

Take-Two Interactive: (TTWO)

Analyst: Eric Munn

Sector: Communication Services

Industry: Entertainment

Current Price: \$105.75

Target Price: \$142.17

Description: Take-Two Interactive develops and publishes products principally through its two wholly-owned labels, such as Rockstar Games and 2K, as well as the company's new Private Division label and Social Point, a primary developer of mobile games.

BUY

Current Price: \$105.75

Target Price: \$142.17

Market Cap: \$11.6B

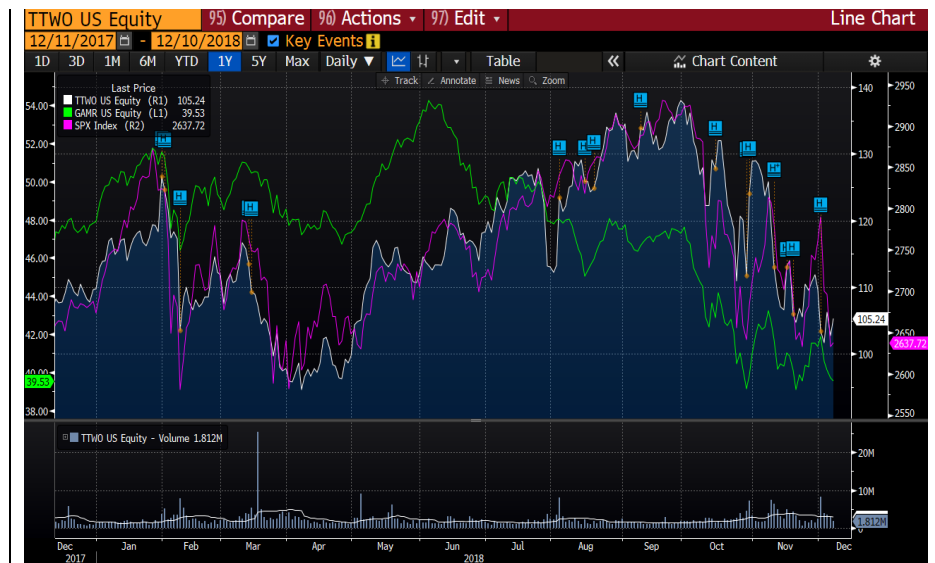
ROC/WACC: 1.61

WACC: 10.5%

No Debt

Default Rating: bb+

SI Ratio: 1.39



GAMR ETF

S&P 500 Index

Thesis: TTWO is a victim of the recent market sell off. The gaming industry is in a major growth stage that will only expand TTWO's users. The company is poised to benefit greatly from current and recurring sales on Red Dead Redemption 2. IT also has entered the eSports industry, which will spearhead further integration as the industry grows.

Catalysts: Forward looking projections that call for positive/negative outlook that will strengthen your thesis. Example:

- Short Term(within the year): Red Dead Redemption Two Sales
- Long Term(3+): **eSports Industry**

Video Game Industry Outlook:

The gaming industry has continued to grow. According to NEWzoo's Global Games report, gamers will likely spend around \$138 Billion this year. This is a 13.3 YoY increase. More than half of teenagers play video games and for several hours each day. Gaming will continue to gain entertainment market share, because it is cheaper

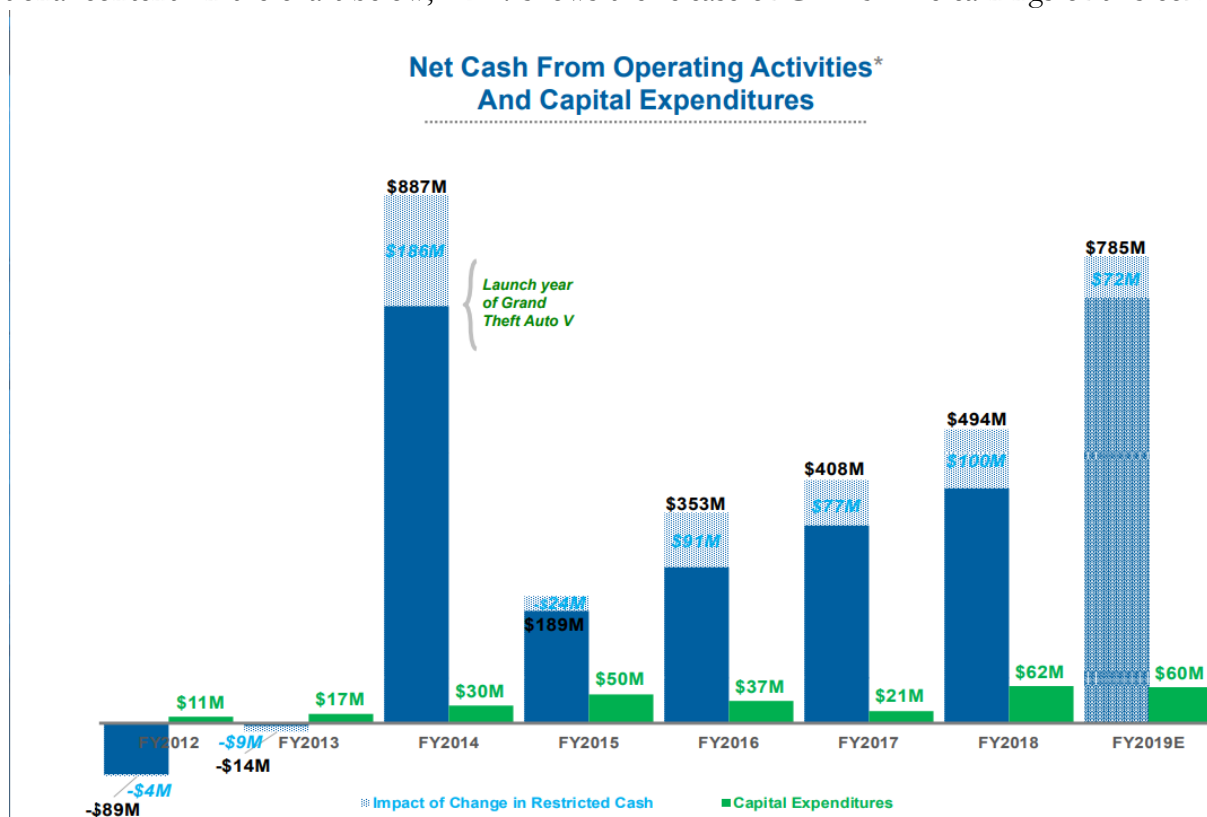
to consume than cable television or going to the movies. Videogame content sales were up 25% to \$7.9B, NPD Group says, with broad gains led by mobile games and digital content for consoles/portables. Hardware sales were up 11% for the quarter, to \$737M, while accessory sales rose 44% with all-time quarterly records in headsets as well as in game cards. The model for gaming has completely changed, and TTWO is a perfect example. The initial purchase is just the beginning of the spending.

The table below depicts TTWO's growth in digital purchases and recurrent revenue. This digital growth is helping margins, as marginal costs become lower as production of disks slows.

| FY2012 | FY2013 | FY2014 | FY2015 | FY2016 | FY2017 | FY2018 | FY2019E |
|--|--------|--------|--------|--------|--------|--------|---------|
| <div> <div>■ Recurrent Consumer Spending</div> <div>■ Digitally-Delivered</div> <div>■ Total Net Bookings</div> </div> | | | | | | | |
| Digital % of Total | | | | | | | CAGR |
| 13% | 22% | 18% | 37% | 53% | 57% | 68% | 52% |
| Recurrent Consumer Spending % of Total ³ | | | | | | | |
| 4% | 7% | 9% | 18% | 26% | 33% | 48% | 76% |

Earnings Performance:

TTWO's business model is conducive to large release on their flagship franchises that occur irregularly. However, franchises like their largest producer, Grand Theft Auto 5, bring in continuous revenue, by releasing additional content. In the chart below, FY14 shows the release of GTA 5. The earnings of this company are



staggered as major releases occur. Investors did not expect to see the same amount of success from Red Dead Redemption 2, but the initial results are promising.

| 1) Key Stats | 2) I/S | 3) B/S | 4) C/F | 5) Ratios | 6) Segments | 7) Addl | 8) ESG | 9) Custom | | | |
|-----------------------|---------------------|--------------|----------------------|------------|---------------|---------------|-----------------|------------|-------------|------------|------------|
| 11) Adj Highlights | 12) GAAP Highlights | 13) Earnings | 14) Enterprise Value | | 15) Multiples | 16) Per Share | 17) Stock Value | | | | |
| In Millions of USD | 2011 Y | 2012 Y | 2013 Y | 2014 Y | 2015 Y | 2016 Y | 2017 Y | 2018 Y | Current/LTM | 2019 Y Est | 2020 Y Est |
| 12 Months Ending | 03/31/2011 | 03/31/2012 | 03/31/2013 | 03/31/2014 | 03/31/2015 | 03/31/2016 | 03/31/2017 | 03/31/2018 | 09/30/2018 | 03/31/2019 | 03/31/2020 |
| Market Capitalization | 1,323.2 | 1,388.0 | 1,513.9 | 1,950.0 | 2,249.1 | 3,261.2 | 6,082.3 | 11,150.6 | 11,983.9 | | |
| - Cash & Equivalents | 280.4 | 420.3 | 402.5 | 935.4 | 1,098.0 | 1,269.6 | 1,392.3 | 1,424.4 | 1,025.3 | | |
| + Preferred & Other | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | |
| + Total Debt | 107.2 | 316.3 | 335.2 | 454.0 | 473.0 | 497.9 | 251.9 | 8.1 | 0.0 | | |
| Enterprise Value | 1,150.1 | 1,284.0 | 1,446.6 | 1,468.6 | 1,624.1 | 2,489.6 | 4,941.9 | 9,734.3 | 10,958.6 | | |
| Revenue, Adj | 1,136.9 | 825.8 | 1,214.5 | 2,350.6 | 1,082.9 | 1,413.7 | 1,779.7 | 1,792.9 | 1,811.8 | 2,977.6 | 2,847.3 |
| Growth %, YoY | -1.9 | -27.4 | 47.1 | 93.5 | -53.9 | 30.5 | 25.9 | 0.7 | -5.1 | 66.1 | -4.4 |
| Gross Profit, Adj | 447.5 | 297.0 | 498.6 | 936.2 | 288.1 | 599.8 | 756.8 | 894.6 | 988.3 | 1,556.0 | 1,581.5 |
| Margin % | 39.4 | 36.0 | 41.1 | 39.8 | 26.6 | 42.4 | 42.5 | 49.9 | 54.6 | 52.3 | 55.5 |
| EBITDA, Adj | 242.5 | 78.6 | 254.5 | 702.2 | -103.4 | 227.3 | 372.7 | 286.8 | 320.5 | 767.6 | 822.3 |
| Margin % | 21.3 | 9.5 | 21.0 | 29.9 | -9.5 | 16.1 | 20.9 | 16.0 | 17.7 | 25.8 | 28.9 |
| Net Income, Adj | 53.3 | -107.9 | -30.3 | 366.5 | -287.6 | 64.2 | 79.5 | 186.1 | 225.9 | 580.9 | 604.8 |
| Margin % | 4.7 | -13.1 | -2.5 | 15.6 | -26.6 | 4.5 | 4.5 | 10.4 | 12.5 | 19.5 | 21.2 |
| EPS, Adj | 0.65 | -1.30 | -0.35 | 3.24 | -3.58 | 0.77 | 0.86 | 1.65 | 1.93 | 5.00 | 5.18 |
| Growth %, YoY | 8.4 | - | 72.8 | - | - | - | 12.2 | 91.6 | 59.8 | 202.1 | 3.6 |
| Cash from Operations | 134.8 | -85.0 | -4.6 | 700.3 | 212.8 | 261.3 | 331.4 | 393.9 | 186.8 | | |
| Capital Expenditures | -9.7 | -10.8 | -16.8 | -29.8 | -49.5 | -37.3 | -21.2 | -61.6 | -58.0 | -57.5 | -59.6 |
| Free Cash Flow | 125.1 | -95.8 | -21.4 | 670.4 | 163.3 | 224.0 | 310.3 | 332.4 | 128.9 | 694.0 | 577.6 |

The cyclicalty of the revenue streams from gaming releases is apparent in the YoY revenue growth. However, TTWO has managed to leverage the increase in reccurent revenue from at a essentially zero marginal cost to increase net income margins and generate free cash flow.

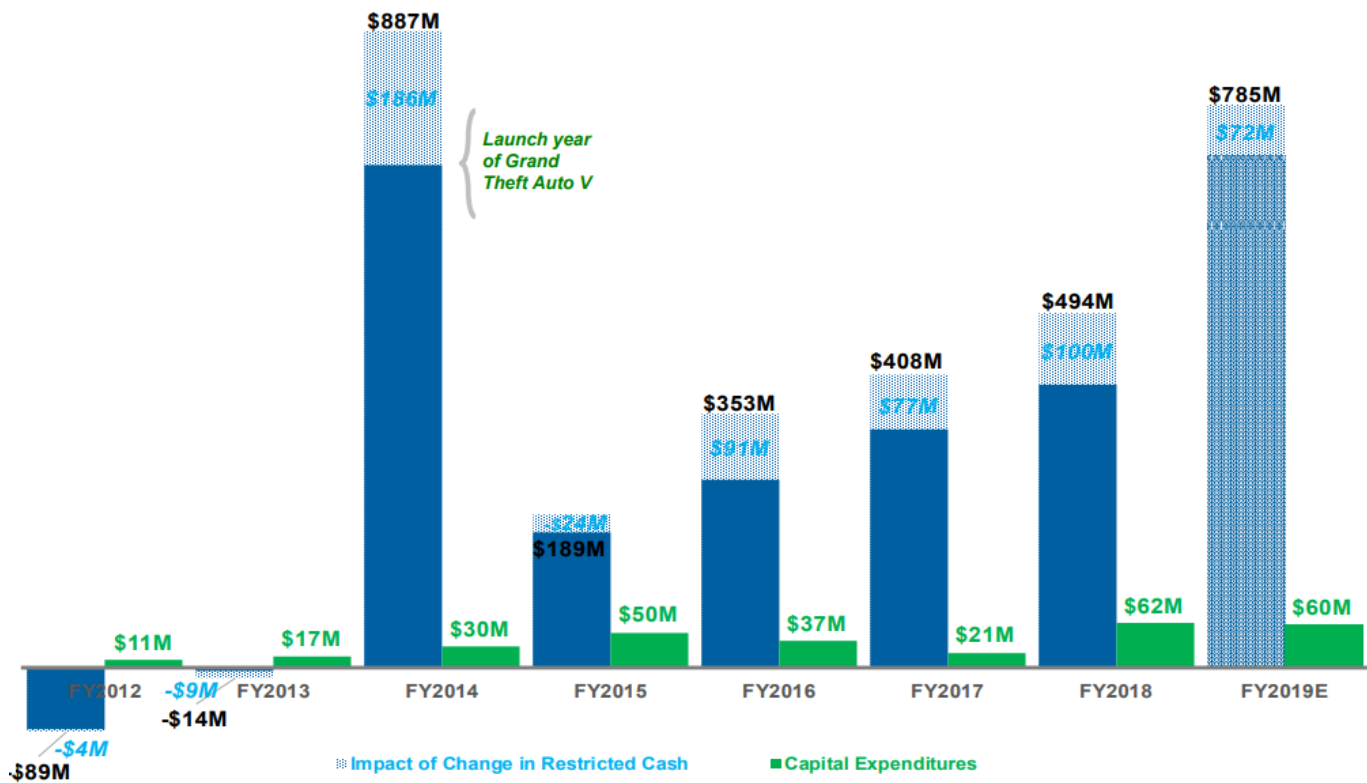
Red Dead Redemption 2:

The release of RDR2 occurred on October 13, 2018, with critical acclaim. There are not games out that match the type of game play available in Rockstar's Red Dead Redemption series. There is not completion in the nitch. Red Dead Redemption 2 sold about 70 percent as well as GTA 5 did over it's first three days with 725 million worth of copies sold. This matched expectations. RDR2 out sold Red Dead Redemption 1's lifetime sales in 12 days.

The online portion of GTA 5 has been a cash cow. The total sales have been estimated at around 6 billion, a large part being recurrent purchases online, which make it the most successful entertainment product of all time.

TTWo is aiming to develop the current beta version of the online feature into something close to as lucrative as GTA online. The company took 18 months to really get the online feature right on GTA. Their have been issues with the mechanics and already an announced fix of the in game rewards.

Investors are waiting to see how well TTWO can monetize RDR2 and this is a reason to buy in now.



RDR2 PC Release:

Currently, RDR2 is only available on the XBOX One and PS4. Investors are speculating about the PC version of Red Dead Redemption 2. If it follows the same pattern as Grand Theft Auto 5, it could be released in March of 2019, which is better than the current estimates, some of which do not even believe it will be released. This revenue boost may not be priced in.

eSports 2K League:

There is significant excitement around the growth of eSports. TTWO has joined the scene with the first major sport affiliation. Their franchise, NBA 2k, the leader in basketball simulation, has a joint venture with the National Basketball Association. It started in May 2018. 76,000 people participated in qualifying rounds. 17 NBA teams drafted 5 person teams to compete in a 15-week season. The league has partnerships with Dell, Intel, and Twitch. The purpose of this league is to enhance the engagement of fans, which will build up NBA 2k users, and in turn, revenue.



Ownership:

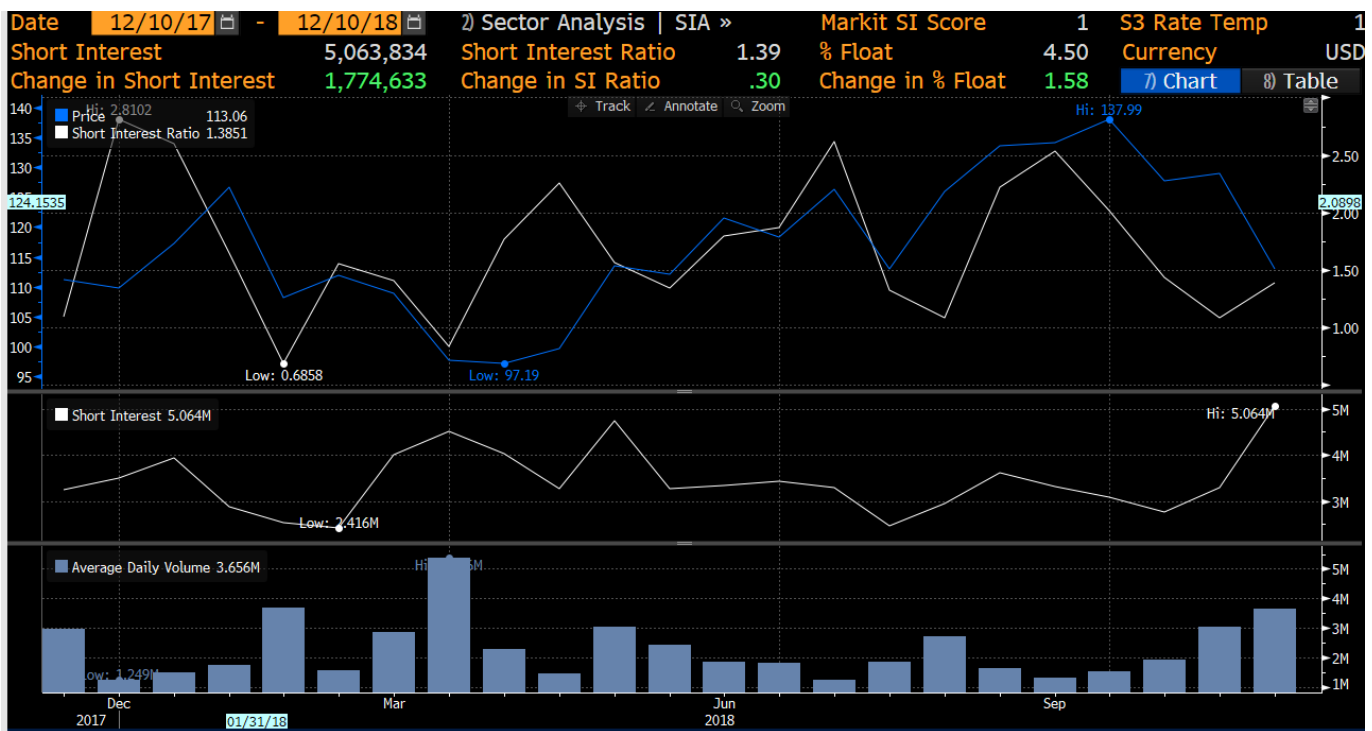
Hedgefunds entered new positions during a significant drop around July 29th. As unforeseen macro conditions have dropped the price, they have remained relatively constant in their positions.

| | | | |
|------------------------|-------|-------|-------|
| 11) Investment Advisor | 72.44 | 75.52 | +3.08 |
| 12) Hedge Fund Manager | 18.87 | 15.01 | -3.86 |



Short Interest:

Short interest ratio is at a low position of 1.39. Short positions took their profits as the price dropped starting in October. Investors have now added to their positions once again, but at such a low overall % of the float, a small portion believes the price will significantly drop again.

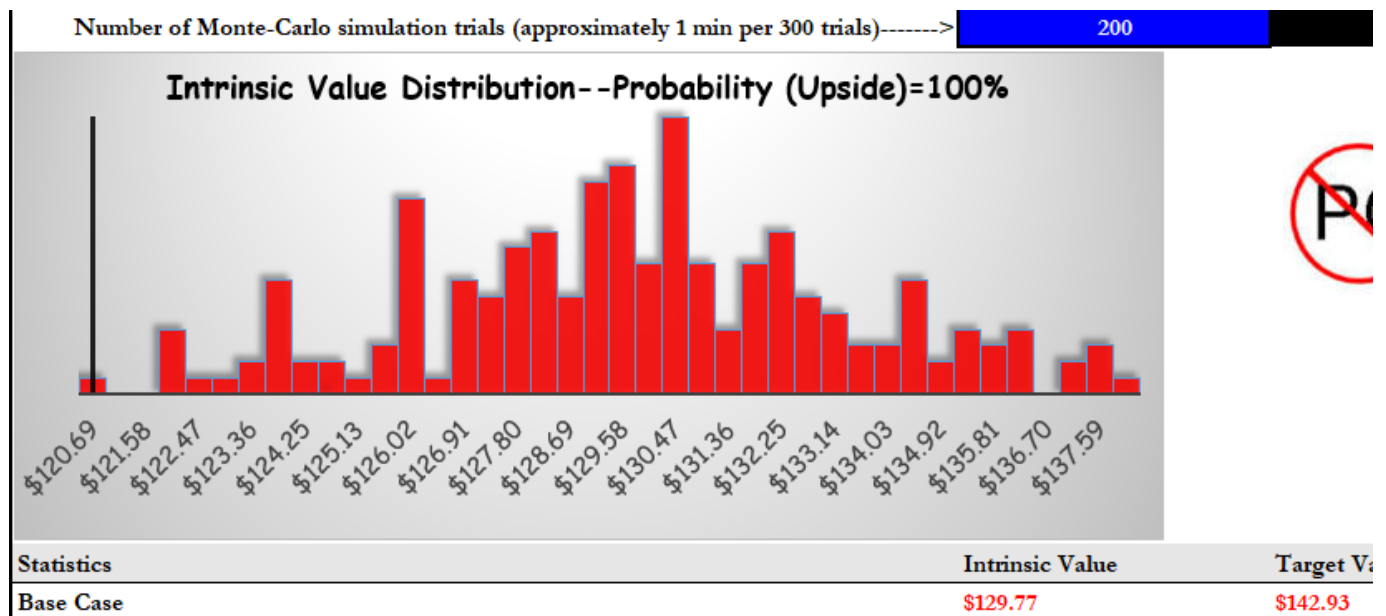


Conclusion:

Take-Two Interactive is part of an industry where we are seeing massive growth potential in the long term. As technology advances, TTWO is keeping up with

ground breaking games. The company's Red Dead Redemption 2 release was a success, and will follow the same pattern as the biggest success in entertainment, GTA 5. The intergration of PC and the monetization of the online features will lead to runaway success in revenues. The 2K/NBA partnership has fostered fan engagement and is a marker for furthing eSports expansion that is looking to become a staple in society in the future.

Target Price: \$142.93



Take-Two Interactive Software, Inc. (TTWO)

CENTER FOR GLOBAL FINANCIAL STUDIES

BULLISH

Analysis by Al Capone

Current Price:

\$105.24

Intrinsic Value

\$128.81

12/10/2018

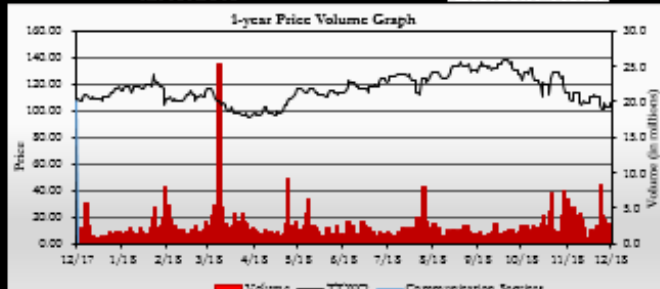
Divident Yield:

0.0%

Target Price

\$142.17

Target 1 year Return: 35.09%
Probability of Price Increase: 100%



| Description | |
|---|------------------------|
| Take-Two Interactive Software, Inc. develops, publishes, and markets interactive entertainment solutions for consumers worldwide. | |
| General Information | |
| Sector | Communication Services |
| Industry | Entertainment |
| Last Guidance | May 8, 2018 |
| Next earnings date | February 6, 2019 |
| Market Assumptions | |
| Estimated Equity Risk Premium | 6.46% |
| Effective Tax rate | 21% |

| Market Data | |
|--------------------------------------|-------------|
| Market Capitalization | \$11,979.28 |
| Daily volume (mil) | 1.77 |
| Shares outstanding (mil) | 113.83 |
| Diluted shares outstanding (mil) | 115.99 |
| % shares held by institutions | 94% |
| % shares held by investment managers | 71% |
| % shares held by hedge funds | 17% |
| % shares held by insiders | 0.50% |
| Short interest | 4.45% |
| Days to cover short interest | 1.98 |
| 52-week high | \$139.91 |
| 52-week low | \$92.81 |
| Volatility | 28.12% |

| Quarter ending | |
|----------------|---------|
| 9/30/2017 | Revenue |
| 12/31/2017 | -13.90% |
| 3/31/2018 | -27.85% |
| 6/30/2018 | -0.22% |
| 9/30/2018 | 47.97% |
| Mean | -11.06% |
| Standard error | -1.01% |

| Part Earning Surprises | |
|------------------------|---------|
| EBITDA | -45.59% |
| EBIT | -62.49% |
| Operating Income | 5.07% |
| Operating Profit | 159.74% |
| Net Income | -55.04% |
| EPS | 0.34% |

| Market and Credit Scores | |
|---|--------|
| Recommendation (STARS) Value | --4 |
| Recommendation (STARS) Description | Buy |
| Quality Ranking Value | --C |
| Quality Ranking Description | Lowest |
| Short Score | --1 |
| Market Signal Probability of Default % (Non-Rating) | --1.8% |
| Credit Model Score (Non-Rating) | --bb+ |

| Management | |
|-------------------|---|
| Zelnick, Strauss | Executive Chairman & CEO |
| Slattoff, Karl | President |
| Geldstein, Laine | Chief Financial Officer |
| Emerson, Daniel | Executive VP & General Counsel |
| Diamond, Henry | Senior Vice President of Investor Relations & C |
| Breitman, Matthew | Senior VP, Deputy General Counsel & Corporate |

| Total Compensation Growth | |
|---------------------------|-------------------|
| 24.54% | per annum over 6y |
| 10.35% | per annum over 6y |
| -11.53% | per annum over 6y |
| 24.86% | per annum over 4y |

| Industry and Segment Information | |
|-----------------------------------|--------------------|
| LTM Revenue by Geographic Segment | United States--59% |
| LTM Revenue by Business Segment | Publishing--100% |
| Asia Pacific | --6% |
| Europe | --30% |

| Profitability | |
|---------------------------|------------|
| Return on Capital (GAAP) | 30.1% |
| Operating Margin | 22% |
| Revenue/Capital (GAAP) | 3.58 |
| ROE (GAAP) | 12.8% |
| Net margin | 11.8% |
| Revenue/Book Value (GAAP) | 1.07811981 |

| TTWO (LTM) | |
|--------------------|------------|
| Return on Capital | 30.1% |
| Operating Margin | 22% |
| Revenue/Capital | 3.58 |
| ROE (GAAP) | 12.8% |
| Net margin | 11.8% |
| Revenue/Book Value | 1.07811981 |

| TTWO Historical | |
|--------------------|--------|
| Return on Capital | 76.41% |
| Operating Margin | 18.01% |
| Revenue/Capital | 4.24 |
| ROE (GAAP) | 12.7% |
| Net margin | 10.7% |
| Revenue/Book Value | 1.19 |

| Invested Funds | |
|--------------------------|--------|
| CapEx/Capital | 54.5% |
| NWC/Capital | -22.6% |
| Operating Assets/Capital | 47.0% |
| Goodwill/Capital | 21.1% |

| TTWO Historical | |
|--------------------------|--------|
| CapEx/Capital | 77.9% |
| NWC/Capital | -40.1% |
| Operating Assets/Capital | 48.0% |
| Goodwill/Capital | 12.6% |

| Peers' Median (LTM) | |
|---------------------|--------|
| Return on Capital | 14.00% |
| Operating Margin | 29.32% |
| Revenue/Capital | 0.48 |
| ROE (GAAP) | 12.8% |
| Net margin | 16.1% |
| Revenue/Book Value | 0.79 |

| Capital Structure | |
|--|--------|
| Total Debt/Market Capitalization | 0.06 |
| Cost of Debt | 4.0% |
| CGFS Rating (Firm, Z-score, and default Probability) | BBB |
| WACC | 518.9% |

| TTWO Historical | |
|--|-------|
| Total Debt/Market Capitalization | 0.24 |
| Cost of Debt | 6.2% |
| CGFS Rating (Firm, Z-score, and default Probability) | BBB |
| WACC | 11.7% |

| Peers' Median (LTM) | |
|--|------|
| Total Debt/Market Capitalization | 0.09 |
| Cost of Debt | 3.1% |
| CGFS Rating (Firm, Z-score, and default Probability) | BBB |
| WACC | 8.9% |

| Forecast Assumptions | |
|---------------------------|-----|
| Revenue Growth CAGR | 9% |
| Average Operating Margin | 25% |
| Average Net Margin | 24% |
| Growth in Capital CAGR | 17% |
| Growth in Claims CAGR | 12% |
| Average Return on Capital | 16% |
| Average Return on Equity | 16% |
| Average Cost of Capital | 11% |
| Average Cost of Equity | 11% |

