EC121

Financial Accounting

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**Analysis on Activision Blizzard with a Financial Accounting Perspective**

**Section one: Describe the Business Model**

**1) Introduction:**

In this project, our group’s main goal is to investigate the financial conditions of Activision Blizzard, Inc., one of the largest American Video game developers, by digging into its financial statements, analyzing additional sources relating to it, and comparing its financial data to its two other competitors in the industry, Electronic Arts Inc. and Changyou.com Ltd.

**2) Profitability:**

In this section we will introduce the profitability measures as it relates to Activision Blizzard and two of its competitors: Electronic Arts(EA)Inc. and Changyou.com Ltd.

Activision Blizzard, Inc. is an American video game developer. Activision Blizzard currently contains five business units: Activision, Blizzard Entertainment, Major League Gaming, Activision Blizzard Studios, and King Digital Entertainment. The company's franchises include Activision’s  Call of Duty, Destiny, Skylanders, Blizzard Entertainment's World of Warcraft, StarCraft, Diablo, Hearthstone, Heroes of the Storm, Overwatch, Sierra Entertainment's King's Quest, Space Quest, Police Quest, Leisure Suit Larry, The Legend of Spyro, King's Candy Crush Saga, Pet Rescue Saga, and Farm Heroes Saga. The outcome product spans various game genre, including FPS, Real Time Strategy, Action/ Adventure, Role Playing, and mixture of three.

Activision Blizzard earns its primary income through distributing contents and services through multiple gaming platforms, including video game consoles, personal computers, and mobile devices. The company primarily offers the following products and services:

1. Full-games, which typically provide access to main game content, primarily for console or PC.
2. Downloadable content, which provides players with additional in-game content to purchase following the purchase of a full game.
3. Microtransactions, which typically provide relatively small pieces of additional in-game content or enhancements to gameplay, generally at relatively low price points.
4. Subscriptions for players in its World of Warcraft franchise that provide for continual access to the game content.

In order to generate revenue, Activision Blizzard’s cost segment focuses primarily on software development and marketing. Since it is necessary for the company to develop outstanding products to compete against other developers, it is essential to not only have the ability to implement the product, but also to attract a bigger share of the player base via marketing.

The targeted audiences for Activision Blizzard also range based on the product. The FPS and Role Playing games, for example Call Of Duty and Starcraft, targets teenagers and young adults. In contrast the products under King studio focus on casual gaming and target a more general population.

For Activision Blizzard, it has various competitive advantages over two other developers we evaluate. For example, the FPS franchise, Call of Duty, has developed 19 games since 2003. The well-constructed game playing experience has made the franchise the benchmark for FPS games. In each release, Call of Duty becomes one of the best selling games year-round. In 2016, Call of Duty Infinite Warfare ranked No. 5 in the best selling FPS.[[1]](#footnote-0) In a similar case, Call of Duty Black Ops III also received decent sales in 2015.[[2]](#footnote-1) Thus, one can expect stable performance in the future products under the franchise. Other products under the company also have respectful performances. Blizzard has a strong base of developers that allow them to outperform other products under the same game genre. This allows them to create games that satisfy both visual and gaming experience.

Electronic Arts(EA) Inc. is an American video game developer and a competitor of Activision Blizzard. The company’s franchize includes FIFA, Madden NFL, Star Wars, Battlefield, the Sims and Need for Speed. Similar to Blizzard Activision, the company distributes its product through consoles and PC. Additionally, both companies accept third party digital storefronts such as Sony Playstation Store and Microsoft’s Xbox Store. The sales of whole games through digital storefronts plays a major role in generating sales for EA. In the year of 2016, the sales on third party whole game consists 30% of the total revenue and this proportion is projected to continue rising.

Similar to Activision Blizzard, EA also spend its major resources on software development and marketing. Two companies are direct competitors in console games as well as PC games. For example, Battlefield by EA and Call of Duty by Activision Blizzard are direct competitors in the FPS PC game genre. While Blizzard outperforms EA in real time strategy games like Starcraft, which holds a strong position in the field, EA has a dominate role in sport simulation games. The FIFA franchise, for instance, is constantly one of the most popular console games on the market and the best selling console game in 2016.

Changyou.com Ltd is a Chinese online game developer that compete along Activision Blizzard as well. The company’s franchises include TLBB online, God Slayer, Warframe and Project Z. Unlike the other two companies, Changyou focuses primarily on Personal Computer games and mobile games. The products span through Massively Multiplayer Online Role-playing Game(MMORPG), Collectible Card Games and Third Person Shooter Games. The business model also differs from Blizzard Activision and Electronic Arts because Changyou uses an item-based revenue model, which means that the players are free to access the game but may choose to purchase virtual items such as gems, pets, fashion items, magic medicine, riding animals, skill books and fireworks. Through virtual items, players are able to enhance or personalize their game environments or game characters, accelerate their progress in the games and share and trade with friends.

The key factors that drive Changyou’s sales and revenue are the popularity of the game products and balanced gaming design. To maintain its popularity, it is vital for the company to enhance the gameplay to both attract new players and keep the regular purchasing players. Furthermore, marketing is also vital in attracting new players. Changyou typically incurs marketing expenses for a game couple quarters before the game generates any revenue. Thus in order to make this business model viable and not to suffer excess risk, it is important to create a positive market image. The game design also plays an important role in encouraging players to stay in the game and purchase virtual item. Changyou allows players to boost its game performances through purchasing items. While this method allows a direct gain in revenue, it is also necessary to balance the gameplay experience so that more players are willing to pay.

Changyou is only a direct competitor to Blizzard’s MMORPG franchises. However, the genre has suffered a severe popularity decline in recent years. Since such genre plays a major role in the company’s product line, Changyou needs to make more games that are popular in a different genre in order to keep up with the dynamic market.

**3) Resource and Funding Sources:**

The key asset for Blizzard Activision is the software development which is capitalized once revenue can be expected. It is intangible and can be recognized as either a current or a long term asset. Another essential long term asset is the Property and Equipment that are closely related to software product development. For example, computers that allow programmers and designers to develop the game product consist of a major part in the property and equipment section. The company, on the one hand, develops games and softwares using its resources like visual engineers and programmers. On the other hand, it also cooperates with third party developers to make joint efforts toward the completion of a game product. Thus, another key asset that is not tangible is its relationship with other developer studios that contribute to enhancing Activision’s product.

In order to finance these assets, the company usually uses cash flows from operating activities to obtain new software and equipments. The company is well financed and able to provide essential services to keep the functionality of the product.

**Section two: Perform a time-series analysis**

The main company we are focusing on is the Activision Blizzard, INC. In this section, we will perform a three year time-series analysis to evaluate the overall performances of the company and try to identify certain patterns so that we can use to estimate their future performances.

**1) Trends in Revenue**:

From the Selected Financial Data table, we notice that the net revenues are increasing in the three most recent years. In particular, the net revenue is $4408 million in 2014, $4664 million in 2015, and $6608 million in 2016. We can see that there’s a really huge rise of net revenue in 2016, which is about 42 percent higher than 2015. This huge increase in revenue in 2016 was primarily due to: a) new revenues from King titles following King Closing Date, primarily driven by the Candy Crush franchise; b) revenues recognized from Overwatch, a new team-based first-person shooter released in May 2016; c) higher revenues recognized in 2016 from Call of Duty: Black Ops 3; d) increase of revenue from digital online channels, which rises from $2.5 billion in 2015 to $4.9 billion in 2016.

**2) Profitability ratios and their components:**

The profitability ratios we are going to focus on in this section are gross profit margin, operating profit margin, net profit margin, return on assets, and return on equity.

**[Gross Margin]**: The gross margins were 84 percent, 73 percent, and 72 percent in 2016, 2015, and 2014 respectively. We can see that the gross margin was increasing in this three-year period, which means that the amount the company retains on each dollar of sales to service its other costs and debt obligations was going higher. Although this measurement doesn’t show a strong signal whether the firm was behaving well or not, it at least indicated a positive trend of growth.

**[Operating Profit Margin]**: The operating profit margins were 20 percent, 28 percent, and 27 percent in 2016, 2015, and 2014 respectively. It increased a little in 2015 but decreased significantly in 2016. This data tells us that the proportion of leftover revenue after paying for variable costs of production was smaller in 2016 than the previous two years. This decrease in operating profit margin in 2016 was due to the increase of all kinds of expenses except for the cost of product sales. Since the firm acquired King Entertainment in 2016, which included $1.5 billion net revenue and a $230 million net loss from King’s operation, this drop in operating profit margin became understandable. Indeed, a 20 percent operating profit margin is actually not bad since it is still higher than the industry average which is around 17 percent. Therefore, we can say that the firm is still operating in a good way, i.e. the firm is still profitable.

**[Net Profit Margin]**: The net profit margin is 15 percent, 19 percent, and 16 percent in 2016, 2015, and 2014 respectively. It increased in 2015 but dropped significantly in 2016. This trend tells us that the proportion of revenue leftover after all expenses from sales have been deducted increased in 2015 but decreased dramatically in 2016. Again, if we still take into account the King acquisition in 2016, we would realize that this drop of net profit margin was normal. Moreover, this 15 percent net profit margin is roughly the same as the industry average, and since the firm is still in its developing phase, acquiring more companies and spending lots of money in producing and researching, we should be confident that it will become more profitable in the future.

**[Return on Assets]**: The return on assets is 7.3 percent, 6.7 percent, and 6.4 percent in 2016, 2015, and 2014 respectively. It kept increasing through this three-year period. This increase shows that the company earns more profits for a fix amount of resources, which basically tells us that the firm’s ability to generate returns kept increasing, a good signal for the future.

**[Return on Equity]**: The return on equity is 11.9 percent, 11.0 percent, and 10.3 percent in 2016, 2015, and 2014 respectively. It kept increasing in this three-year period, which shows that the company’s ability to generate money increased given a fixed amount of money shareholder invested, and therefore the profitability becomes higher as a shareholder’s perspective.

**3) Changes in long term assets, long term liabilities, and equity composition and liquidity:**

**[Long-Term Assets]**: The firm’s long-term assets worth $12622 million, $11864 million, and $8101 million in 2016, 2015, and 2014 respectively. Thus, the firm’s long-term assets kept increasing in the past three years, with a 46 percent growth rate in 2015 and a 6 percent growth rate in 2016. The increase of long-term assets shows the firm is still in its growing period.

**[Long-Term Liabilities]**: The firm’s long-term liabilities worth $5677 million, $4567 million, and $4695 million in 2016, 2015, and 2014 respectively. Thus, the firm’s long-term assets decreased in 2015 and then increased in 2016, with a -3 percent growth rate in 2015 and a 24 percent growth rate in 2016. The increase of long-term liabilities in 2016 indicates the firm increased its borrowing, showing their ambitions for expansion in the future.

**[Equity Composition]**: The total shareholder’s equity was increasing in the three-year period. In particular, it had $9119 million, $8068 million, and $7233 million, which can be decomposed by $10442 million, $10242 million, and $9924 million of additional paid-in capital plus $4869 million, $4096 million, and $3374 million retained earnings minus $5563 million, $5637 million, and $5762 million stock repurchase minus $629 million, $633 million, and $303 million accumulated other comprehensive loss in 2016, 2015, and 2014 respectively. Therefore, from the decomposition, we can see that the increase of the total shareholder’s equity was due to the increase of the additional paid-in capital, the increase of the retained earnings, and the decrease of the stock repurchases.

**[Liquidity]**: In the near term, the company expects their business to remain strong and to continue generate significant operating cash flows. The primary sources of liquidity include cash and cash equivalents, short-term investments, and cash flows provided by operating activities. The cash or cash equivalents and short-term investments at December 2016 is $3.3 billion, and combine with the expected cash flows provided by operating activities, the company has the sufficient liquidity to meet daily operations for the foreseeable future. In fact, the cash and cash equivalents increased $438 million in 2014, decreased $3025 million in 2015, and increased $1422 million in 2016. Also, cash flows provided by operating activities were $1331 million, $1259 million, and $2155 million in 2014, 2015, and 2016, respectively. From these data, we also have that the cash and cash equivalents and short-term investments worth 19 percent of the total assets in 2016, with a 7 percent increase from 2015. Therefore, the overall liquidity deteriorated in 2015 but improved in 2016, and we can conclude that the cash and cash equivalents, short-term investments, and the cash flows provided by operating activities are sufficient in 2016, and thus the firm is in a good shape in terms of liquidity in 2016. Moreover, we can calculate that net working capital, which was $2.2 billion at December, 2016, and it was sufficient to finance the firm’s operational and financing requirements for at least next 12 months, so they were in a healthy condition. If we calculate the previous two years as well, we will have the net working capital equals $0.8 billion in 2015 and $3.8 billion in 2014. Therefore, the firm was very healthy in terms of working capital in 2014, but it became short of funds in 2015, and then it became healthier again in 2016, with $2.2 billion funds reserve.

**4) Measurements and Key Accounting Policies**:

The preparation of the financial statements is conform with U.S. GAAP, which requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period.

**[Revenue Recognition]:** The firm recognizes revenues when there is persuasive evidence of an arrangement, the product or service has been provided to the customer, the collection of their fees is reasonably assured, and the amount of fees to be paid by the customer is fixed or determinable. We will discuss some special revenue recognition policies regarding to this specific firm in the following.

a) Revenue Arrangements with Multiple Deliverables: Certain of the firm’s revenue arrangements have multiple deliverables. When a revenue arrangement contains multiple elements, such as hardware and software products, licenses and/or services, the firm allocates revenue to each element based on a selling price hierarchy. The selling price for a deliverable is based on its vendor-specific objective evidence ("VSOE") if it is available, third party evidence ("TPE") if VSOE is not available, or best estimated selling price ("BESP") if neither VSOE nor TPE is available.

b) Product Sales: Revenues from product sales are recognized after deducting the estimated allowance for returns and price protection, which is estimated by company using the historic experiences and their own models.

c) Software with online functionality: For their software products with online functionality or that are part of a hosted service arrangement, the firm evaluates whether that online functionality constitutes a more-than-inconsequential separate deliverable in addition to the software product. If so, they consider their performance obligation to extend beyond the sale of the game.

d) Estimated Service Periods: In order to recognize their revenue accordingly, the firm has to estimate the service periods of their customers. The way they did to determine the estimated service period took into account various data points, including the weighted-average number of days between players' first and last date played online, the average total hours played, the average number of days in which player activity stabilizes, and the weighted average number of days between players' first purchase date and last date played online. They also consider known online trends, the service periods of their previously released games, and the service periods of their competitors' games that are similar in nature.

e) Subscriptions Revenue: Value-added service revenues associated with subscriptions are recognized ratably over the estimated service periods.

f) Licensing Revenues: In certain countries, the firm utilizes third-party licensees to distribute and host their games in accordance with license agreements, for which the licensees pay the them a royalty, which they recognize as revenues based on usage by the end user and over the estimated service period when they have continuing service obligations.

**[Expenses]:** We will discuss some special expense measurements and methods in the following.

a) Allowance for Inventory Obsolescence: The firm regularly reviews inventory quantities on-hand and in the retail channels. They write down inventory based on excess or obsolete inventories determined primarily by future anticipated demand for our products. Inventory write-downs are measured as the difference between the cost of the inventory and net realizable value, based upon assumptions about future demand.

b) Advertising Expenses: The firm expenses advertising as incurred, except for production costs associated with media advertising, which are deferred and charged to expense when the related advertisement is run for the first time.

c) Income Taxes Expenses: The firm records a tax provision for the anticipated tax consequences of the reported results of operations. In accordance with ASC Topic 740, the provision for income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating losses and tax credit carryforwards.

d) Foreign Currency Translation: All assets and liabilities of the firm’s foreign subsidiaries who have a functional currency other than U.S. dollars are translated into U.S. dollars at the exchange rate in effect at the balance sheet date, and revenue and expenses are translated at average exchange rates during the period.

e) Share-based Payments: Share-based compensation expense for a given grant is recognized over the requisite service period and is based on the value of share-based payment awards after a reduction for estimated forfeitures. Forfeitures are estimated at the time of grant and are revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

**[Valuation of Key assets]:** The following discusses the valuation methods for some key assets.

a) Cash and Cash equivalents: The firm considers all money market funds and highly liquid investments with original maturities of three months or less at the time of purchase to be "Cash and cash equivalents."

b) Investment Securities: Investments designated as available-for-sale securities are carried at fair value, which is based on quoted market prices for such securities, if available, or is estimated on the basis of quoted market prices of financial instruments with similar characteristics.

c) Cash in escrow: As part of the King Acquisition, the firm was required to deposit $3.56 billion in cash to be held in an escrow account until the earlier of (i) the completion of the King Acquisition, or (ii) the termination of the transaction agreement.

d) Inventories: Inventories consist of materials, labor, and freight-in and are stated at the lower of cost (weighted-average method) or net realizable value. Inventories are relieved on a weighted-average cost method.

e) Property and Equipment: Property and equipment are recorded at cost and depreciated on a straight-line basis over the estimated useful life (25 to 33 years for buildings, and 2 to 5 years for computer equipment, office furniture and other equipment) of the asset. Leasehold improvements are amortized using the straight-line method over the estimated life of the asset, not to exceed the length of the lease. Repair and maintenance costs are expensed as incurred.

f) Goodwill: Goodwill and indefinite-lived assets are not amortized, but are subject to an annual impairment test. The company performs their annual impairment testing at December 31.

g) Amortizable Intangible Assets: Intangible assets subject to amortization are carried at cost less accumulated amortization, and amortized over the estimated useful life in proportion to the economic benefits received.

**Section three: Cross-sectional Analysis**

In this section, we are going to perform a two year time-series analysis to evaluate the overall performances of EA and Changyou and try to identify the comparative advantages/ disadvantages over the Activision Blizzard.

**1) Trends in Revenue**:

Given the Selected Financial Data table, we notice that the Electronic Art’s revenue is increasing over the two most recent years. However, Activision Blizzard experience faster revenue growth rate in the past year. In 2015 Blizzard’s leads 268 thousand in revenue but in 2016 this gap increase to 2.2 million. This enlarged difference is due to the fact that EA did not experience sudden growth in newly developed franchise. Instead EA has a steady performance and successfully maintained its share in the market.

For Changyou, it experiences 31% decrease in revenue in two most recent years. The effect is due to primarily the lack of outstanding franchise from the company after 2014. Due to the commercial success of TLBB, its revenues grew from $623.4 million for the year ended December 31, 2012 to $737.9 million for the year ended December 31, 2013. However, Changyou’s revenues increased only slightly to $755.3 million and to $761.6 million, respectively, for the years ended December 31, 2014 and 2015, and its revenues decreased to $525.4 million for the year ended December 31, 2016. In the future we cannot expect sudden growth in revenue if the company choose to retain its current strategy.

**2) Profitability ratios and their components:**

In this section we are going to focus on two competing companies’ gross profit margin, operating profit margin, net profit margin, return on assets and return on equity.

**[Gross Margin]:** For EA the gross margin rises from 69% to 73% from 2015 to 2016. Since the company did not make huge changes in its general strategy, we can expect steady changes in revenue and cost of good sold. For Changyou, the Gross Margin decreased from 72% to 68%. In similar case, Changyou did not make significant modifications on its existing products. Thus the revenue and cost relationship remained steady over the time. Compare to Blizzard, both companies take conservative stand on its development and hereby did not experience huge change in revenue-cost relationship.

**[Operating Profit Margin]:** The operating profit margin is 25%, 20% in 2016, 2015 respectively for EA. Changyou on the other hand retained its 32% operating profit margin. Compare to Blizzard, EA experiences a steady development in its operating profit margin, indicating that Blizzard may face a potential challenge in bring profits through its operation. Changyou’s high operating profit margin may due to its fewer investment on the operating process.

**[Net Profit Margin]:** The profit margin for EA are 20%, 26% in 2016, 2015 respectively. Changyou’s profit margin are 28%, 25% in 2016, 2015 respectively. We can see EA has fewer left after deducting all costs related to production. However this rate is acceptable among its competitors since Blizzard only has 15% in 2016.

**[Return on Asset]:** The return on assets is 13%, 11% for EA and 9% , 11% for Changyou in 2016, 2015 respectively. We can see EA enjoys higher return on asset than Blizzard does. Indicating EA is more efficient on generating benefits based on given assets. Changyou experienced a decrease in return on asset. While the company did not make major changes in investing assets, this indicates that Changyou has a decreasing return in its business model.

**[Return on Equity]:** The return on equity is 26%, 36% for EA and 13% , 18% for Changyou in 2016, 2015 respectively. The decrease on equity return for EA is largely due to increased funds that is invested into the company. Hence it indicates confidence among investors while the return decrease in their perspective.

**3) Changes in long term assets, long term liabilities, and equity composition and liquidity:**

**[Long Term Asset]:** The long term asset for EA decreased from $2696 million to $2519 million. For Changyou, its long term asset is 1363 million and 1101 million in 2015, 2016 respectively. Both companies has decreased long term asset while Blizzard is increasing its long term asset. This indicates that unlike Blizzard, both companies have entered maturity period.

**[Long Term Liability]:** The long term liability for EA increased from $1234 million to $1243 million. On the other hand, Changyou has zero long term liability over the period. Both companies has fewer long term liability than Blizzard, showing that the company has fewer investing and have entered maturity period.

**[Equity Composition]:** The total shareholder’s equity increased from $3396 million to $4060 million for EA from 2015 to 2016, while Changyou’s shareholder’s equity decreased from $1374 million to $1108 million. The increase for EA’s shareholder equity is due to bigger retained earning over the period, showing the company has positive development trend similar to Blizzard. Changyou on the other hand suffers a decrease in retained earning, indicating poor performances in sales.

**[Liquidity]:** For EA the company enjoys increasing cash and cash equivalents through the period. Furthermore, the net working capital increased since the current liability remain stable. Giving the company a well situation to continue its operation with sufficient cash. Even Changyou also enjoy an increase of cash, the company suffer insufficient funds in 2015 and have to make short term loan to maintain operation, making its net working capital unstable.

**Section four: Conclusion**

Our target firm, Activision Blizzard, from our time-series analysis’ point of view, remains high profitability and sufficient liquidity in the most recent three years. However, even if the Operating Profit Margin and Net Profit Margin both fell in 2016 comparing to 2015, we are still confident that those ratios will increase in the future since the firm is still developing and expanding in terms of both assets and equities. On the other hand, from the cross-sectional analysis’ point of view, we can conclude that Activision Blizzard is still ahead to its competitors, EA and Changyou in term of its revenues. Also, from the profitability ratios comparisons, due to Blizzard’s dynamic changes in its product line, Blizzard outperforms EA and Changyou in gross margin and operating profit margin while suffering lower return on equity and asset. Compare to other two companies, Blizzard shows higher potential for development since other two companies has entered maturity stage in sight of their status in Long Term Liability and Equity. In conclusion, we expect Blizzard to maintain its leading market performance in the future period.

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