



THE RISE OF ESPORTS

DYNALECT ANALYTICS

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INTRODUCTION

What's your favorite sport? Soccer? Football? Hearthstone? Hockey? LoL? If a couple of these don't ring a bell, that's fine — you're in good company. Hearthstone and LoL (League of Legends) are just two examples of a diverse range of games within the eSports industry.

eSports is a rapidly growing and relatively new industry that is based entirely around competitive video gaming. This includes international tournaments, live streams, sponsorships, and team based play. eSports "teams" typically extend across multiple video games and are often unified under the sponsorship of some larger company or brand, such as Samsung or SK Telecom. This is a similar strategy to that employed by Red Bull, which owns and operates several conventional sports franchises, consisting of many talented high profile individuals that compete in a variety of events such as snowboarding, motocross, and soccer as either a collective unit or as individuals. Similarly, an eSports team like Team SoloMid will consist of multiple sub-teams for different games that are all unified by the main team name and its branding. Many of these teams compete in high stakes competitions, generating millions of dollars in revenue, prizes, and sponsorships.

MARKET OUTLOOK & CULTURAL TREND ANALYSIS

In 2017, the global eSports industry is set to generate a total of \$696 million in revenue, with \$517 million of this coming from brand investment revenues such as media rights, advertising, and sponsorships. Total revenue is up 41.3% from 2016, when the total global revenue of the industry amounted to \$493 million. NewZoo, a company specializing in eSports industry analysis, has projected that by 2020 the global revenue will be up 35.6% from this year to a total of \$1.488 billion. Based on several factors that will be discussed in the following paragraph, we expect the industry to grow by at least 50% between 2020 and 2025, resulting in a total global revenue of over \$2.2 billion by 2025.

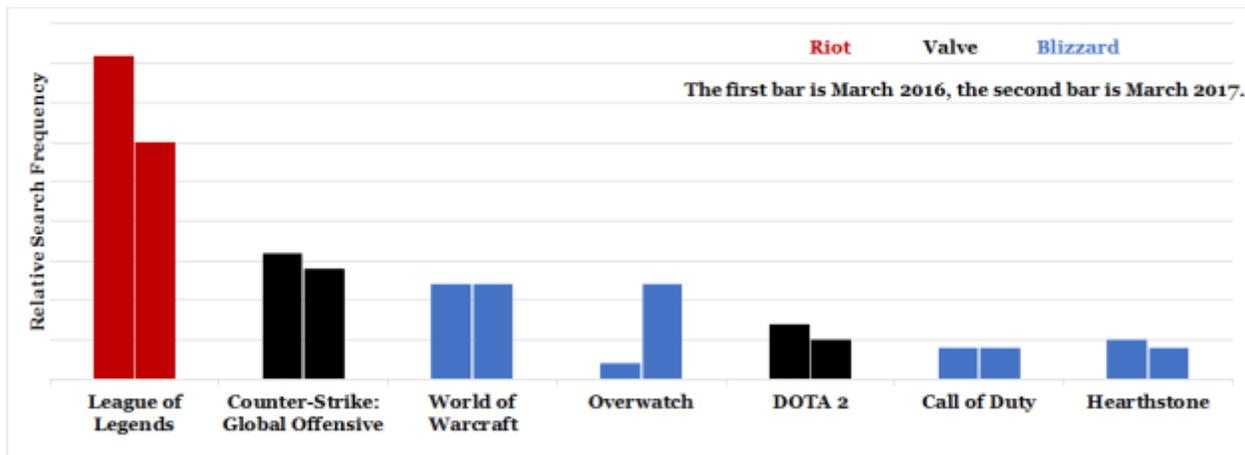
The factors that contribute to our projection of a 50% increase in revenue between 2020 and 2025 are an increase in societal dependence on electronic media platforms; the accessibility eSports provides to previously unreachable demographics; the advancement of gaming technology, especially that of virtual and augmented reality platforms; the entry of high profile professional athletes, teams, and investors into the industry; and the increasing amount of advertising and sponsorships coming from larger corporations.

The projected growth of the eSports industry does have some negative consequences. Based on information from an immersed member of the community, franchising of teams by larger corporations is expected to be viewed poorly by members of the community. In an industry so dependent on team loyalty and viewership, community perception of a team could greatly affect the revenue it generates.

When evaluating game development companies and the products they produce, investors should also consider the fact that players strongly prefer skill-based games. Even the perception that a game is pay-to-win could end a game's chance to be an eSport. On a similar note, games in which player skill can be easily determined through spectating, and games that are enjoyable and accessible to watch are most likely to become popular.

MONETIZATION STRATEGIES

Of all the companies that produce video games, Activision Blizzard (ATVI) stands to be one of the biggest beneficiaries of the increasing popularity of eSports. It boasts an impressive financial record and is the publisher of such extremely popular games as World of Warcraft and Overwatch. It's also currently engaged in vertically integrating, buying up many smaller companies with roles in the eSports industry. Neither of its major competitors, Riot Games and Valve Corporation, are publicly traded.



The graph above shows the changes in search frequency over the past year for the most widely played video games. The first bars show relative search frequency in March 2016, the second bars show search frequency in March 2017. Games with red bars are published by Riot, those with black bars by Valve, and those with blue bars by Activision Blizzard.

Currently, the most-viewed eSport is League of Legends, published by Riot Games. The 2016 League of Legends World Championship, held in October, drew 43 million online viewers and generated millions of dollars in ad and sponsorship revenue. However, its popularity has been steadily dwindling in the past couple of years. According to eSports fans, there is a popular perception that Riot takes too heavy-handed an approach to managing competitions, which has left many viewers disenchanted and looking for an alternative.

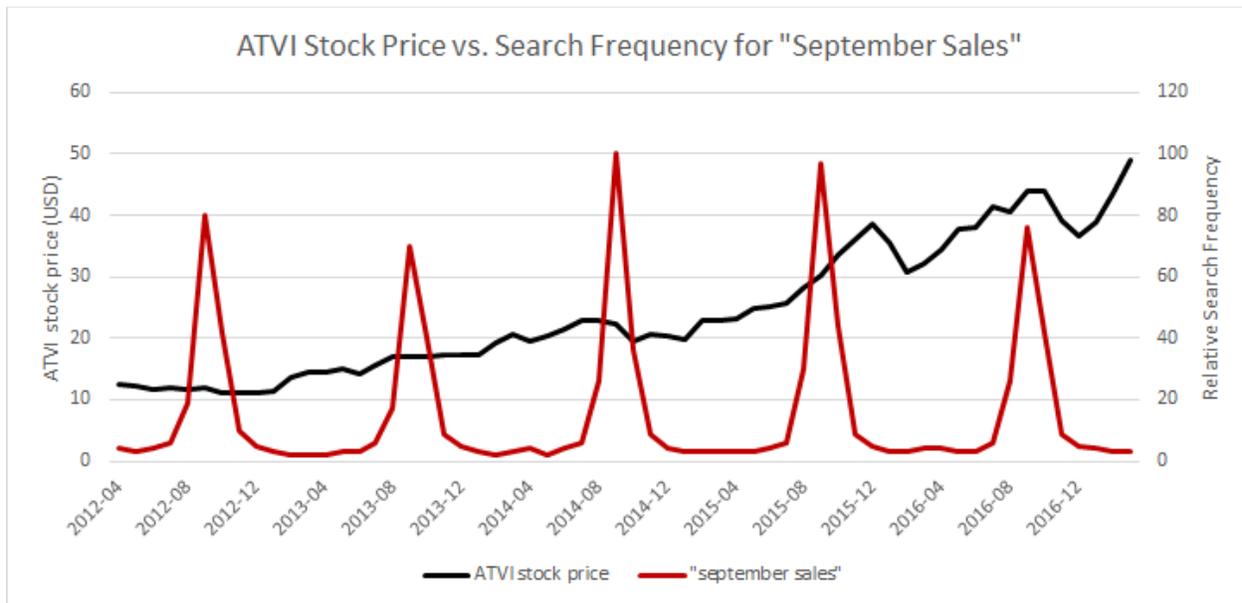
Enter Overwatch, a first-person shooter game that has become immensely popular since its release in May 2016. Blizzard announced the launch of Overwatch League, a professional league for Overwatch players, in November 2016. Overwatch League differs from other eSports leagues in that it will have a permanent lineup of teams organized into location-based leagues, and seeks to imitate the conventional sports leagues in other important ways as well.

Currently, viewership for Overwatch competitions is limited due to poor options for spectating multiplayer rounds, but Blizzard has taken an active interest in improving the spectating software. According to many, Overwatch is poised to become the next big spectator eSport as soon as these issues are resolved, and Blizzard stands to cash into the burgeoning market for eSports as a result.

In any case, Activision Blizzard has a financial record that's hard to argue with, with a safe price to earnings ratio of about 25 and a stock price that's shot up 42.5% in the last year, and shown a very strong record of growth for several years running. These facts are probably owed to a set of shrewd business practices, including the acquisition of King, the publisher of Candy Crush Saga and a pioneer of the freemium game model.

When monetizing on Blizzard, as well as several other gaming companies, it's important to consider seasonal fluctuations in stock price. Many major games offer "September Sales" through Steam, a popular game distribution platform, which grant revenue bumps to their publishers. Several late-year eSporting events such as Blizzcon and the League of Legends World Championships also boost ledgers.

In the last few years, ATVI has seen a price increase of between 15% and 30% at the end of the year, mostly around September. If an investor one year ago had bought 30 shares of ATVI at \$33.71 each, for a total of \$1011.30, held them and sold them again at their peak on October 24 for \$45.47 each (\$1364.10 total), and used the money to buy 38 more shares at \$36.11 apiece (\$1372.18 total) on December 30, their portfolio would be worth \$1863.52 as of the closing bell yesterday, for a total return of 84% in a single year. That's the power of Blizzard's strong record in combination with the September bounce.



PUREFUNDS VIDEO GAME ETF (NYSEARCA: GAMR)

Essential Financial Data

Current Price	33.95
YTD Return	28.55%
Expense Ratio	0.75%
Net Assets	\$8,435,205.22

The GAMR ETF, at first glance, appears to be an exciting opportunity for people who are eager to get involved in the video game industry. GAMR was created in February of 2016 and is up 28.55% YTD, which is an impressive annual return for such a new security. It is worth considering that a 0.75% expense ratio is quite high for an ETF, especially compared to an S&P 500 index fund, which can easily be bought at an expense ratio of 0.09%. The 0.75% figure seems even worse when one considers that the entire ETF is only made up of about 30 securities, which could be more or less replicated within the personal portfolio of an interested investor. Refer to Section C for the complete list of securities contained within the GAMR ETF.

However, if the eSports industry continues to grow at current rates, it is highly likely that the value of an ETF such as this will continue to rise considerably in the medium and long term. For this reason, even at the level of 0.75% for the expense ratio, this

could be a good opportunity for someone who wants to take a more passive stance in investing instead of having to individually manage positions in 10-15 securities to mimic the portfolio of the ETF.

APPENDIX A: FUNDAMENTALS EVALUATIONS

ACTIVISION BLIZZARD (NASDAQ: ATVI)

Blizzard is one of the largest video game companies in the United States. Blizzard is responsible for producing popular games such as World of Warcraft and StarCraft. The company is taking an aggressive stance in benefitting from growth in the eSports industry by creating the Overwatch League and releasing an updated version of the aforementioned StarCraft game.

General Financial Information (as of 04/04/2017)

Fiscal Year (Current F17)	January 1 st – December 31 st
Current Stock Price	\$49.04
Next Earnings Report	05/10/2017
P/E Ratio	38.50
Take Two P/E Ratio	338.94
Electronic Arts P/E Ratio	21.95
Nintendo P/E Ratio	39.66

Sales and Revenue

	2016	2015	2014	2013	2012
Sales/Revenue	6,689	5,375	4,408	4,583	4,856
Growth	24.45%	21.94%	-3.82%	-5.62%	N/A

The sales and revenue data from Activision Blizzard is very strong moving through the last two years. As with any good investment opportunity, we would expect to see revenue increasing by a comfortable margin on a yearly basis, which is certainly the case here. The quarterly data not depicted here is equally convincing; other than a slight dip in revenue in the 3rd quarter of 2016 (down 0.13% from the second quarter), revenue has been increasing over the past 4 quarters at a comfortable pace, with the 4th quarter of 2016 being especially noticeable with an increase of 28.44% posted.

Another interesting point of data not shown here is the rise in research and development funding from Activision Blizzard. With an increase of 48.30% in 2016, this

shows that the company is actively looking to develop and extend its product line, which is an exciting sign for investors. Much of this research and development spending likely went to the new Overwatch League, which is positioned to benefit greatly from increases in the eSports industry.

Gross Income and Profit Margin

	2016	2015	2014	2013	2012
Gross Income	4,295	3,790	2,883	3,052	3,194
Gro. Inc. Growth	13.32%	31.46%	-5.54%	-4.45%	N/A
Gross Profit Margin	64.21%	70.51%	65.40%	66.60%	65.77%
Prof. Marg. Growth	-8.93%	7.81%	-1.80%	1.26%	N/A

As is the case with the revenue data above, the income data shows signs of growth and financial health. It's good to see the growth in the gross income figures over the past two years, and especially in 2015 with the 31.46% increase.

Slightly less convincing is the declining profit margin. However, with all of the research and development work going on within Activision Blizzard, the fall in the profit margin could be attributed to new revenue streams that Activision Blizzard is still in the process of optimizing. As those new products and revenue streams become a more central part of the company's operation, investors will be looking for a renewed rise in profit margins.

Overall though, a profit margin of 64.21% in 2016 is only slightly lower than that of EA Sports at 68.88%, which shows that Activision Blizzard is within the industry standard of operating margins.

Earnings Per Share

	2016	2015	2014	2013	2012
EPS (Basic)	1.28	1.19	1.13	0.95	1.01
EPS Growth	7.56%	5.31%	18.95%	-5.94%	N/A

The earnings per share data shown here shows sustained recent growth, and bodes well for Activision Blizzard's continued improvement. While still below that of EA Sports (3.50 in 2016), we expect the EPS figures to continue to rise here, which will allow the stock price to continue to appreciate over time. The quarterly data for Activision Blizzard tells a similar story. Other than a sudden drop in earnings per share during the second quarter of 2016, the EPS figures rose 55.90% and 27.61% in the third and fourth quarters respectively.

Miscellaneous Data and Ratings

Zack's Rank	2 (Buy)
Average Stock Price Target	50.75
Return on Equity	11.19
Electronic Arts ROE	35.95
Take Two ROE	-1.45

The Zack's rating of 2 for Activision Blizzard reflects the large growth opportunities moving forward in terms of capitalizing on the eSports industry, combined with current strong fundamentals. Assuming that Activision can capitalize on at least 20% of the eSports market, an increase of 10 billion dollars in the eSports industry over the next decade, would translate to considerable increases in Activision Blizzard's bottom line, which will ultimately fuel growth in stock value over the medium term.

The return on equity figures show that Activision Blizzard is no super star in the industry... yet. It makes a decent amount of money, but it hasn't quite figured out how to put it's capital to the most effective use. This further shows strong growth opportunities that are backed by an already healthy financial institution.

Final Word

Based on the data provided above, and other analyses specific to Activision Blizzard's financial health, it appears that the company is in good financial standing and is likely positioned well to take advantage of growth in the eSports industry over the next few years.

Increases in the bottom line of Activision Blizzard's income statement will surely continue assuming the Overwatch League continues to perform well and the new release of StarCraft is a success.

The next quarterly report scheduled for May 10th will prove to be invaluable in demonstrating sustained growth in Q1 of Activision Blizzard's 2017 fiscal year. If the

numbers end up in the green compared to last quarter, I will expect the value of ATVI stock to appreciate considerably moving through the early summer.

ELECTRONIC ARTS (NASDAQ: EA)

Electronic Arts is one of the most respected names in the video game industry. Responsible for the development and sale of popular game series such as FIFA and Madden Football, Electronic Arts is uniquely positioned to take advantage of eSports specifically related to real-life sports.

General Financial Information (as of 04/05/2017)

Fiscal Year (Current F17)	April 1 st – March 31 th
Current Stock Price	\$89.28
Next Earnings Report	05/09/2017
P/E Ratio	22.01
Activision Bliz. P/E Ratio	38.50
Take Two P/E Ratio	338.94
Nintendo P/E Ratio	39.66

Sales and Revenue

	2016	2015	2014	2013	2012
Sales/Revenue	4,373	4,517	3,575	3,797	4,143
Growth	-3.19%	26.35%	-5.85%	-8.35%	N/A

The sales and revenue data for Electronic Arts is disappointing to an investor looking for explosive growth opportunities. Electronic Arts was a struggling company in the early years of the current decade. Then, with the change in leadership to Andrew Wilson in 2013, the company began to turn around, which is finally reflected in the 2015 revenue data, up 26.35% from the year before.

The failure of EA to continue that growth moving through 2016 does not bode well for the company's medium term growth outlook.

In the short term, the quarterly data paints a slightly more promising picture. The final quarter of 2016 posted an increase of 27.52% in revenues, which was a welcome change from the previous two quarter's contractions. The earnings report set to come out the 9th

of May will provide much needed insights into whether or not EA can sustain this growth moving through the first quarter of 2017, and the final quarter of their 2017 fiscal year.

Gross Income and Profit Margin

	2016	2015	2014	2013	2012
Gross Income	3,012	3,196	2,229	2,413	2,502
Gro. Inc. Growth	-5.76%	43.38%	-7.63%	-3.56%	N/A
Gross Profit Margin	68.88%	70.75%	62.35%	63.55%	60.39%
Prof. Marg. Growth	-2.64%	13.47%	-1.89%	5.23%	N/A

The gross income figures paint a similar picture to that of the revenue figures. The large increase in 2015 is a welcome change from otherwise declining numbers over the past few years. One hopes that Mr. Wilson can deliver better performance in the 2017 fiscal year, which will be reported in the next earnings report this May.

Earnings Per Share

	2016	2015	2014	2013	2012
EPS (Basic)	3.50	2.69	0.03	0.31	0.23
EPS Growth	30.22%	8866.67%	-90.32%	34.78%	N/A

The earnings per share data depicted here shows much needed growth over the past 2 years. As of 2016, EA has a considerably higher earnings per share figure than some of its largest competitors such as Activision Blizzard at 1.28. This is a good sign for the outlook of the value of EA stock in the short to medium term, especially if growth in these figures has been sustained throughout the 2017 fiscal year.

Miscellaneous Data and Ratings

Zack's Rank

3 (Hold)

Average Stock Price Target	93.96
Return on Equity	35.95
Activision Bliz. ROE	11.19
Take Two ROE	-1.45

The Zack's rank of 3 is likely due to un-impressive performance of EA sports over the past year. The huge growth in 2015 delivered a boost in confidence to investors, but those initial feelings of euphoria have since worn off and it is now unclear whether or not EA can sustain that turnaround and deliver growth moving through the 2017 fiscal year. Investors will surely be watching closely for the upcoming report to answer that question.

In the meantime, it is clear that EA is still a strong financial institution worth considering as a potential investment. The return on equity figure of 35.95 is an impressively large value compared to the generally accepted threshold of 15 for companies with acceptable capital efficiency and financial health. As one can clearly see above, the 35.95 return on equity figure is much higher than EA's main competitors, which shows their ability to outperform their industry in terms of efficiency.

Final Word

Based on the figures presented above, it is clear that Electronic Arts is a viable financial institution and a relatively low-risk investment opportunity. Electronic Arts consistently returns stable profits, and appears to be poised to grow considerably in the coming years.

The eSports industry, at a valuation of several billion dollars over the next decade could have a considerable impact on EA's bottom line figures if they can figure out how to capitalize on it effectively. With FIFA and Madden already attracting professional players, and EA actively working towards accommodating competitive professional gameplay, it seems likely that EA will indeed benefit from the growth in that industry, thus rendering it a potentially lucrative investment.

However, it is clear that the next earnings report scheduled for May 9th will prove to be invaluable in demonstrating sustained growth through the last quarter of EA's fiscal year 2017. If the numbers end up in the green compared to last quarter, one can expect the value of EA stock to appreciate considerably moving through the early summer.

In addition, the results from EA's fiscal year 2017 will be reported this summer on May 9th. Keep an eye on that for the annual data set to be released. Strong data for the past

year will propel EA closer towards the low \$90s/share range that analysts expect over the next few quarters.

MICROSOFT (NASDAQ: MSFT)

Microsoft is a major pillar of the technology industry in the United States. Founded in 1975, Microsoft has been an engine of growth and development of technology for many decades, and will likely continue to be for many decades to come.

General Financial Information (as of 04/04/2017)

Fiscal Year (Current F17)	July 1 st – June 30 th
Current Stock Price	\$65.55
Next Earnings Report	04/27/2017
P/E Ratio	30.92
Apple P/E Ratio	17.21
Google P/E Ratio	30.31
Oracle P/E Ratio	21.09

Sales and Revenue

	2016	2015	2014	2013	2012
Sales/Revenue	84,695	92,972	86,729	77,654	73,750
Growth	-8.90%	7.20%	11.69%	5.29%	N/A

According to the annual sales and revenue data, Microsoft appears to have gone through a period of contraction on a macro scale in 2016, with gross revenue down just under 10% from the previous year. Data not depicted here, however, shows a 37.77% rise in net income over last year, which is not too surprising given that Microsoft had a rough fourth quarter in 2015. The \$7.5 billion charge due to troubles from its acquisition of Nokia knocked its net income down significantly despite record high gross income. It's hard to evaluate whether or not 2016 is an anomaly in Microsoft's otherwise long-term trend of growth and prosperity. Quarterly data shows strong growth in revenues in the final quarter of 2016, up 17.37% from the previous quarter. The quarterly report set to come out on the 27th of this month will provide valuable insights into whether or not the growth at the end of last year has been sustained. Green numbers for the first quarter of this year will be key to rising values of MSFT stock over the course of the next few months.

Gross Income and Profit Margin

	2016	2015	2014	2013	2012
Gross Income	51,915	59,934	59,795	57,405	56,220
Gro. Inc. Growth	-13.38%	0.23%	4.16%	2.11%	N/A
Gross Profit Margin	61.30%	64.46%	68.94%	73.92%	76.23%
Prof. Marg. Growth	-4.90%	-6.50%	-6.74%	-3.03%	N/A

This data shows a significant spike in profit margin in 2014, following a steady decline back towards 2013 levels ever since. In terms of quarterly data, the profit margin in the last quarter of 2016 was down 0.20% from 61.50%. The upcoming earnings report later this month will be a good indication of whether or not that downward trend is continuing.

In terms of net profit margins, Microsoft's net profit margin (19.69%) is still higher than the industry average of 19.02%, but slightly lower compared to its specific sector competitors (20.18%).

With Microsoft's recent efforts to expand into new industries and adjust their business model to keep up with modern times, it is not necessarily a bad sign to see decreasing profit margins. Microsoft seems to be in a period of aggressive change development; at some point in the next few years though, investors will need to see rising profit margins once again to show that Microsoft is able to increase their efficiency across their business engagements.

Earnings Per Share

	2016	2015	2014	2013	2012
EPS (Basic)	2.10	1.48	2.63	2.58	2.00
EPS Growth	41.89%	-43.69%	1.87%	29.00%	N/A

Microsoft had a rough year in 2015, which is reflected by a significant hit in their earnings per share figures. There was a considerable uptick in the value of their stock after they posted such a drastic recovery in July of 2016. The quarterly data moving

through the third and fourth quarter of 2016 show steady rises in EPS values. Microsoft stock is likely to benefit from a considerable increase in stock value if the company can continue to demonstrate improvements in earnings per share in the next quarterly earnings report, and especially in the annual report set to come out in July when their fiscal year 2017 closes.

Miscellaneous Data and Ratings

Zack's Rank	3 (Hold)
Average Stock Price Target	70.13
Return on Equity	22.09
Apple ROE	36.90
Google ROE	15.02

The Zack's rating of 3 for MSFT at this time is likely due to the imminent release of the Q3 earnings report on April 27th. This report will provide a better picture of whether or not the growth that MSFT experienced moving through the end of 2016 will be sustained moving forward. If the numbers from this report are promising, I would expect the rating to go to buy to prepare for the uptick in value of Microsoft stock amidst the release of strong fundamentals.

The Return on Equity figure is nestled right between Apple and Google. Conventional wisdom tells us that anything above 15 is a good figure; at 22.09, MSFT appears to be operating at an above-satisfactory level of efficiency.

Final Word

It appears that Microsoft (NASDAQ: MSFT), is a very financially healthy company. Returns over the past year were comfortably in the low 20s, and I would expect that trend to at least continue, and likely pick up over the course of the next year.

The eSports industry, even at a valuation of over \$1 billion, is likely to have little impact on the bottom line of MSFT in the short run. However, as the industry picks up in the long run, MSFT will be well poised to take advantage of any growth opportunities that arise there.

The next quarterly report scheduled for April 27th will prove to be invaluable in demonstrating sustained growth in Q3 of Microsoft's 2017 fiscal year. If the numbers end up in the green compared to last quarter, I would expect the value of MSFT stock to appreciate considerably moving through the early summer.

In addition, the fiscal year 2017 for MSFT will end this summer on June 30th. Keep an eye on that for the annual data set to be released. Strong data for the past year will propel MSFT closer towards the \$70/share range that analysts expect over the next few quarters.

TAKE TWO INTERACTIVE SOFTWARE (NASDAQ: TTWO)

Take Two Interactive Software is a large American video game company that owns well-known brands such as 2K and Rockstar Games. TTWO is responsible for the creation and success of games such as Grand Theft Auto, Civilization, and Borderlands.

General Financial Information (as of 04/04/2017)

Fiscal Year (Current F17)	April 1 st – March 31 st
Current Stock Price	\$58.62
Next Earnings Report	05/22/2017
P/E Ratio	338.94
Activision Blizz. P/E Ratio	38.50
Electronic Arts P/E Ratio	21.95
Nintendo P/E Ratio	39.66

Sales and Revenue

	2016	2015	2014	2013	2012
Sales/Revenue	1,414	1,083	2,351	1,214	826
Growth	30.54%	-53.93%	93.54%	47.06%	N/A

The sales and revenue data for Take Two Interactive show signs of a company that has potential for growth over the past few years. After a sharp decline in sales in 2015, the company appears to be back on the upward swing moving through 2016, which will likely contribute to rising prices for the TTWO stock. In order whether or not Take Two can continue the growth trend started in 2016, investors will be closely watching the annual earnings report on May 22nd for relevant data.

The quarterly data presents slightly more convincing numbers showing strong growth over the last two quarters of 2016. There was also a large increase in the cost of goods sold (COGS) expense in the last quarter of 2016, but this was mostly due to an unusually large write off in the depreciation and amortization column.

Overall, the sales and revenue data shows a company that has potential to grow, but is not necessarily finding the magic to make it happen. It does not, however, raise any serious concerns about the financial health of the company as of now; investors could have something to worry about if the company shows shrinking sales in F17.

Gross Income and Profit Margin

	2016	2015	2014	2013	2012
Gross Income	594	291	976	488	285
Gro. Inc. Growth	104.05%	-70.18%	99.94%	71.33%	N/A
Gross Profit Margin	42.00%	26.87%	41.51%	40.20%	34.50%
Prof. Marg. Growth	56.31%	-35.27%	3.26%	16.52%	N/A

The gross income and profit margin data paint a similar picture as the sales and revenue data. 2015 was an especially rough year nestled in between two otherwise good years. Investors will expect to see continued growth in the fiscal year 2017, which will be included in the earnings report on May 22nd.

One positive sign apparent in this data is that the profit margin itself rose considerably for Take Two in 2016. This suggests an ability to operate more efficiently within their market. On the other hand, it is worth considering that Take Two's profit margin is considerably lower than that of Activision Blizzard (NASDAQ: ATVI) and Electronic Arts (NASDAQ: EA). Given that all three companies operate within a similar industry, one would expect to see them post similar profit margins, which Activision Blizzard and Electronic Arts indeed do.

Earnings Per Share

	2016	2015	2014	2013	2012
EPS (Basic)	(0.10)	(3.48)	3.20	(0.34)	(1.31)
EPS Growth	97.14%	-208.67%	1028.61%	73.69%	N/A

Of all the companies presented in this report, Take Two is the only company that has had negative earnings per share data, which means they are still losing money with regular frequency. From the point of view of the fundamentals data, Take Two will have to figure out a way to consistently make money in the long term in order to ensure the continued growth of their stock.

Projections for future EPS data moving through the fiscal year 2017 (which will post on May 22nd) and fiscal year 2018 are both positive, but show very little growth over the next year. The positive earnings data by itself will likely be enough to catapult Take Two's stock value to higher values, but serious investors interested in Take Two in the medium and long terms will be eager to see growth in the EPS over the next few years to remain confident in the companies ability to create value.

Miscellaneous Data and Ratings

Zack's Rank	1 (Strong Buy)
Average Stock Price Target	59.07
Return on Equity	-1.45
Electronic Arts ROE	35.95
Activision Blizzard	11.19

Final Word

Take Two Interactive's current financial standing could surely be better. It is periodically unprofitable, has a higher debt ratio than some of its competitors such as Activision Blizzard, and a lower profit margin despite existing within the same industry.

The high price of Take Two's stock ticker at this point in the year appears to be largely speculation. The higher prices will not be warranted until Take Two proves that the 2017 fiscal year was an improvement upon the previous 5 years. In order to do this, they will ideally show increased revenue in sales, as well as an increase in the profit margin. At the very least though, investors will need to see Take Two's bottom line in the green.

Large increases in the eSports industry market as projected above could have a noticeable effect on Take Two's bottom line if they can effectively capitalize on the imminent growth potential. At this point though, it's not clear that they will be able to take advantage of the emerging market given their apparent lack of games that are played professionally and competitively.

The next quarterly report scheduled for May 22nd, which will also include the annual data for fiscal year 2017, will prove to be invaluable in demonstrating whether or not Take Two has been able to turn around their financial situation in the past year. As stated above, in order to demonstrate that their stock is backed by real fundamental data Take Two will need to post healthy growth in revenue figures, a positive number on the net income line, and ideally an increase in the profit margin. If all of these numbers check out, Take Two will be well suited to benefit from considerable growth over the next few quarters. Stay tuned.

APPENDIX B — SEARCH FREQUENCY RAW DATA

Month	Call of Duty	Dota 2	League of Legends	World of Warcraft	Counter-Strike: Global Offensive	Hearthstone	Overwatch
2015-04	25	49	226	84	84	43	2
2015-05	22	56	243	84	89	41	2
2015-06	22	52	238	84	89	38	2
2015-07	23	52	255	89	89	38	2
2015-08	24	65	248	101	96	50	5
2015-09	19	52	243	73	101	37	4
2015-10	20	44	278	67	96	32	13
2015-11	35	42	243	84	89	37	20
2015-12	31	47	226	89	101	34	5
2016-01	26	41	255	79	89	29	5
2016-02	25	40	232	73	89	26	11
2016-03	24	41	232	67	89	31	13

2016-04	25	41	238	73	96	38	25
2016-05	34	42	238	73	84	31	148
2016-06	23	46	220	101	84	22	148
2016-07	22	38	220	101	84	22	105
2016-08	22	53	215	124	67	23	84
2016-09	26	34	215	158	67	22	72
2016-10	29	36	248	112	73	23	69
2016-11	48	32	215	89	67	25	89
2016-12	34	49	198	84	73	26	84
2017-01	25	33	198	84	89	17	81
2017-02	23	32	187	73	84	17	69
2017-03	21	31	164	67	79	20	66

APPENDIX C — GAMR ETF FUND HOLDINGS

Stock Ticker	Security Description	Shares	Percent of Holdings
ATVI	ACTIVISION BLIZZARD INC	10512	6.16
036570 KS	NCISOFT CORPN	1820	5.82
9766 JP	KONAMI HOLDINGS CO	11112	5.68
CYOU	CHANGYOU COM LTD	16735	5.63
UBI FP	UBISOFT ENTERTAIN	11407	5.62
TTWO	TAKE-TWO INTERACTIVE SOFTWARE COM	7769	5.34
3632 JP	GREE INC	67000	5.22
EA	ELECTRONIC ARTS INC	4911	5.16
3659 JP	NEXON CO LTD	26500	4.87
GLUU	GLU MOBILE INC	165266	4.6
9684 JP	SQUARE-ENIX HOLDIN	13200	4.56
ZNGA	ZYNGA INC	131992	4.37
9697 JP	CAPCOM CO LTD	18000	4.23
7974 JP	NINTENDO CO LTD	1500	4.22
GME	GAMESTOP CORP NEW	14862	3.82
095660 KS	NEOWIZ GAMES CO LT	18465	2.28
AMD	ADVANCED MICRO DEVICES INC	10880	1.74
LOGI	LOGITECH INTL S A	4713	1.75
AAPL	APPLE INC	987	1.66
NVDA	NVIDIA CORP	1225	1.54

SNE	SONY CORP	3827	1.48
MSFT	MICROSOFT CORP	1815	1.39
INTC	INTEL CORP	3146	1.31
NTES	NETEASE INC	331	1.1
7832 JP	BANDAI NAMCO HLDGS	3000	1.09
700 HK	TENCENT HLDGS LTD	3000	1.03
3635 JP	KOEI TECMO HOLDING	4500	1.03
HAS	HASBRO INC	861	1
3765 JP	GUNGHO ONLINE ENTE	34800	0.92
SINA	SINA CORP	1026	0.88
6460 JP	SEGA SAMMY HLDGS I	5000	0.83
MAT	MATTEL INC	2510	0.74
2432 JP	DENA CO LTD	3000	0.75
VUZI	VUZIX CORP	10281	0.7
JAKK	JAKKS PAC INC	10070	0.66
IMMR	IMMERSION CORP	6591	0.65
TRPXX	SHORT TERM TREASURY INVESTMENT	15121.02	0.18