused on driving retention for engagement and monetization, not only game by game but also across the network. We have 150 mathematicians, statisticians, operations research experts, and physicists working on this. It’s where the mathematician meets the magician.

Investment horizons for new games spanned about two years. Knutsson stated, “It’s a funnel. You need a lot of prototype ideas to send several into play test and then just a few, the best ones, into the market.”

**Concept origination** King’s seven studios originated many game concepts, but King also operated “experimentation studios” that developed and tested “crazy and risky ideas” originated by game teams. This allowed King to explore new ideas without disrupting the teams working on its most popular games. Knutsson said, “In 2015, the experimentation studios evaluated 110 ideas; most failed, but 3 really powerful ideas emerged. We proved them out and transferred them to our established sagas with good, double-digit percentage gains in bookings against a current baseline.”

King’s innovation teams were always looking for new game formats that might augment or even replace the saga. One possibility was integrating more social features into games. Sommestad noted,

“The future of casual and mobile gaming will surely be more social, but ‘social’ can take many forms.” One was multiplayer gaming, which allowed users to play together or against each other. But Zacconi noted, “For most people, playing with others is more fun. But we’re still at Version 1.0 for social gaming. We are experimenting with it a lot, but we have not yet found the magic key.”

**Pre-Production** The pre-production process started with a “game pitch,” a short document outlining an idea for a new game developed by one of the game teams or by teams in the experimentation studios. Knutsson observed, “We have a fairly simple methodology. We always start with wire frames to get a shared vision of the product. We present the idea to a development team that serves as a sounding board. If the team is not convinced, then it probably isn’t a good idea.” If the team had a positive response, they would develop a rough prototype to clarify the game concept and mechanics.

Knutsson explained the role of intuition in the process: “We might try to estimate the business opportunity, but sometimes there isn’t a demand for a new game concept. For example, *Candy Crush* was the first match-three mobile game. We didn’t take market share from competitors; we created a new genre by identifying a classic format that nobody was offering to mobile players.”

**Production** After senior management gave the “green light” to a game idea, it moved into production. This phase included a “blackout period” during which the company was investing in a game but had not yet validated its business case through play tests. Knutsson explained, “As the market has matured, you have to invest more before you can test. Five or six years ago, very simple games could break through the charts. Today, you need a much more polished game.” He added:

How do you create a great game that’s going to be the right type of game two years from now? The sure way to fail is to mimic what’s already available. Instead, we look for opportunities that nobody is targeting, like a successful console game that hasn’t been moved to mobile yet. This is smarter than trying to come up with an amazing new game concept that no one has ever seen before. You hope it will surprise people, but instead everyone is confused because nobody knows how to play it.

**Testing** As production advanced, the game would be ready for play test, when the product was brought to market in a beta version. Hartwig said, “We want game developers to structure and run play tests, so they can fix the game more easily and feel a sense of ownership.” Knutsson explained:

We might put the game in front of thousands of real users in Apple’s App Store. They don’t need to know that it’s an early test product. The game might have just enough content to play for three days. That’s sufficient to give an early indication of how people will interact with the game. When we introduce more content, we can also see how much money players spend, and what fraction of them remain for longer times. We might run 5 to 15 such play tests before a game goes to market.

Game teams were supported by the Marketing Department, which was involved early in the game development process. Marketing regularly helped teams refine a new game by testing hypotheses about how target players would react to a game. However, the mass audience for King’s games posed some challenges. Knutsson explained, “Our games are so big now that we sometimes have different profiles and segments that we are trying to address with any single game.”

Transparency was crucial to the game development process, especially in trading off effort and resources between optimizing existing games and launching new ones. Knutsson explained, “You can always use data to find a good story. The central business performance team and the central marketing

team look at data before we launch a game. They look at play test results, and provide a neutral-party validation, as opposed to the perhaps biased view held by the team building the product.”

**Ongoing development** After launch, the team focused on developing new features, creating live ops, and improving the game experience. Game teams assessed the monetization potential of new features. Price changes could be tested more easily than new creative features. Sommestad elaborated: “We wrestle with prioritization. For example, should we go after something that could give us a quick 3% monetization uplift or something that we feel would boost player engagement over the long term? We have a consensus-driven culture. It is important that we make the decision, with everyone on board, and then learn fast. That’s how we win.”

To avoid focusing on features of limited interest to users or little commercial potential, most of King’s employees had access to data on the number of installs and revenues from every King game on a particular day. This allowed them to check if another team had already carried out a test on a similar feature. The company deployed standardized testing and analysis templates to facilitate such sharing. In the same spirit, successful new features developed by one studio were contributed to a shared development environment for use by other game studios.

**Sunset mode** Once a game had fully penetrated, it was put into “sunset mode,” in Hartwig’s words, who noted, “Our most important and precious asset is developer talent, and we need to deploy our talent against the biggest opportunities. When we see that a game is going to continue making money but not grow anymore, we transfer key talent so they can start up a new game.”

**Team composition** Teams changed in size across the product life cycle. Knutsson explained, “Typically, in the early prototype phase, the team has three to four people. These are senior, skilled individuals. When the idea looks good, we might scale the team to eight people, adding another layer of competencies, for example, one more artist, one more developer, one more back-end technician, maybe a project producer.” When the game moved into full production, the team scaled up to 15 to 20 people and would reach about 20 to 30 at launch. Knutsson continued, “The team does not have to increase in size after that point. But with a blockbuster like *Candy Crush Saga*, we knew we could be more effective by adding more talent. *Candy Crush*’s group has about 50 to 70 people divided into five or six small teams so they can stay agile.”

**Incentives** To foster information sharing, King’s incentive schemes focused on company results rather than individual or team performance. Knutsson explained, “If we gave every team a bonus based on their game’s performance, since our games are quite similar, they would not be open to sharing. Instead, they would try to steal users from each other and fight over who gets network support.” He added, “This is also why game teams do not decide who gets marketing support. The marketing teams manage cross-promotion in a neutral manner; they decide which is the best game to support.”

Hartwig added, “Each game team is focused on delivering the ultimate user experience and entertainment to its players. But we also focus on our network and the ability to attract 500 million players on a monthly basis, regardless of whether they are playing *Candy Crush Saga* or *Bubble Witch Saga* or *Farm Heroes Saga*. The studios and their game teams contribute to the network and thus to the greater good of the company.”



## King Saga, Part II?

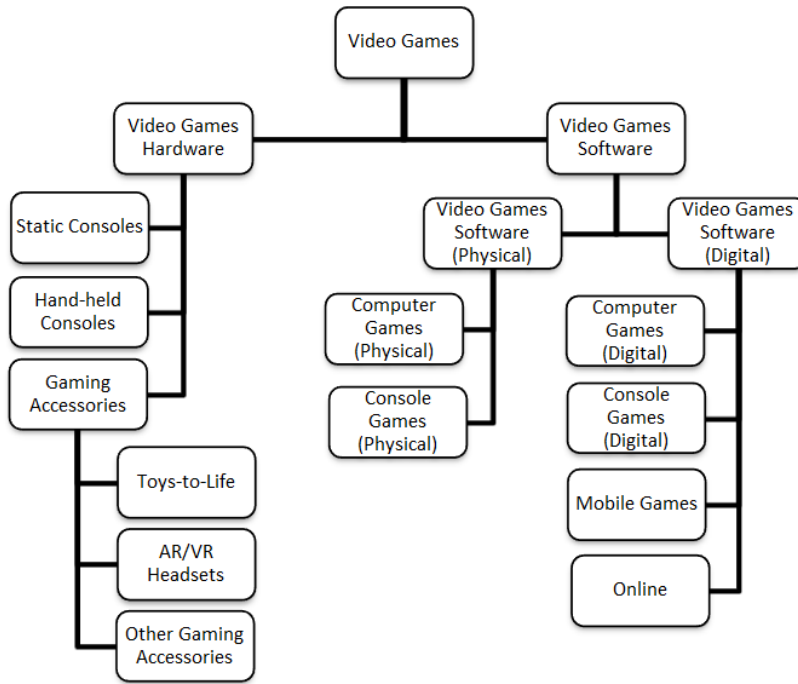
Zacconi recalled how, before the launch of King's Facebook games, his team had been approached by Activision about a possible merger. They had preferred to go it alone and ultimately took the company public.

A merger of the two businesses had compelling strategic logic. Activision was a leader in PC and console gaming, but it had limited traction in mobile and casual gaming (see **Exhibit 15**). The company's revenues derived largely from game sales and subscription fees in developed geographies; its selection of free-to-play content was limited, which kept its presence in emerging markets low. Potential synergies seemed large. King's expertise in free-to-play could be leveraged by Activision to bring versions of its main console franchises to new audiences in emerging markets. Activision could also introduce PC and console titles to King's more than 470 million users, who had a different demographic profile than Activision's.<sup>16</sup> As Kurgan put it, "We do casual games, mobile games, free-to-play games, and they do not." By the same token, Activision could help King expand its male gamer audience.

Previous acquisitions of technology companies by industry giants had yielded mixed results (see **Exhibit 16**). Zacconi wondered, what if Google had sold to Yahoo! before scaling AdWords? What if Facebook had sold to Google before realizing massive user growth? Indeed, the tech world was rife with examples of companies that had arguably sold too early, such as YouTube to Google or Instagram to Facebook, and those that sold just in time, such as Myspace to News Corporation or Tumblr to Yahoo! At its core, King was a creative company. Would ownership by a diversified gaming conglomerate like Activision provide air cover for King's energy and creativity, or stifle it? Zacconi owed Activision's CEO, Bobby Kotick, an answer soon. Whatever King's board decided, he thought, it had to satisfy one condition: Player was King.

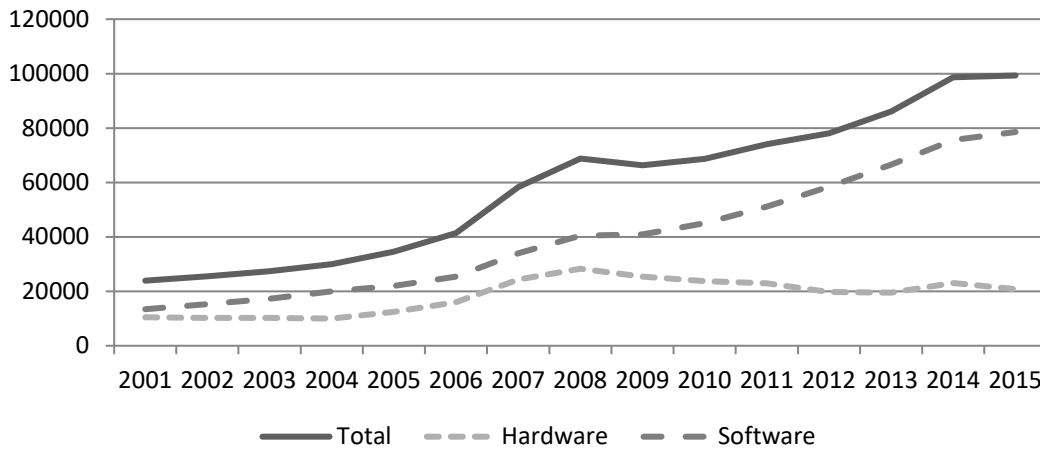
**Exhibit 1** The Electronic Games Market: Description and Evolution

a) Video Games Categories



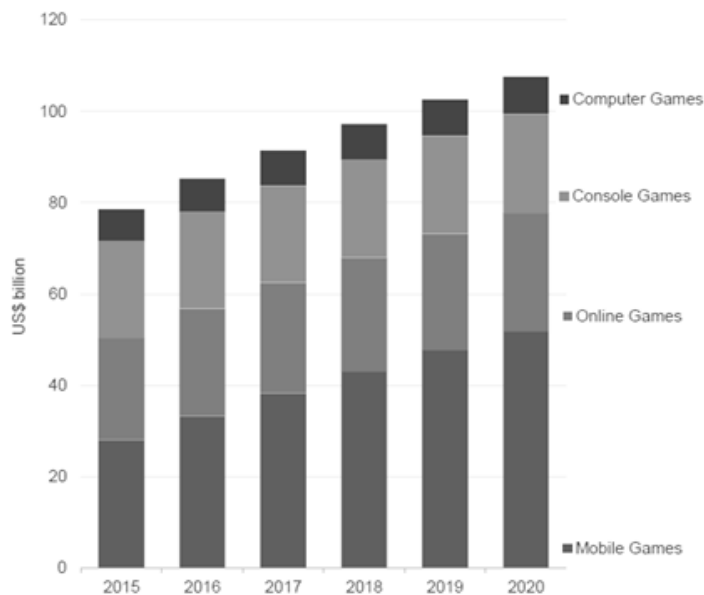
Source: Adapted by casewriters from “Toys and Games: Global Trends, Developments and Prospects,” Passport Report, August 2016, Euromonitor International, accessed December 2016.

b) Overview of the Video Games Industry, 2001–2015 (in \$ millions)



Source: Compiled by casewriters based on data from Passport GMID, Euromonitor International, accessed December 2016.

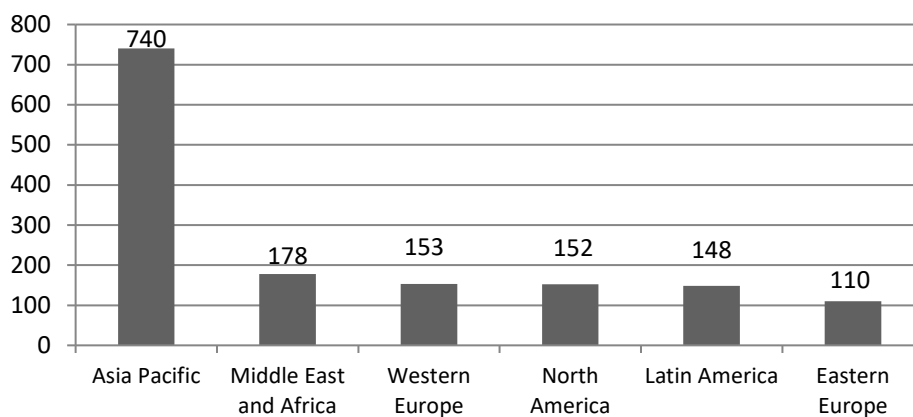
c) Estimates of Global Video Games Value Sales by Platform, 2015–2020 (in billions)



Source: Adapted by casewriters from “Toys and Games in 2016: Market Overview, Trends and What’s New in Passport,” Passport Report, September 2016, Euromonitor International, accessed December 2016.

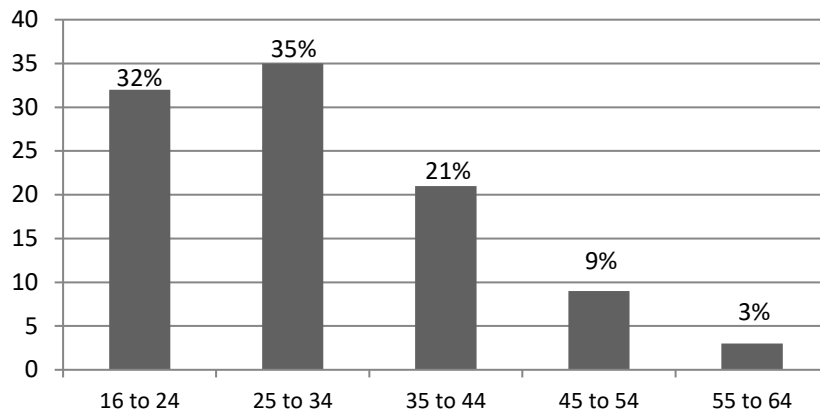
**Exhibit 2** Industry Statistics for Mobile Games

a) number of Mobile Game Players Worldwide in 2014, by Region (in millions)



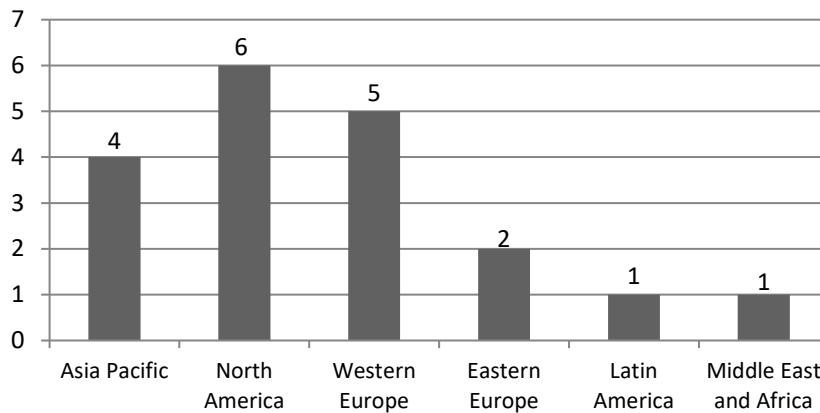
Source: Adapted by casewriters based on data from Statista Portal, <https://www.statista.com/>, accessed December 2016.

b) distribution of Mobile Gamers Worldwide, as of Second Quarter 2014, by Age



Source: Adapted by casewriters based on data from Statista Portal, <https://www.statista.com/>, accessed December 2016.

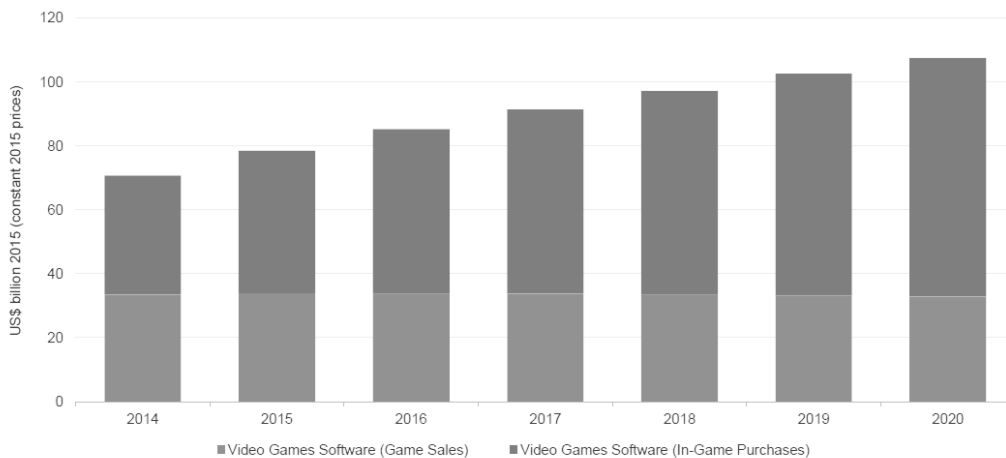
c) average Monthly Spending on Mobile Games per Capita Worldwide, as of June 2014, by Region (in dollars)



Source: Adapted by casewriters based on data from Statista Portal, <https://www.statista.com/>, accessed December 2016.

**Exhibit 3** Electronic Games Sales and In-Game Purchases

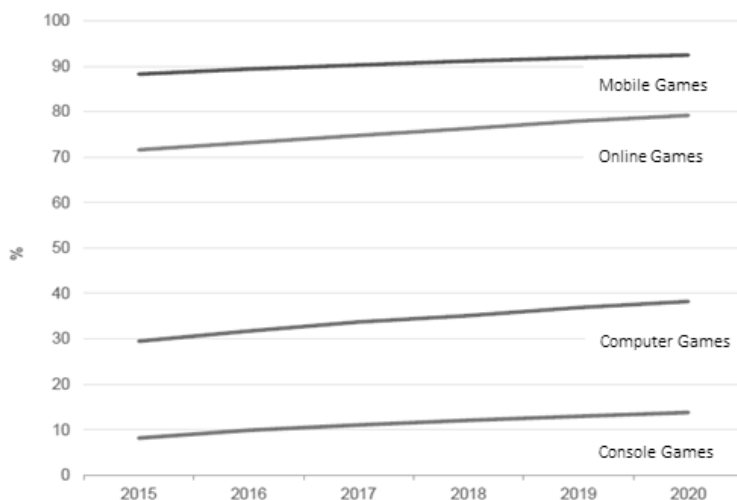
a) Global Video Games Software Value Sales: Game Sales and In-Game Purchases, 2014–2020 (in billions at constant 2015 prices)



Source: “Toys and Games in 2016: Market Overview, Trends and What’s New in Passport,” Passport Report, September 2016, Euromonitor International, accessed December 2016.

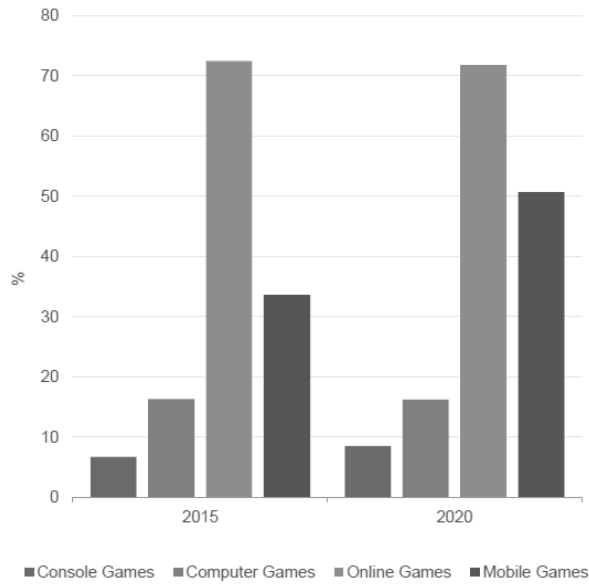
Note: Data from 2015 onward are estimates.

b) In-Game Purchases as a Percentage of Total Global Video Games Sales by Platform, 2015–2020



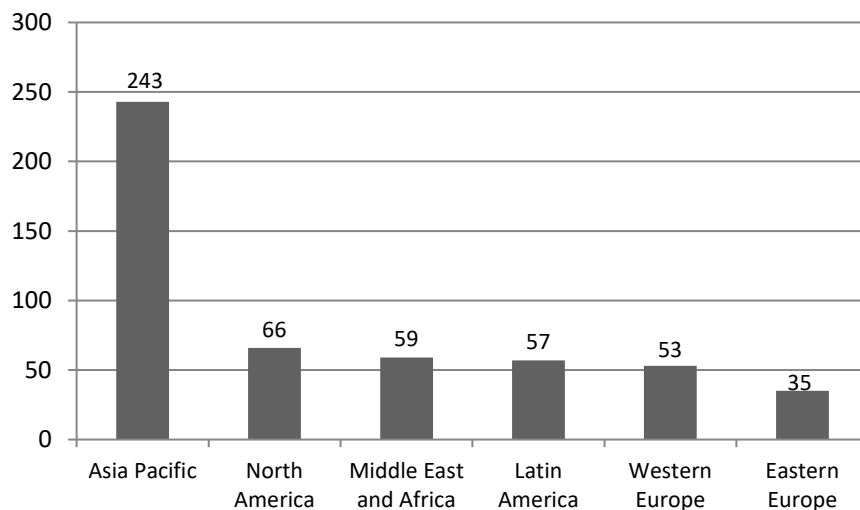
Source: Adapted by casewriters from “Toys and Games: Global Trends, Developments and Prospects,” Passport Report, August 2016, Euromonitor International, accessed December 2016.

**Exhibit 4** Share of Emerging Markets in the Global Total Sales of Video Games by Platform, 2015–2020



Source: "Toys and Games: Global Trends, Developments and Prospects," Passport Report, August 2016, Euromonitor International, accessed December 2016.

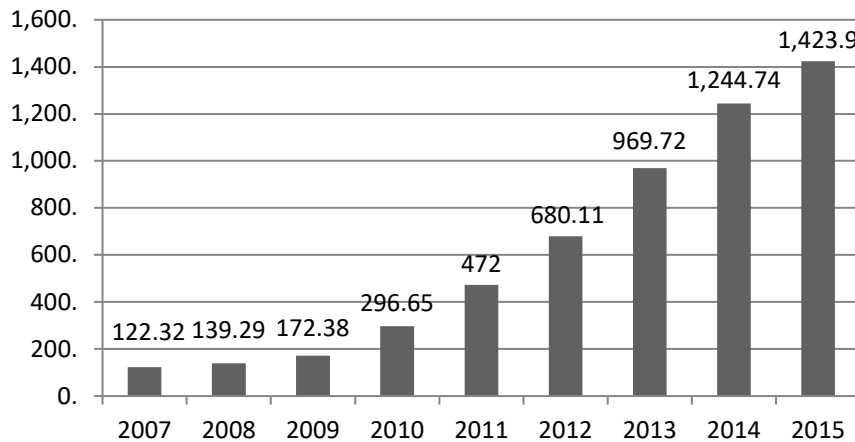
**Exhibit 5** Number of Paying Mobile Game Players Worldwide in 2014, by Region (in millions)



Source: Adapted by casewriters based on data from Statista Portal, <https://www.statista.com/>, accessed December 2016.

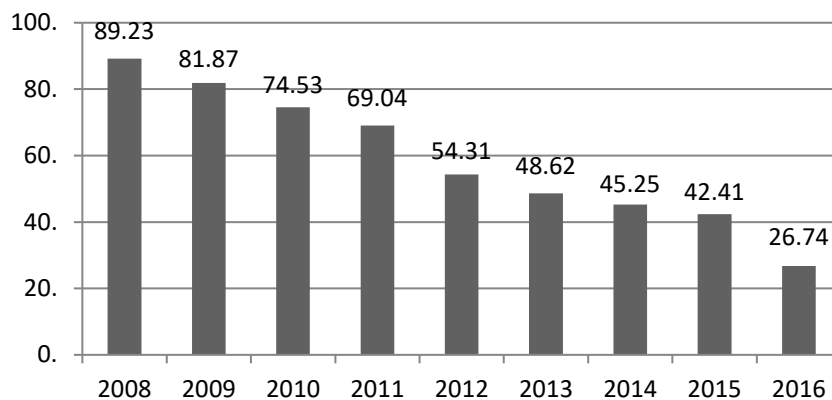
**Exhibit 6** Releases and Unit Sales of Smartphones, Tablet Devices, and Gaming Consoles

a) Unit Sales of Smartphones to End Users Worldwide, 2007–2015 (in millions)



Source: Adapted by casewriters based on data from Statista Portal, <https://www.statista.com/>, accessed December 2016.

b) Global Unit Sales of Current-Generation Video Game Consoles, 2008–2016 (in millions)



Source: Adapted by casewriters based on data from Statista Portal, <https://www.statista.com/>, accessed December 2016.

## c) Selected Releases of Smartphones, Tablet Devices, and Gaming Consoles, 2007–2015

Year	Product	Manufacturer	Category
2007	iPhone	Apple	Smartphone
2008	iPhone 3G	Apple	Smartphone
2008	Nintendo DSi	Nintendo	Hand-held console
2009	iPhone 3GS	Apple	Smartphone
2009	Nintendo DSi XL	Nintendo	Hand-held console
2009	PlayStation Portable (PSP) Go	Sony	Hand-held console
2009	PlayStation 3 Slim	Sony	Home console
2010	iPhone 4	Apple	Smartphone
2010	Samsung Nexus S	Google and Samsung	Smartphone
2010	Samsung Galaxy S	Samsung	Smartphone
2010	LG Optimus One	LG	Smartphone
2010	HTC Desire	HTC	Smartphone
2010	iPad	Apple	Tablet
2010	Galaxy Tab 7.0	Samsung	Tablet
2011	iPhone 4s	Apple	Smartphone
2011	Lumia 800	Nokia	Smartphone
2011	Samsung Galaxy S2	Samsung	Smartphone
2011	Nintendo 3DS	Nintendo	Hand-held console
2011	PlayStation Vita	Sony	Hand-held console
2011	iPad 2	Apple	Tablet
2011	Galaxy Tab 8.9	Samsung	Tablet
2012	iPhone 5	Apple	Smartphone
2012	Samsung Galaxy S3	Samsung	Smartphone
2012	Nokia Lumia 920	Microsoft	Smartphone
2012	HTC One S	HTC	Smartphone
2012	Nintendo 3DS XL	Nintendo	Hand-held console
2012	Wii U	Nintendo	Home console
2012	New iPad and iPad Mini	Apple	Tablet
2012	Microsoft Surface	Microsoft	Tablet
2012	Nexus 7	Google and Asus	Tablet
2013	iPhone 5s and iPhone 5c	Apple	Smartphone
2013	Samsung Galaxy S4	Samsung	Smartphone
2013	HTC One (M7)	HTC	Smartphone
2013	Google Nexus 5	Google and LG	Smartphone
2013	Nintendo 2DS	Nintendo	Hand-held console
2013	Xbox One	Microsoft	Home console
2013	PlayStation 4 (PS4)	Sony	Home console
2013	iPad Air and iPad Mini 2	Apple	Tablet
2013	Samsung Galaxy Tab 3	Samsung	Tablet
2014	iPhone 6 and iPhone 6 plus	Apple	Smartphone
2014	Samsung Galaxy S5	Samsung	Smartphone
2014	Nokia Lumia 930	Microsoft	Smartphone
2014	Sony Xperia Z3	Sony	Smartphone
2014	New Nintendo 3DS and 3DS XL	Nintendo	Hand-held console
2014	iPad Air 2 and iPad Mini 3	Apple	Tablet
2014	Samsung Galaxy Tab S	Samsung	Tablet
2015	iPhone 6s and iPhone 6s Plus	Apple	Smartphone
2015	Samsung Galaxy S6	Samsung	Smartphone

Source: Compiled by casewriters based on Jeff Desjardins, "The History and Evolution of the Video Games Market," Visual Capitalist, January 11, 2017, <http://www.visualcapitalist.com/history-video-games-market/>; Al Sacco, "iPhone Evolution, Release Timeline and Memorable Moments," CIO from IDG, September 11, 2013,



<http://www.cio.com/article/2369744/apple-phone/apple-phone-119363-iphone-evolution-timeline-and-notable-moments.html#slide1>; Ross Miller, "From Game Boy to the New 3DS XL, This is the Full History of Nintendo's Handheld Dominance," The Verge, August 29, 2014, <http://www.theverge.com/2014/8/29/6082561/nintendo-game-boy-3ds-xl-timeline>; "Timeline of Computer History—Graphics & Games," available at <http://www.computerhistory.org/timeline/graphics-games/>; Jacob Kastrenakes, "The iPad's 5th Anniversary: a Timeline of Apple's Category-Defining Tablet," The Verge, April 3, 2015, <http://www.theverge.com/2015/4/3/8339599/apple-ipad-five-years-old-timeline-photos-videos>; Philip Elmer-DeWitt, "Where are the smartphones of yesteryear?," Fortune, August 12, 2011, <http://tech.fortune.cnn.com/2011/08/12/where-are-the-smartphones-of-yesteryear/>; Matt Brian, "The 6 Best Smartphones Of 2012," The Next Web, December 23, 2012, <http://thenextweb.com/mobile/2012/12/23/the-6-best-smartphones-of-2012/>; Matthew Miller, "Top 10 smartphones of 2013: There's One that's best," ZDNet, December 11, 2013, <http://www.zdnet.com/article/top-10-smartphones-of-2013-theres-one-thats-best/>; Ben Woods, "11 of the best smartphones that launched in 2014," The Next Web, December 30, 2014, <http://thenextweb.com/gadgets/2014/12/30/11-best-smartphones-launched-2014/>, accessed January 2017.

**Exhibit 7** Overview of Key Players in the Video Games Industry, 2015 (in billions)

Company Name	Headquarters	Revenue
Microsoft Corporation	Redmond, WA, U.S.	93.6
Sony Corporation	Tokyo, Japan	72.1
Tencent Holdings Limited	Shenzhen, China	15.8
BANDAI NAMCO Holdings Inc.	Tokyo, Japan	5.1
Activision Blizzard Inc.	Santa Monica, CA, U.S.	4.7
Nintendo Co. Ltd.	Kyoto, Japan	4.5
Electronic Arts Inc.	Redwood City, CA, U.S.	4.4
Supercell Oy	Helsinki, Finland	2.2
King Digital Entertainment plc.	Dublin, Ireland	2
Ubisoft Entertainment SA	Montreuil, France	1.6
GunHo Online Entertainment Inc.	Tokyo, Japan	1.3
DeNA Co. Ltd.	Tokyo, Japan	1.3
GREE Inc.	Tokyo, Japan	0.8
Zynga Inc.	San Francisco, CA, U.S.	0.8

Source: Compiled by casewriters based on data from Capital IQ, Inc., a division of Standard & Poor's, accessed January 2017.

Note: Fiscal year ended March 31, 2016, for Sony Corporation, Nintendo Co. Ltd.; Electronic Arts Inc.; BANDAI NAMCO Holdings Inc.; Ubisoft Entertainment SA; DeNA Co. Ltd. Fiscal year ended December 31, 2015, for Tencent Holding Ltd.; Activision Blizzard Inc.; King Digital Entertainment plc; GunHo Online Entertainment Inc.; Zynga Inc. Fiscal year ended June 30, 2015, for Microsoft Corporation; GREE Inc. Fiscal year ended December 1, 2015, for Supercell Oy.

## Exhibit 8 Biographies of King's Senior Management

Name and Title	Biography
Riccardo Zacconi, <i>Co-Founder and Chief Executive Officer</i>	Born in 1967, Zacconi cofounded King in 2003 and served as CEO and in its Board of Directors since then. Previously, Zacconi was vice president of European Sales and Marketing at the online dating service uDate.com Ltd., and was involved in driving market penetration and partnerships until the company was acquired by InterActive Corporation in 2002. From 2001 to 2002, Zacconi served as entrepreneur in residence at the venture capital firm Benchmark Capital Partners; while from 1999 he was managing director for Spray Network, an online messaging portal based in Hamburg, Germany, with a presence also in France, Italy, Sweden, Denmark and Norway, until its sale in 2000. Prior to 1999, Zacconi held various investment and consulting positions of increasing responsibility with The Boston Consulting Group and LEK Consulting, both of which are management consulting firms. Zacconi held a B.A. degree in Economics from LUISS University, Italy. <sup>17</sup>
Sebastian Knutsson, <i>Co-Founder and Chief Creative Officer</i>	Knutsson was one of King's founders and served on its Board of Directors since October 2003, as Chief Creative Officer since June 2004 and as executive product developer from February 2003 to June 2004. With more than 18 years of experience in the online and mobile industries, Knutsson led the product strategy, games development, and service offerings for King, for which he had designed more than 100 games. Previously, Knutsson served as the founder and chief creative officer of Fjord Network AB, a developer of IP-telephone services. Before that, he was co-founder of Spray Ventures AB, which seeded many successful Internet startups within Internet consultancy, consumer Internet services and e-commerce, and also served in various product development positions at Lycos Europe, N.V., Spray Network AB and Razorfish, Inc. Knutsson held a B.A. in Cost Analysis and Finance from Stockholm School of Economics, Sweden. <sup>18</sup>
Thomas Hartwig, <i>Co-Founder and Chief Technology Officer</i>	Hartwig was one of King's founders and served as its CTO since September 2011, after eight years as vice president of engineering. He was responsible for overall technology decisions, as well as engineering, operations and information technology. Previously, Hartwig worked as a partner and developer at Fjord Network AB after two years at Spray Network Services as chief system architect. Before that, he was a system developer at Razorfish Inc. and Seema Group. Hartwig studied Computer Science at Lund University, Sweden. <sup>19</sup>
Lars Markgren, <i>Co-Founder and Managing Director at Midasplayer AB</i>	Markgren was one of King's founders and served since 2004 as Managing Director at Midasplayer AB, King's Candy Crush Studio. From 1998 to 2001 he had served as Chief Technology Officer at Spray Network Services. Markgren held a Master of Science in Structural Engineering from the KTH Royal Institute of Technology, Sweden. <sup>20</sup>
Patrik Stymne, <i>Co-Founder and Chief System Architect</i>	One of King's founders, Stymne served since 2003 as its Chief System Architect. He had cofounded in 2001 Fjord Network AB, after serving for one year at Lycos Europe as systems architect. From 1998 to 2000, Stymne had worked as system architect at Spray Network Europe and Razorfish. Before that, he had worked at Spray Ventures, which he had cofounded in 1995. Stymne had studied Electronics at the KTH Royal Institute of Technology, Sweden. <sup>21</sup>
Stephane Kurgan, <i>Chief Operating Officer</i>	Kurgan served as King's COO since April 2011 and was part of its Board of Directors since April 2012. Prior to joining King, Kurgan served as the CFO at Tideway Systems Ltd., a data center management software company, and as senior vice president and managing director of Enba plc, a company which provided financial services via the Internet. Kurgan held various sales and product management roles at the business information publisher Bureau van Dijk Electronic Publishing BV and was a consultant with the management consulting firm McKinsey & Company. Kurgan holds a B.A. in

Name and Title	Biography
<p>Tjodolf Sommestad, <i>Senior Vice President for the Candy Crush franchise</i></p>	<p>Economics from the Université Libre de Bruxelles, Belgium, a Diploma in International Relations from Johns Hopkins University SAIS School, Italy, and an M.B.A. from INSEAD, France.<sup>22</sup></p> <p>Sommestad was King's senior vice president for the Candy Crush franchise since August 2014. Previously, he served at King as vice president for Competitive Games from October 2012 to July 2014, and as vice president for Skillgames from August 2011 to October 2012. Before joining King, Sommestad worked as a consultant at the Swedish supplier of Microsoft-based solutions Precio, and at the Jadestone Group, a developer of fully managed online game solutions, as product manager for Casino and Skillgames from October 2009 to May 2011, as Head of Operations from January 2007 to November 2009, as product manager for E-Sport Games from June 2005 to January 2007 and as producer of games from June 2003 to June 2005. Sommestad holds a Master of Science in Computer from the KTH Royal Institute of Technology, Sweden.<sup>23</sup></p>
<p>Alex Dale, <i>Chief Marketing Officer</i></p>	<p>Dale served as King's Chief Marketing Officer since September 2011. He had extensive marketing experience in technology companies. Dale joined King from Microsoft, where he was director of consumer marketing, advertising sales and general management for Western European online business. Prior to Microsoft, he was the founder and managing director of broadband Internet Service Provider (ISP) and portal, virgin.net. Part of the Virgin Group of companies, the virgin.net service was sold to NTL Cable in 2004. Dale received a B.A. in History from Oxford University, U.K., and an M.B.A from Imperial College London, U.K.<sup>24</sup></p>
<p>Robert Miller, <i>Chief Legal Officer</i></p>	<p>Miller served as King's Chief Legal Officer and Corporate Secretary since August 2012. Prior to joining King, Miller served as head of legal for the international operations of the online marketplace LivingSocial, Inc.; as vice president and general counsel at the chat and voice call application Skype S.a.r.l.; as senior director of legal and government affairs at the online marketplace eBay U.K. Ltd.; and as corporate counsel at the British multinational telecommunications services company British Telecommunications plc. Miller holds a B.A. in Economics from the University of Manchester, England, and qualified from the City Law School, London, England. He has also completed the International Executive Programme in General Business Management at INSEAD, France.<sup>25</sup></p>
<p>Hope Cochran, <i>Chief Financial Officer</i></p>	<p>King's CFO since September 2013, from 2005 to 2013, Cochran served at Clearwire Corporation, a company active in the wireless industry, in several positions, including Chief Financial Officer, Senior Vice President, Finance and Treasurer, until it was acquired by Sprint Nextel Corporation. From 2003 to 2005, Cochran served as the CFO of Evant Incorporated, a planning and logistics software developer. From 2001 to 2003, he was the Controller of the Americas - Sales Operations for PeopleSoft, Inc. (software products now marketed by Oracle). Before 2001, Cochran was the founder and CFO of SkillsVillage, a contractor supply chain management software provider, until she sold it to PeopleSoft, Inc. Cochran began her career as an auditor at Deloitte&amp;Touche and she received a number of awards over the years. Cochran holds a B.A. in Economics and Music from Stanford University, San Francisco, United States.<sup>26</sup></p>

Source: Compiled by casewriters based on public sources.

**Exhibit 9** Selective Overview of King Digital Entertainment’s Games

Game Title	Launch Year	Description
Bubble Witch Saga	Tournament: Q4 2010 Facebook: Q3 2011 Mobile: Q3 2012	Players achieve top scores by creating groups of three or more magical bubbles and blasting them in specified move limits. For every shot that makes a bubble crackle and burst, players earn new spiders at the bottom of the screen and receive higher points by making the bubbles fall into more valuable cauldrons.
Pyramid Solitaire Saga	Tournament: NA Facebook: Q2 2012 Mobile: Q3 2014	Based on the adventures of aviator Helena Lightfoot and her helper Kingsley as they explore ancient Egypt, the game’s goal is to clear a deck of cards and catch the scarabs, while collecting points or clearing a certain number of cards in a row. The treasure hunting storyline behind the game offers exotic graphics that immerse players in the wonders of ancient Egyptian culture, such as The Hidden Tomb, the Garden of Osiris, and the Depth of Nautilus.
Candy Crush Saga	Tournament: Q1 2011 Facebook: Q2 2012 Mobile: Q4 2012	It is a switcher game in which players match candies in combinations of three or more to win points and defeat obstacles. Players progress through a colorful candy world with over 500 levels, each offering a different puzzle challenge. In December 2013, Candy Crush Saga was expanded to include “Dreamworld,” a parallel world of levels with a magical twist available to players who have reached level 50.
Pet Rescue Saga	Tournament: Q3 2009 Facebook: Q4 2012 Mobile: Q2 2013	It’s a clicker game in which players click on groups of similarly colored blocks in order to clear them from the screen. The game offers over 440 levels of play in an animal-themed adventure where players have to rescue a range of cute pets from the evil Snatchers. The aim is to clear enough blocks to guide pets to safety at the bottom of the screen while also achieving the minimum score required. The game also offers additional challenges in the form of caged pets, stony floors that require a key to unlock and diamonds that can only be removed by landing them on a stony floor.
Papa Pear Saga	Tournament: Q2 2012 Facebook: Q2 2013 Mobile: Q4 2013	It is based on a colorful fantasy world. Players shoot Papa Pear out of a cannon at the top of the screen and are challenged to skillfully fire Papa Pear shots into a selection of barrels, while evading a tricky maze of obstacles. Making each Papa Pear shot count is vital as players are challenged to hit as many objects as they can throughout the course of each level to generate further points within the game.
Farm Heroes Saga	Tournament: Q4 2010 Facebook: Q2 2013 Mobile: Q1 2014	Farm Heroes Saga is a switcher game that focuses on a collection mechanic. The game is set in a fantasy farmland world and requires players to collect different farm elements such as carrots, apples, beetroots and water by matching at least three in a row. To progress, players need to collect sufficient quantities of each element within a limited number of moves. Once a player has collected enough of each element, the game goes into “Hero Mode,” enabling the player to boost his or her score through careful use of the remaining moves.
Pepper Panic Saga	Tournament: Q3 2012 Facebook: Q4 2013 Mobile: NA	Pepper Panic Saga follows 'Pepper Puppy', a dog who craves spicy chillies and explosions, as he journeys from Pepperfield Place to Squawker's Island. Like other 'saga' games, players have to match objects to set of chain reactions, and get through each level as fast as possible.
Diamond Digger Saga	Tournament: NA Facebook: Q2 2014	Diamond Digger Saga is a clicker game where players blast, dig and explore their way through the glistening lands of Diamond Dale, Turquoise Meringue and other fantastical locations while uncovering special treasures and clearing away groups of three or more jewels to reach the target score. Players are tasked with clearing a path to allow for the water to flow freely to its destination, sending

Game Title	Launch Year	Description
	Mobile: Q3 2014	them through portals to interconnected rooms, each with its own wondrous task for discovering new gems and advancing to the next level.
Bubble Witch 2 Saga	Tournament: NA Facebook: Q2 2014 Mobile: Q2 2014	Bubble Witch 2 Saga is a bubble shooter game presenting the next chapter to Bubble Witch Saga. Enhancements include, among others, an appealing and whimsical storyline, upgraded bewitching characters, dynamic visuals, and new episodic adventures.
Candy Crush Soda Saga	Tournament: NA Facebook: Q4 2014 Mobile: Q4 2014	The next iteration in the Candy Crush franchise, it was designed to be played alongside the original game. The game introduces new graphics and features including game modes, candy combinations, and gameplay mechanics. It features the same Saga framework used in the original, where players progress through new levels and episodes on the Saga map and can experience various social layers when connected via Facebook.
Alpha Betty Saga	Tournament: NA Facebook: NA Mobile: Q2 2015	The game sets players off on a bold new quest as Betty, a young mouse living in the 1930s, follows her grandfather, Professor Alpha, and his loyal assistant, Barney, to discover lost words to complete the "Encyclopedia of Everything". As the world's authority on collecting words, Professor Alpha will call on players to help him complete the legendary book. This word-based game uses non-linear gameplay to enhance creative word play and strategic opportunities for players as they are tasked with connecting adjacent letters to create words, score points and ultimately advance through the fantasy world.
Paradise Bay	Tournament: NA Facebook: NA Mobile: Q3 2015	Paradise Bay begins as players arrive on the island in a quest to transform their new home into a thriving port and market. They will journey through lands of crystal clear waters and the bluest of skies, collecting long-lost map pieces and selling their wares to players from around the world. They will also discover new islands where they can find great deals, unique gifts and surprises and trade with the characters they meet. New trade routes will open up and new relationships will blossom, creating a world of endless discovery and possibility.
Blossom Blast Saga	Tournament: NA Facebook: NA Mobile: Q4 2015	Blossom Blast Saga sets players off on a new King adventure with Blossom, a curious and adventurous bee, who loves to collect and grow unique flowers, on a journey beyond her home to beautiful gardens in the sky. With each flower she blooms, she earns and collects to power her journey further into this magical world. Players must help this busy little bee make the buds bloom and clear the flowerbeds before running out of moves. By linking three or more adjacent flowers of the same color, players can create a chain which in turn helps clear the board. The more chains the players make, the more flowers will bloom, setting off an epic chain reaction that boosts their scores.

Source: Company data.

**Exhibit 10** Overview of Selected Game Types

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<b>Game Genre</b>	<b>Definition</b>
Casual	A game that can be played in short sessions and does not require specific skills or long-term commitment. Casual games can belong to any genre, such as card games and strategy games.
Match-three	Also called Match 3, it is a subcategory of tile-matching games. The player is required to make tiles disappear by manipulating them to create matches of three.
Switcher	A switcher game is a game where gameplay requires the player to change the position of objects by moving them into the place of a nearby object, thus switching their positions.
Clicker	A game where gameplay requires the player to perform the action of clicking.
Shooter	A game where gameplay requires the player to perform the action of pointing and shooting.
Card	A game that uses playing cards as the basic device with which the game is played.
Strategy	A game where gameplay requires the player to apply strategic thinking and planning to achieve the game's goals.

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Source: Casewriters.

## Exhibit 11 Key Financial and Operating Data of King Digital Entertainment

## (a) Key Financial Metrics, 2011-2015 (in \$ millions)

	2011	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015
Revenue	64	22	32	41	70	206	455	621	602	607	594	514	546	570	490	480	461
Gross Bookings	78	29	38	43	71	219	481	648	632	641	611	544	586	604	529	502	509
Non-Candy Bookings	--	--	NA	NA	NA	NA	NA	NA	137	211	250	264	324	375	NA	NA	NA
	--	--	NA	NA	NA	NA	NA	NA	(22%)	(33%)	(41%)	(49%)	(55%)	(62%)	NA	NA	NA
<b>Cost and expenses</b>																	
Cost of revenue	26	9	11	13	21	64	142	189	189	196	183	163	175	179	158	149	151
R&D	12	4	5	6	13	22	29	11	49	47	40	42	49	51	50	45	53
Sales and marketing General and administrative	18	6	14	12	22	48	113	110	106	129	118	101	108	95	89	89	71
and administrative	8	2	3	4	5	7	16	23	51	73	37	39	37	40	40	42	56
Total costs and expenses	65	22	33	36	62	140	300	333	395	445	378	345	368	364	337	325	332
Total revenue less expenses	(0.7)	(0.5)	(2)	5	8	66	155	288	207	161	216	169	187	206	160	158	131
Net finance income (costs)	0.05	0.008	0.021	0.012	0.011	0.003	0.007	(1.8)	0.054	(0.27)	(0.26)	(0.18)	(0.196)	(0.22)	(0.17)	(0.27)	0.20
Profit (loss) before tax	(0.70)	(0.45)	(1.49)	5	8	66	155	287	207	161	216	187	204	211	160	174	131
Tax expense	0.62	0.26	0.49	0.97	2	13	29	57	48	34	50	46	63	47	40	31	41
Profit (loss) Full time Employees	(1.32)	0.7	(2)	4	6	53	126	230	159	127	165	142	141	164	119	143	91
	144	NA	NA	NA	338	NA	NA	NA	665	NA	NA	NA	1200	NA	NA	NA	2000

## (b) Key Operating Metrics, 2012-2015 (in millions)

	Q1 2012	Q2 2012	Q3 2012	Q4 2012	Q1 2013	Q2 2013	Q3 2013	Q4 2013	Q1 2014	Q2 2014	Q3 2014	Q4 2014	Q1 2015	Q2 2015	Q3 2015	Q4 2015
Avg DAUs	7	11	12	15	36	76	109	124	143	138	137	149	158	142	133	128
Avg MAUs	30	49	52	67	138	265	361	408	481	485	495	533	550	501	474	449
Avg MUUs	20	28	31	43	101	194	269	304	352	345	348	356	364	340	330	318
Avg MUPs	0.41	0.67	0.85	1.32	4.1	10.34	13.01	12.17	11.86	10.42	8.67	8.34	8.52	7.59	6.84	6.58
MGABPPU	23.65	18.58	16.96	17.64	15.92	15.51	16.60	17.32	18.02	19.54	20.92	23.42	23.64	23.26	24.45	25.76
GABPU	0.044	0.036	0.040	0.052	0.067	0.069	0.065	0.056	0.050	0.049	0.044	0.044	0.043	0.041	0.042	0.043

Source: King Digital Entertainment, "IPO Prospectus," February 18, 2014, available at U.S. Securities and Exchange Commission (SEC), <https://www.sec.gov/Archives/edgar/data/1580732/000119312514056089/d564433df1.htm>, accessed December 2016; and Wedbush Equity Research, "King Digital Entertainment: King Slows the Pace of Bookings Bleeding as It Approaches Acquisition; Downgrading to NEUTRAL as Shares Trade Near Deal Price, Maintaining \$18 PT," November 5, 2015, via Thomson ONE Banker, accessed September 2016.

Notes: King defined Gross Bookings in the following way: "Gross bookings is a non-GAAP financial measure that is not calculated in accordance with IFRS. Gross bookings is equal to the total amount paid by our users for virtual items and for access to skill tournaments. In these periods, gross bookings included amounts paid for advertising space, which have become immaterial in recent periods. We use gross bookings to evaluate the results of our operations, generate future operating plans and assess our performance. We believe that this non-GAAP financial measure provides a meaningful measurement of our business performance during a particular period because it measures the total cash spend by our players in the period."

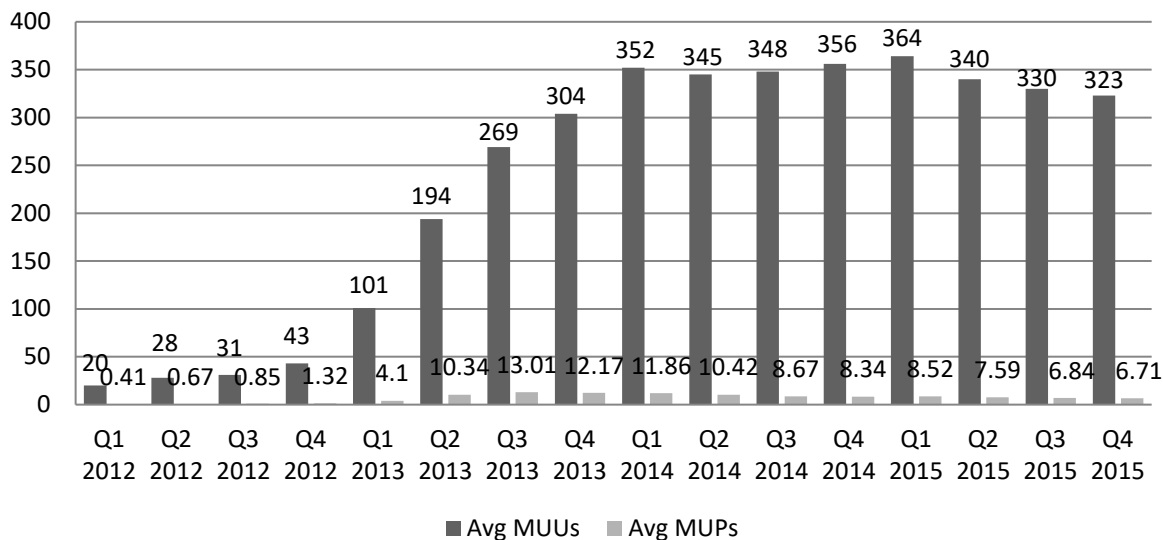
For the operating metrics, averages are on quarterly data. Daily Active Users (DAUs) measures the number of individuals who played one of King's games during a particular day. Monthly Active Users (MAUs) measures the number of individuals who played a particular game in the 30-day period ending with the measurement date. Monthly Unique Users (MUUs) measures the number of unique individuals who played any of King's games on a particular platform in the 30-day period ending with the measurement date. Monthly Unique Payers (MUPs) measures the number of unique individuals who made a purchase of a virtual item at least once on a particular platform in the 30-day period ending with the measurement date. Average MUPs for periods prior to April 2013 exclude Google's Android payers due to technological limitations.

MGABPPU measures the overall monetization across King's network on a monthly basis and is calculated by dividing (1) King's total gross bookings in a given period by (2) the number of months in that period, divided by (3) the average number of MUPs during the period. GABPU measures the overall monetization across King's network on a daily basis and is calculated by dividing (1) King's total gross bookings in a given period by (2) the number of days in that period, divided by (3) the average number of DAUs during the period. King believes that GABPU provides useful information to understand the company's results given that it quantifies the daily monetization levels of its users.

In the "active user" metrics, an individual who plays either two of the company's games on a single platform or device, or the same game on two platforms or devices in the relevant period, would be counted as two users. For the calculation of unique user metrics, King does not de-duplicate user data: a user who plays the company's games on multiple platforms or devices in the relevant period will be counted as a unique user for each platform or device on which the user played during the period. However, due to certain technological limitations, a user who plays on more than one platform or device will likely be counted more than once as a unique user.



**Exhibit 12** Comparison between King Digital Entertainment’s Monthly Unique Users (MUUs) and Monthly Unique Payers (MUPs) Worldwide, 2012–2013 (in millions)

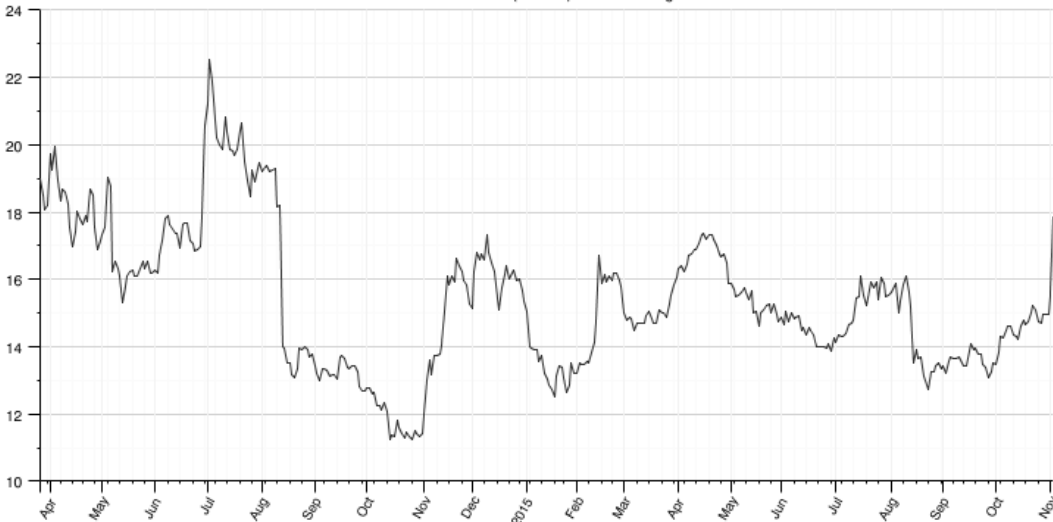


Source: Compiled by casewriters based on company data.

Notes: Monthly Unique Users (MUUs) measures the number of unique individuals who played any of King’s games on a particular platform in the 30-day period ending with the measurement date.

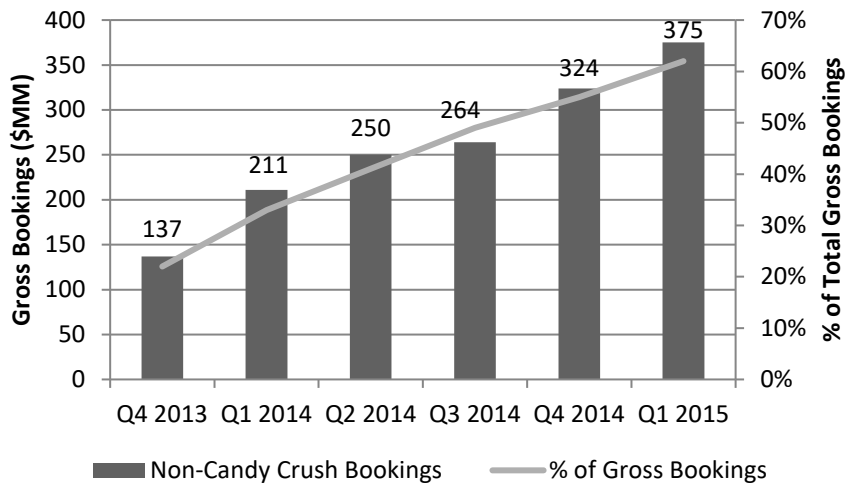
Monthly Unique Payers (MUPs) measures the number of unique individuals who made a purchase of a virtual item at least once on a particular platform in the 30-day period ending with the measurement date. Average MUPs for periods before April 2013 exclude Google’s Android payers due to technological limitations.

**Exhibit 13** King Digital Entertainment’s Stock Price Performance, New York Stock Exchange, 2014–2015 (in \$)



Source: Capital IQ, Inc., a division of Standard & Poor’s, accessed November 2016.

**Exhibit 14** Non-Candy Crush Saga Gross Bookings



Source: Compiled by casewriters based on company data.

Note: Non-Candy Crush Saga Gross Bookings represents total gross bookings (including Candy Crush Soda Saga) less gross bookings from Candy Crush Saga.

**Exhibit 15** Company Information and Key Financial Data on Activision Blizzard Inc., as of December 31, 2015

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**Company Information**

Activision Blizzard Inc. was a developer and publisher of online, PC, video game console, handheld, mobile and tablet games, headquartered in California. The company was the result of the 2008 merger between Activision Inc., and a few subsidiaries of the French mass media conglomerate Vivendi S.A. (“Vivendi”). As a result of the operation, Activision Inc. was renamed Activision Blizzard Inc. and Vivendi became a majority shareholder of the company, which was traded on the NASDAQ Stock Exchange. On May 28, 2014, Vivendi sold approximately 50% of its then-current holdings of Activision Blizzard common stock in a registered public offering, receiving proceeds of approximately \$850 million from the sale. Activision had four operating units:

- Activision Publishing Inc. developed, distributed, and published “interactive software products and content for a broad range of gamers, ranging from children to adults, and from core gamers to mass-market consumers to ‘value’ buyers seeking budget-priced software, in a variety of geographies.” Its games operated on gaming consoles, PCs, mobile and tablet devices, and were sold through both retail and digital online channels. Its franchises included Call of Duty®, Skylanders® and Destiny®.
- Blizzard Entertainment Inc. developed, marketed and sold role-playing action and strategy games for the PC, console, mobile and tablet platforms, such as Diablo®, StarCraft®, and the Hearthstone®: Heroes of Warcraft™ and Heroes of the Storm™ franchises. Blizzard was also “leader in online PC gaming, including the subscription-based massively multi-player online role-playing game (“MMORPG”) category in terms of both subscriber base and revenues generated through its World of Warcraft® franchise.” Blizzard maintained a proprietary online gaming service, Battle.net®, which “facilitates the creation of user-generated content, digital distribution and online social connectivity across all Blizzard games.” Blizzard distributed its products and generated revenues worldwide through various means, including: “subscriptions; sales of prepaid subscription cards; in-game purchases and services; retail sales of physical ‘boxed’ products; online download sales of PC products; purchases and downloads via third-party console, mobile and tablet platforms; and licensing of software to third-party or related party companies that distribute Blizzard products.”
- Media Networks was devoted to “broadcasting professionally produced eSports competitions around the world, celebrating players and highlighting their successes.”
- Activision Blizzard Studios was devoted to create “original film and television content based on the company’s extensive library of iconic and globally-recognized intellectual properties.”

Moreover, the Activision Blizzard Distribution business consisted of “operations in Europe that provide warehousing, logistical, and sales distribution services to third-party publishers of interactive entertainment software, our own publishing operations, and manufacturers of interactive entertainment hardware.”

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**Financial performance of Activision Blizzard, 2010–2015 (in millions)**

	2010	2011	2012	2013	2014	2015
Total Revenue	4,447	4,755	4,856	4,583	4,408	4,664
Gross Profit	2,312	2,983	3,194	3,052	2,883	3,079
EBITDA	996	1,514	1,571	1,559	1,286	1,419
EBIT	798	1,366	1,451	1,451	1,196	1,324
Net Income	418	1,085	1,149	1,010	835	892
Full-time Employees	7,600	7,300	6,700	6,790	6,690	7,190

Source: Compiled by casewriters based on data from public sources, and from Capital IQ, Inc., a division of Standard & Poor’s, accessed December 2016; all quotes come from Activision Blizzard, “Activision Blizzard—Our Company—About us,” <http://www.activisionblizzard.com/about-us>, accessed September 2016; and Activision Blizzard, 2015 Annual Report, [http://files.shareholder.com/downloads/ACTI/2846409547x0x887600/BE853918-329D-4E90-ABDC-E669E9D097B9/Activision\\_Blizzard\\_2015\\_Annual\\_Report.pdf](http://files.shareholder.com/downloads/ACTI/2846409547x0x887600/BE853918-329D-4E90-ABDC-E669E9D097B9/Activision_Blizzard_2015_Annual_Report.pdf), accessed December 2016.

**Exhibit 16** Selected Examples of Acquisitions

a) selected Examples, 2002–2013 (in billions)

Year	Buyer	Target	Price	Outcome	Value Target Company in 2015
2002	Yahoo!	Google	3.00	Rejected	528.45
2005	News Corporation	Myspace	0.58	Completed	NA
2006	Google	YouTube	1.65	Completed	70.00
2007	Google	Facebook	15.00	Rejected	295.98
2011	Specific Media Group	Myspace	0.04	Completed	NA
2012	Facebook	Instagram	1.00	Completed	37.00
2013	Yahoo!	Tumblr	1.10	Completed	0.35
2013	Facebook	Snapchat	3.00	Rejected	19.00

Source: Compiled by casewriters based on Nicholas Carlson and Harrison Jacobs, "The 10 Companies That Tried to Buy Facebook," Business Insider France, April 12, 2014, <http://www.businessinsider.fr/us/the-10-companies-that-tried-to-buy-facebook-2014-3/>; Michael Arrington, "Google Closes YouTube Acquisition," TechCrunch, November 13, 2006, <https://techcrunch.com/2006/11/13/google-closes-youtube-acquisition/>; Julie Verhage, "A Bank of America Analysis Says YouTube is Worth More than 85 Percent of Companies in the S&P 500," Bloomberg, May 27, 2015, <https://www.bloomberg.com/news/articles/2015-05-27/a-bank-of-america-analysis-says-youtube-is-worth-more-than-85-percent-of-companies-in-the-s-p-500>; Maya Kosoff, "Here's how Two Analysts Think Instagram Could Be Worth Up to \$37 Billion," Business Insider France, March 16, 2015, <http://www.businessinsider.fr/us/instagram-valuation-2015-3/>; Andrew Nusca, "Myspace Acquired by Time Inc, Fortune's Publisher," Fortune, February 11, 2016, <http://fortune.com/2016/02/11/myspace-acquired-time-inc/>; Chris Isidore, "Yahoo Buys Tumblr, Promises to Not 'Screw It Up,'" CNN Tech, May 20, 2013, <http://money.cnn.com/2013/05/20/technology/yahoo-buys-tumblr/>; Saqib Shah, "Tumblr's Slow Evolution Forces Yahoo to Write down Value by Two-Thirds," Digital Trends, July 18, 2016, <http://www.digitaltrends.com/social-media/tumblr-yahoo-devaluation/>; "Yahoo! has Tumbled the Market Valuation of Tumblr to One Third," Dazeinfo, July 19, 2016, <https://dazeinfo.com/2016/07/19/yahoo-revenue-q2-2016-tumblr-valuation/>; Andrew Nusca, "Why Snapchat is worth \$19 billion (or more)," Fortune, April 25, 2015, <http://fortune.com/2015/02/19/snapchat-worth-19-billion-more/>, accessed January 2017.

Note: Figures are rounded; "Value Target Company" refers to the market capitalization as of December 31, 2015, for listed companies, and to the market value as estimated by analysts in 2015 for the unlisted ones.

## b) selected Technology-Sector Acquisitions

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**Yahoo! and Google**

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Launched in 1994, the multinational technology company Yahoo! had once been "the King of the internet,"<sup>27</sup> with a market valuation that peaked at \$125 billion in 2000.<sup>28</sup> In 1998, Larry Page and Sergey Brin, Google's co-founders, had tried to sell to Yahoo! their PageRank system for \$1 million, the algorithm behind the search engine Google.<sup>29</sup> Yahoo! refused the offer; Google search engine aimed to give people fast answers by sending them to the most relevant website, while Yahoo! directories were "designed both to answer questions and to keep people on the Yahoo site, where they could shop, view ads, check their email, play games, and spend more money and time, rather than less."<sup>30</sup> Yahoo! offered to buy Google for \$3 billion in 2002, when Google's revenue was \$240 million while Yahoo!'s was about \$837 million,<sup>31</sup> but Page and Brin refused the offer.

While in 2004 Google's IPO was considered a "disappointment,"<sup>32</sup> in 2015 Google's stock price was up more than 1,500% from its offering price of \$85, on a split-adjusted basis. Google's market capitalization amounted to more than \$460 billion, making the company the second biggest in the world after Apple.<sup>33</sup> In October 2015, when its market cap reached \$29.5 billion,<sup>34</sup> Yahoo! signed a deal with Google to provide some ads and search features for Yahoo!'s search results.<sup>35</sup>

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**Google and YouTube**

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In October 2006, the multinational technology company Google announced that it would buy the video-sharing website YouTube for \$1.65 billion.<sup>36</sup> Founded in 2005, at the time of the acquisition YouTube had been defined as "one of the world's fastest-growing websites,"<sup>37</sup> with an estimated 50 million users worldwide.<sup>38</sup> However, YouTube incurred significant costs to store and deliver the 65,000 videos that users uploaded every day,<sup>39</sup> and it was facing serious legal issues as many clips violated copyright law.<sup>40</sup> While Google's growing server farms could store information more cheaply, its resources could help YouTube to deal with copyright infringement.<sup>41</sup> Moreover, YouTube could have access to the large network of advertisers that Google possessed.<sup>42</sup>

While analysts believed that Google had "overpaid,"<sup>43</sup> the deal had beaten out other YouTube suitors, including Yahoo! and Microsoft.<sup>44</sup> Google's clip-sharing website "Google Videos," had not proved as successful as YouTube; the deal allowed Google to incorporate a direct competitor and eliminate competition in the video realm, a source of ad revenues.<sup>45</sup> For example, some analysts argued that, without this acquisition, the social network Facebook could have been able to enter in the video sector and seize Google's leadership position in digital advertising.<sup>46</sup> While Google did not break out YouTube's financials, it was estimated that YouTube's 2014 revenue amounted to around \$4 billion and profit was at a "roughly break even" level.<sup>47</sup> In October 2015,<sup>48</sup> YouTube launched "YouTube Red," a paid program which, among others, allowed members to watch YouTube's catalogue ads-free and also offline, to obtain at no additional cost a subscription to the music streaming service Google Play Music, and to watch a selection of original series and movies.<sup>49</sup>

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**Facebook and Instagram**

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Instagram was a "mobile application that enables people to take photos or videos, customize them with filter effects, and share them with friends and followers in a photo feed or send them directly to friends."<sup>50</sup> Users could share photos and videos either publicly or privately on the application and also on social networking platforms such as Facebook and Twitter. Created by Kevin Systrom and Mike Krieger, Instagram launched on October 6, 2010. The service soon received widespread success, being used by 1 million users just two months after its birth. The number of Instagram users kept growing, until reaching 10 million in September 2011.<sup>51</sup> On April 9, 2012, Facebook announced that it had reached an agreement to acquire Instagram for approximately \$1 billion.<sup>52</sup> Reversing its tradition of "talent acquisitions," Facebook stated to be "committed to building and growing Instagram independently."<sup>53</sup> After the acquisition, Instagram kept introducing improvements and new features and in January 2012 it could count on 150 million monthly active users and 16 billion photos shared. On September 22, 2015, Instagram celebrated the expansion of its community up to 400 million monthly active users.<sup>54</sup> The service was free and, at the time of the acquisition, it did not generate any revenue. In 2013, Instagram introduced paid advertising, a monetization approach in line with the one of the parent company Facebook. Given Instagram's nature of photo sharing app, the service was soon embraced by many iconic companies, such as Nike Inc. and Walt Disney Co., as a "natural platform for branded advertising."<sup>55</sup> Facebook reported \$17,928 million in revenue for 2015 but did not break down Instagram's financials. According to market analysts, Instagram was a \$37 billion business in 2015.<sup>56</sup>

Source: Compiled by casewriters based on public sources.

## Endnotes

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