

## Take-Two Interactive (TTWO)

**\$173.47** (As of 06/21/21)

Price Target (6-12 Months): **\$147.00**

Long Term: 6-12 Months

**Zacks Recommendation:** Underperform

(Since: 05/12/21)

Prior Recommendation: Neutral

Short Term: 1-3 Months

**Zacks Rank:** (1-5)

**4-Sell**

Zacks Style Scores:

VGM:D

Value: C

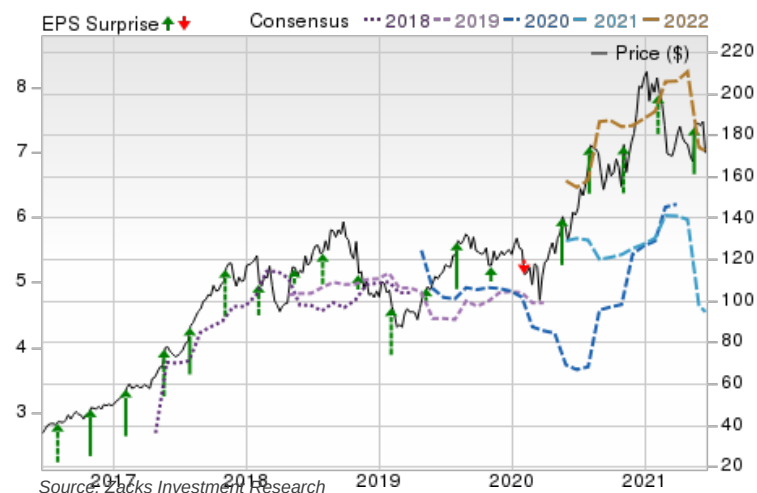
Growth: C

Momentum: C

### Summary

Take-Two's shares have underperformed the industry in the year-to-date period. Dependence on a handful of franchises and a few retail customers and third-party distributors to drive sales are overhangs. Moreover, intensifying competition from the likes of EA and Activision Blizzard is a significant headwind. Further, continued investment in game development and advertising may hurt its profitability in the near term. Nonetheless, Take Two is benefiting from digital revenues are growing on solid demand for *Grand Theft Auto* (GTA) Online and *GTA V*, *NBA 2K20* and *NBA 2K21*, *Red Dead Redemption 2* and *Red Dead Online*, *Borderlands 3*, *Sid Meier's Civilization VI* and the *WWE* series among others.

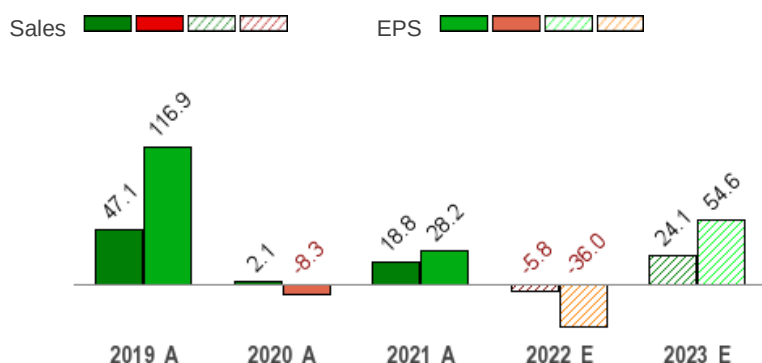
### Price, Consensus & Surprise



### Data Overview

|                                |                         |
|--------------------------------|-------------------------|
| 52-Week High-Low               | \$214.91 - \$136.81     |
| 20-Day Average Volume (Shares) | 1,197,330               |
| Market Cap                     | \$20.1 B                |
| Year-To-Date Price Change      | -16.5%                  |
| Beta                           | 0.57                    |
| Dividend / Dividend Yield      | \$0.00 / 0.0%           |
| Industry                       | Toys - Games - Hobbies  |
| Zacks Industry Rank            | Top 33% (84 out of 252) |

### Sales and EPS Growth Rates (Y/Y %)



|                               |            |
|-------------------------------|------------|
| Last EPS Surprise             | 111.8%     |
| Last Sales Surprise           | 19.0%      |
| EPS F1 Estimate 4-Week Change | 0.0%       |
| Expected Report Date          | 08/02/2021 |
| Earnings ESP                  | -6.9%      |

### Sales Estimates (millions of \$)

|      | Q1    | Q2      | Q3      | Q4    | Annual* |
|------|-------|---------|---------|-------|---------|
| 2023 | 747 E | 1,097 E | 1,162 E | 969 E | 4,156 E |
| 2022 | 674 E | 855 E   | 1,034 E | 796 E | 3,348 E |
| 2021 | 996 A | 958 A   | 814 A   | 785 A | 3,553 A |

### EPS Estimates

|      | Q1       | Q2       | Q3       | Q4       | Annual*  |
|------|----------|----------|----------|----------|----------|
| 2023 | \$1.12 E | \$2.01 E | \$2.18 E | \$1.52 E | \$7.02 E |
| 2022 | \$0.91 E | \$1.19 E | \$1.61 E | \$0.83 E | \$4.54 E |
| 2021 | \$2.68 A | \$2.04 A | \$1.25 A | \$1.44 A | \$7.09 A |

\*Quarterly figures may not add up to annual.

|         |      |
|---------|------|
| P/E TTM | 23.4 |
| P/E F1  | 38.2 |
| PEG F1  | 3.4  |
| P/S TTM | 6.0  |

The data in the charts and tables, including the Zacks Consensus EPS and sales estimates, is as of 06/21/2021. The report's text and the

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analyst-provided price target are as of 06/22/2021.

## Overview

Based in New York City, Take Two Interactive Software is a leading developer and publisher of video games.

Take Two's games can be played on video consoles, personal computers, mobile devices and tablets. The company earns revenues from the sale of disk-based video game products (known as packaged goods), downloadable contents (DLCs), subscription, micro-transactions and advertising.

Take Two reported net revenues of \$3.37 billion for fiscal 2021. The U.S. accounted for 59.8% of revenues, while the rest came from International operations. Channel-wise, digital online contributed 86.6% to net revenues, while the rest came from Physical retail and other segment.

The company develops and publishes games through Rockstar Games, 2K, Private Division, Social Point and Playdots acquired in September, 2020.

Rockstar publishes *Grand Theft Auto (GTA)* and *Red Dead Redemption* among others.

As of May 19, 2021 the latest instalment, *GTA V*, has sold-in over 145 million units worldwide and includes access to *GTA Online* while *Red Dead Redemption 2* has sold-in more than 35 million units worldwide.

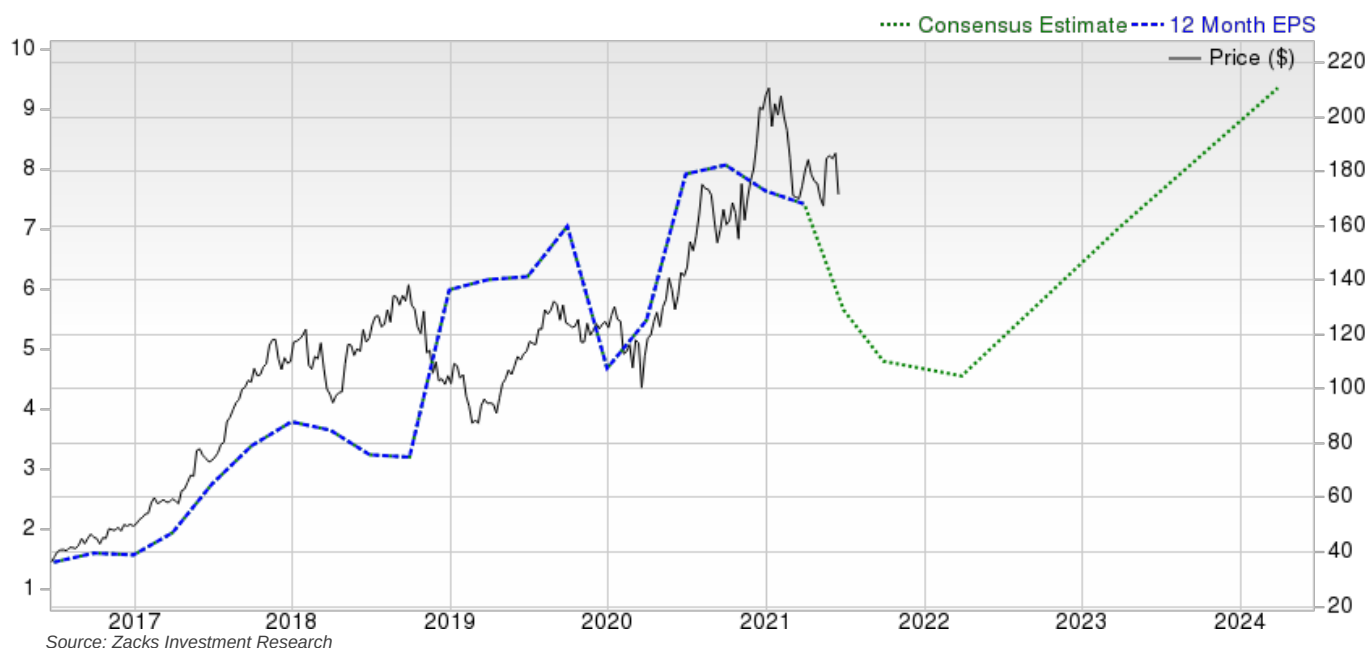
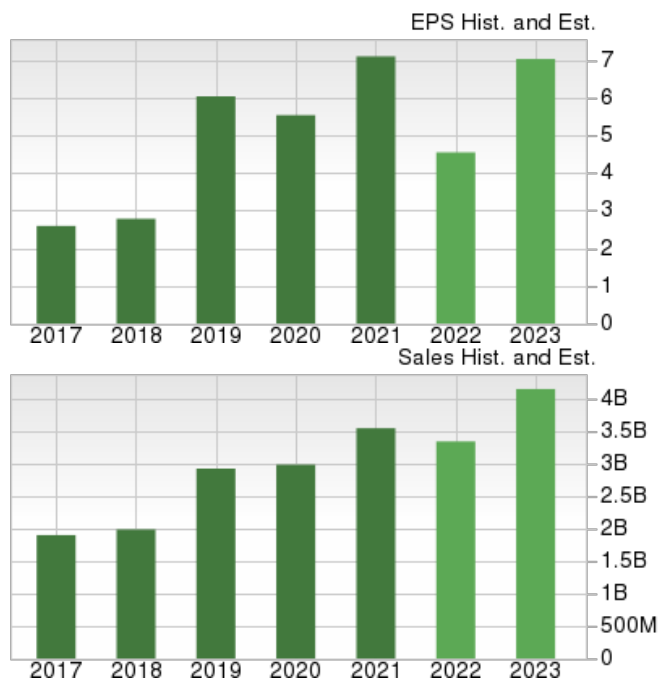
2K's internally owned and published franchises include *BioShock*, *Mafia*, *XCOM* and *Sid Meier's Civilization*. It also publishes externally developed franchises such as *Borderlands*. Moreover, 2K's realistic sports simulation titles include *NBA 2K* series, the *WWE 2K* series, and the *Golf Club*.

Take Two's Private Division is the publisher of *Kerbal Space Program*. *Kerbal Space Program 2* is planned for release in fiscal year 2023.

Social Point develops and publishes popular free-to-play mobile games that include *Dragon City* and *Monster Legends*.

Take Two has development studios in Australia, Canada, China, Czech Republic, Hungary, India, Spain, the United Kingdom and the United States.

The company sells games both physically and digitally through direct relationships with large retail customers and third-party distributors. GameStop, Microsoft, Sony, Steam and Wal-Mart are the top customers. In fiscal 2021, the five largest customers accounted for 78.4% of net revenues, with Sony and Microsoft each accounting for more than 10% of net revenues.



Source: Zacks Investment Research

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## Reasons To Sell:

- ▼ Video games are hit driven. Though Take Two has a powerful line-up of games that can be repeatedly upgraded, there is no assurance that a particular game will be a hit. Moreover, the video game business is highly cyclical and heavily dependent on time-to-time upgrade/introduction of new game software and hardware systems. This always keeps the margins under pressure.
- ▼ Moreover, the video game publishing industry is intensely competitive. The resultant pressure could tell on margins and also lead to market share losses. On the other hand, continued investment in the digital market may hurt its profitability in the near term. In fourth quarter fiscal 2021, operating expenses increased 25.1% year over year, primarily due to higher selling & marketing (S&M), general & administrative (G&M) and research & development (R&D) expenses, up 33.3%, 19.8% and 21.6%, respectively.
- ▼ Take Two's biggest problem is that it depends heavily on a handful of franchises, including GTA, Red Dead Redemption and NBA 2K series. The five best selling franchises make up for a major chunk of its revenues (84.1% in fiscal 2021). Underperformance of any of these franchises is bound to have a negative impact on the top line and profitability.
- ▼ Take Two is highly dependent on its few retail customers and third-party distributors to drive sales. Its top five customers accounted for 78.4% of net revenues in fiscal 2021. Sony and Microsoft each accounted for more than 10.0% of the company's net revenues. Customer concentration does not bode well for growth, as loss of any one such customer can drastically hurt financials.

Take Two's dependence on few franchises for top-line growth and customer concentration, and intensifying competition in the video game industry beget caution.

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## Risks

- Take Two's growth is primarily driven by its popular franchises — *Grand Theft Auto* (GTA) and *Red Dead Redemption*. Notably, GTA generated 29.2% of net revenues in fiscal 2021. *Sid Meier's Civilization VI* also outperformed management's expectation owing to its expansion packs and the popularity of the Nintendo Switch skew. The company's portfolio strength and robust slate of releases, including *OlliOlli World*, *NBA 2K22* and *WWE 2K22*, are key catalysts for the long haul.
  - The growing traction in NBA franchise bodes well for the company. Take Two expects NBA 2K net bookings to continue the momentum owing to strong growth in recurrent consumer spending, which increased by \$689.7 million year over year and accounted for 61.5% of net revenue in fiscal 2021. 2K has secured a multi-year license from the NBA to develop an online version of our NBA simulation game in China, Taiwan, South Korea and Southeast Asia. Meanwhile, NBA 2K Online, the free-to-play NBA simulation game was the most played PC game in China and the franchise has about 52 million registered users, which is expected to drive recurrent consumer spending. Moreover, The NBA 2K League's fourth season is set to take place in calendar year 2021.
  - Compared with the physical platform, digital games are more profitable due to minimum packaging cost. This cost effectiveness helps publishers like Take Two to keep a popular franchise running profitably over a longer period of time. In fiscal 2021, digital online revenues increased by \$540.7 million year over year and accounted for 86.6% of total net revenue. Moreover, net revenue from recurrent consumer spending increased by \$689.7 million year over year and accounted for 61.5% of net revenue driven by rapid adoption of *NBA 2K* franchise, *Grand Theft Auto Online* and *Grand Theft Auto V*, *Civilization VI*, *Dragon City* and *Two Dots*.
  - Take Two has been cautious in its approach towards e-sports market, which refers to live video game tournaments. With continued increase in viewership, corporate sponsorships and growing media coverage, e-sports is here to stay. To grab a share of this lucrative opportunity, in February 2017, Take Two inked a deal with NBA to launch NBA 2K eLeague. This made NBA the only professional sports league to have its own e-sports league. Additionally, the company has a total of 21 teams. Notably, Take Two has been conducting an NBA e-sports tournament for the last two years.
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## Last Earnings Report

### Take Two's Q4 Earnings Rise Y/Y, Net Bookings Improve

Take Two Interactive Software reported fourth-quarter fiscal 2021 earnings of \$1.88 per share, up 75.7% year over year.

Net revenues increased 10.4% year over year to \$839.4 million driven by increase in net bookings, partially offset by higher operating expenses.

*Grand Theft Auto (GTA) Online and GTA V, NBA 2K20 and NBA 2K21, Red Dead Redemption 2 and Red Dead Online, Borderlands 3, Sid Meier's Civilization VI, Social Point's mobile offerings, and NBA Online* were the biggest contributors to the company's fourth-quarter fiscal 2021 top line.

Markedly, digital revenues (89.7% of revenues) increased 18.7% year over year to \$753.3 million. Meanwhile, Physical retail and other segment revenues (10.3% of revenues) declined 31.5% year over year to \$86.2 million.

Recurrent consumer spending (virtual currency, add-on content and in-game purchases, including the allocated value of virtual currency and add-on content incorporated in special editions of certain games) increased 38% year over year and accounted for 67% of total revenues.

#### Top-Line Details

Region-wise, revenues from the United States (61.2% of revenues) increased 24.1% year over year to \$513.5 million. International revenues (38.8% of revenues) decreased 6% year over year to \$325.9 million.

On the basis of platforms, revenues from console (72.4% of revenues) increased 12.1% year over year to \$608 million. Revenues from PC and other (27.6% of revenues) improved 6% year over year to \$231.5 million.

#### Booking Details

Net bookings of \$784.5 million increased 7.6% on a year-over-year basis. Net bookings from recurrent consumer spending grew 17% year over year and accounted for 67% of net bookings.

Notably, Catalog accounted for \$514.7 million of net bookings. Strong demand for *GTA, NBA 2K21, Red Dead Redemption, Borderlands, Social Point's mobile offerings, Sid Meier's Civilization VI, Two Dots, NBA Online,* and *WWE SuperCard* were witnessed in the reported quarter.

Digitally delivered net bookings (92.2% of net bookings) increased 7.7% to \$723.7 million. Bookings from Physical retail and other segments (7.8% of net bookings) increased 6.1% to \$60.9 million.

#### New Game Releases & Updates

During the reported quarter, Take Two's division Rockstar Games released new free content updates for *GTA Online*, including casino story missions and new stunt races among others.

Moreover, the division released new free content updates for *Red Dead Online* including the Outlaw Pass No. 5 and its new rewards.

Take-Two's 2K division launched *NBA 2K21* Arcade Edition on Apple Arcade, delivering an all-new basketball simulation game experience to Apple's video game subscription service.

Additionally, *PGA TOUR 2K21* released the Clubhouse Pass Season 2 and launched its newest game mode, Divot Derby, which features a battle golf style competition where players can compete with up to 20 other players.

*WWE 2K Battlegrounds* released its fifth and final roster update. Moreover, 2K introduced new content for Season 7 of *WWE SuperCard*, including the debut of the *WrestleMania 37* card tier.

Besides, 2K released the *Borderlands 3: Director's Cut* add-on, which is available for purchase separately and available to download for owners of *Borderlands 3* Ultimate Edition or Season Pass 2.

Moreover, it launched the *Vietnam & Kublai Khan Pack* and the *Portugal Pack* for *Sid Meier's Civilization VI*, completing the full season of content from Firaxis Games' *New Frontier Pass*.

Further, Take Two's Private Division released *The Outer Worlds: Peril on Gorgon*, the first narrative-led expansion for the darkly humorous sci-fi RPG for Switch.

Moreover, Social Points and Playdots launched new features, scavenger hunts, and marketing activations to drive player engagement

#### Operating Details

| Quarter Ending   | 03/2021      |
|------------------|--------------|
| Report Date      | May 18, 2021 |
| Sales Surprise   | 18.95%       |
| EPS Surprise     | 111.76%      |
| Quarterly EPS    | 1.44         |
| Annual EPS (TTM) | 7.41         |

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Take Two's gross profit increased 53.4% year over year to \$559.7 million. Reported gross margin of 66.7% expanded from 48% in the year-ago quarter.

Operating expenses increased 25.1% year over year to \$304 million primarily due to higher selling & marketing (S&M) and research & development (R&D) expenses in the reported quarter. S&M and R&D expenses increased 33.3% and 21.6%, respectively, on a year-over-year basis. Meanwhile, general & administrative expenses (G&A) increased 19.8% year over year.

Operating income came in at \$255.8 million, which surged 109.9% year over year. Operating margin expanded from 16% in the year-ago quarter to 20.5%.

### **Balance Sheet**

As of Mar 31, 2021, Take Two had \$2.73 billion in cash, cash equivalents and short-term investments compared with \$2.42 billion as of Dec 31, 2020.

### **Acquisition Details**

During the reported quarter, Take Two's 2K division announced the acquisition of HookBang, LLC's Austin-based video game division, which will become part of Visual Concepts, the developer of the iconic NBA 2K video game franchise.

### **Guidance**

For the first quarter of fiscal 2022, Take Two expects GAAP net revenues between \$730 million and \$780 million. The company projects GAAP earnings between \$1 and \$1.10 per share.

Net bookings are projected between \$625 million and \$675 million.

For fiscal 2022, net bookings are expected between \$3.2 billion and \$3.3 billion. GAAP net revenues are likely to be in the range of \$3.14-\$3.24 billion. Take Two projects GAAP earnings of \$1.95-\$2.20 per share.

*Note: The EPS data mentioned in the text of this section differs from the rest of report due to the difference in calculation or consideration of one-time items.*

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## Recent News

On Jun 14, Take-Two's Private division announced partnership with Supergiant Games to release a physical edition of *Hades*, a rogue-like dungeon crawler on Aug 13, 2021.

On Jun 10, Take-Two's 2K announced that *Tiny Tina's Wonderlands* – an all-new, fantasy-fuelled adventure, set in a whimsical and high-powered weaponry world, will arrive in early 2022.

On Jun 2, Take-Two announced that it has acquired privately-held Nordeus for up to \$378 million. The upfront price of \$225 million is comprised of cash and \$90 million in newly issued shares of Take-Two common stock.

On Apr 14, Take-Two's Private division and Roll7 announced that the new skateboarding action-platformer, OlliOlli World will be launched this winter digitally for the PS5 and PS4, the Xbox Series XS and Xbox One consoles, PC, and Nintendo Switch system.

On Mar 23, Take-Two's 2K announced the acquisition of HookBang, LLC's Austin-based video game division that will become part of Visual Concepts, the distinguished, wholly-owned studio and developer of NBA 2K video game franchise.

On Mar 17, Take-Two's Private division announced the release of *The Outer Worlds: Murder on Eridanos*, the second and final story expansion for the award-winning and critically acclaimed sci-fi RPG.

On Mar 16, Take-Two division 2K announced that it has inked an exclusive long-term partnership with golf legend Tiger Woods. Moreover, 2K announced the acquisition of privately-held HB Studios, developers of *PGA TOUR 2K21* and *The Golf Club* franchise.

## Valuation

Take Two shares are down 16.5% in the year-to-date period while up 21% over the trailing 12-month period. Stocks in the Zacks sub-industry are down 3.7% in the year-to-date period while the Zacks Consumer Discretionary sector is down 1.4%. Over the past year, the Zacks sub-industry and sector are up 17.9% and 27.6%, respectively.

The S&P 500 index is up 13.3% in the year-to-date period and 36.9% in the past year.

The stock is currently trading at 33.97X forward 12-month earnings, which compares to 25.36X for the Zacks sub-industry, 28.93X for the Zacks sector and 21.61X for the S&P 500 index.

Over the past five years, the stock has traded as high as 58.39X and as low as 21.56X, with a 5-year median of 36.54X. Our Underperform recommendation indicates that the stock will perform worse than the market. Our \$147 price target reflects 28.87X forward 12-month earnings.

The table below shows summary valuation data for TTWO

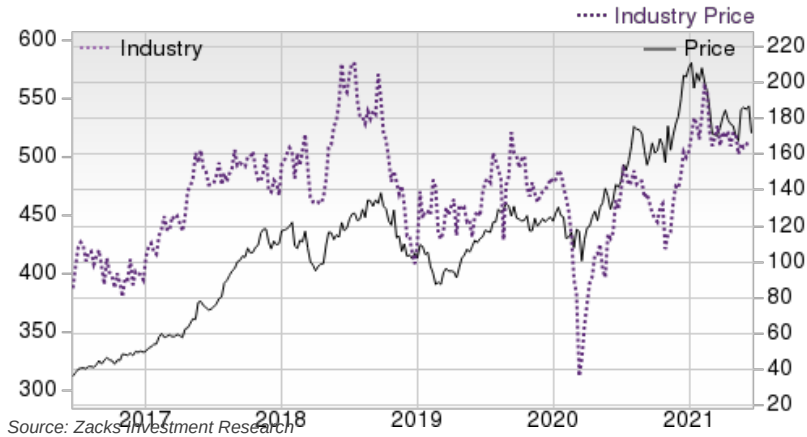
| Valuation Multiples - TTWO |               |       |              |        |         |
|----------------------------|---------------|-------|--------------|--------|---------|
|                            |               | Stock | Sub-Industry | Sector | S&P 500 |
| P/E F12M                   | Current       | 33.97 | 25.36        | 28.93  | 21.61   |
|                            | 5-Year High   | 58.39 | 31.37        | 35.36  | 23.83   |
|                            | 5-Year Low    | 21.56 | 19.27        | 16.24  | 15.31   |
|                            | 5-Year Median | 36.54 | 26.37        | 20.34  | 18.05   |
| P/S F12M                   | Current       | 5.68  | 5.81         | 2.65   | 4.7     |
|                            | 5-Year High   | 7.29  | 6.66         | 2.95   | 4.74    |
|                            | 5-Year Low    | 1.77  | 3.78         | 1.73   | 3.21    |
|                            | 5-Year Median | 4.77  | 5.4          | 2.52   | 3.72    |
| EV/EBITDA TTM              | Current       | 16.22 | 16.86        | 14.25  | 17.35   |
|                            | 5-Year High   | 34.91 | 27.46        | 18.1   | 17.74   |
|                            | 5-Year Low    | 5.34  | 11.75        | 8.35   | 9.63    |
|                            | 5-Year Median | 16.72 | 16.54        | 12.49  | 13.47   |

As of 06/21/2021

Source: Zacks Investment Research



## Industry Analysis Zacks Industry Rank: Top 33% (84 out of 252)



## Top Peers

| Company (Ticker)                | Rec          | Rank |
|---------------------------------|--------------|------|
| Microsoft Corporation (MSFT)    | Outperform   | 3    |
| Activision Blizzard, Inc (ATVI) | Neutral      | 3    |
| Electronic Arts Inc. (EA)       | Neutral      | 3    |
| Hasbro, Inc. (HAS)              | Neutral      | 3    |
| JAKKS Pacific, Inc. (JAKK)      | Neutral      | 2    |
| Nintendo Co. (NTDOY)            | Neutral      | 3    |
| Zynga Inc. (ZNGA)               | Neutral      | 3    |
| Tencent Holding Ltd. (TCEHY)    | Underperform | 5    |

The positions listed should not be deemed a recommendation to buy, hold or sell.

| Industry Comparison Industry: Toys - Games - Hobbies |              |            |           | Industry Peers |           |            |
|------------------------------------------------------|--------------|------------|-----------|----------------|-----------|------------|
|                                                      | TTWO         | X Industry | S&P 500   | ATVI           | EA        | MSFT       |
| Zacks Recommendation (Long Term)                     | Underperform | -          | -         | Neutral        | Neutral   | Outperform |
| Zacks Rank (Short Term)                              | 4            | -          | -         | 3              | 3         | 3          |
| VGM Score                                            | D            | -          | -         | C              | D         | B          |
| Market Cap                                           | 20.06 B      | 9.72 B     | 29.97 B   | 71.35 B        | 40.34 B   | 1,978.02 B |
| # of Analysts                                        | 20           | 6          | 12        | 13             | 12        | 11         |
| Dividend Yield                                       | 0.00%        | 0.00%      | 1.35%     | 0.51%          | 0.48%     | 0.85%      |
| Value Score                                          | C            | -          | -         | C              | D         | C          |
| Cash/Price                                           | 0.17         | 0.16       | 0.06      | 0.13           | 0.16      | 0.06       |
| EV/EBITDA                                            | 18.44        | 14.10      | 17.02     | 20.85          | 29.93     | 27.81      |
| PEG F1                                               | 3.44         | 2.29       | 2.08      | 1.33           | 3.24      | 2.60       |
| P/B                                                  | 6.00         | 4.65       | 4.11      | 4.65           | 5.17      | 14.71      |
| P/CF                                                 | 20.80        | 17.15      | 17.39     | 23.85          | 26.92     | 34.82      |
| P/E F1                                               | 38.40        | 21.71      | 20.94     | 24.32          | 21.96     | 33.68      |
| P/S TTM                                              | 5.95         | 4.70       | 3.39      | 8.32           | 7.17      | 12.37      |
| Earnings Yield                                       | 2.62%        | 4.55%      | 4.67%     | 4.12%          | 4.55%     | 2.97%      |
| Debt/Equity                                          | 0.00         | 0.12       | 0.66      | 0.24           | 0.24      | 0.37       |
| Cash Flow (\$/share)                                 | 8.34         | 4.11       | 6.83      | 3.85           | 5.24      | 7.54       |
| Growth Score                                         | C            | -          | -         | C              | D         | B          |
| Historical EPS Growth (3-5 Years)                    | 45.76%       | 12.24%     | 9.59%     | 12.24%         | 11.23%    | 22.33%     |
| Projected EPS Growth (F1/F0)                         | -35.92%      | 11.52%     | 21.57%    | 8.82%          | 11.43%    | 35.39%     |
| Current Cash Flow Growth                             | 46.95%       | 51.74%     | 0.99%     | 37.96%         | -3.14%    | 17.66%     |
| Historical Cash Flow Growth (3-5 Years)              | 21.77%       | 14.01%     | 7.28%     | 15.86%         | 6.95%     | 10.19%     |
| Current Ratio                                        | 1.89         | 1.96       | 1.39      | 3.43           | 2.43      | 2.29       |
| Debt/Capital                                         | 0.00%        | 19.17%     | 41.51%    | 19.04%         | 19.31%    | 27.10%     |
| Net Margin                                           | 17.46%       | 14.87%     | 11.95%    | 26.95%         | 14.87%    | 35.02%     |
| Return on Equity                                     | 25.16%       | 20.28%     | 16.48%    | 18.18%         | 16.74%    | 43.75%     |
| Sales/Assets                                         | 0.58         | 0.58       | 0.51      | 0.39           | 0.46      | 0.53       |
| Projected Sales Growth (F1/F0)                       | -5.51%       | 6.54%      | 9.41%     | 4.47%          | 15.68%    | 16.08%     |
| Momentum Score                                       | C            | -          | -         | B              | C         | A          |
| Daily Price Change                                   | 1.28%        | 0.00%      | 1.40%     | 0.36%          | -0.11%    | 1.23%      |
| 1-Week Price Change                                  | -8.12%       | -1.80%     | -0.71%    | -6.79%         | -3.60%    | 0.60%      |
| 4-Week Price Change                                  | -6.24%       | -0.40%     | 0.66%     | -4.85%         | -0.80%    | 4.73%      |
| 12-Week Price Change                                 | -1.60%       | 4.44%      | 6.39%     | -2.34%         | 4.44%     | 11.64%     |
| 52-Week Price Change                                 | 22.91%       | 26.46%     | 35.50%    | 20.63%         | 8.66%     | 30.94%     |
| 20-Day Average Volume (Shares)                       | 1,197,330    | 249,522    | 1,885,424 | 4,327,269      | 1,894,411 | 21,714,718 |
| EPS F1 Estimate 1-Week Change                        | 0.00%        | 0.00%      | 0.00%     | 0.00%          | 0.00%     | 0.00%      |
| EPS F1 Estimate 4-Week Change                        | 0.00%        | 0.00%      | 0.01%     | 0.00%          | -0.65%    | 0.01%      |
| EPS F1 Estimate 12-Week Change                       | -29.11%      | 4.03%      | 3.59%     | -0.34%         | 4.03%     | 4.56%      |

Past performance is no guarantee of future results. Please see important disclosures and definitions at the end of this report.

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|                                   |       |   |       |       |   |       |        |       |
|-----------------------------------|-------|---|-------|-------|---|-------|--------|-------|
| EPS Q1 Estimate Monthly Change    | 0.00% | : | 0.00% | 0.00% | : | 0.00% | -2.29% | 0.04% |
| Source: Zacks Investment Research |       |   |       |       |   |       |        |       |

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## Zacks Stock Rating System

We offer two rating systems that take into account investors' holding horizons: Zacks Rank and Zacks Recommendation. Each provides valuable insights into the future profitability of the stock and can be used separately or in combination with each other depending on your investment style.

### Zacks Recommendation

The Zacks Recommendation aims to predict performance over the next 6 to 12 months. The foundation for the quantitatively determined Zacks Recommendation is trends in the company's estimate revisions and earnings outlook. The Zacks Recommendation is broken down into 3 Levels; Outperform, Neutral and Underperform. Unlike many Wall Street firms, we maintain a balance between the number of Outperform and Neutral recommendations. Our team of 70 analysts are fully versed in the benefits of earnings estimate revisions and how that is harnessed through the Zacks quantitative rating system. But we have given our analysts the ability to override the Zacks Recommendation for the 1200 stocks that they follow. The reason for the analyst over-rides is that there are often factors such as valuation, industry conditions and management effectiveness that a trained investment professional can spot better than a quantitative model.

### Zacks Rank

The Zacks Rank is our short-term rating system that is most effective over the one- to three-month holding horizon. The underlying driver for the quantitatively-determined Zacks Rank is the same as the Zacks Recommendation, and reflects trends in earnings estimate revisions.

### Zacks Style Scores

The Zacks Style Score is as a complementary indicator to the Zacks rating system, giving investors a way to focus on the highest rated stocks that best fit their own stock picking preferences.

Academic research has proven that stocks with the best Value, Growth and Momentum characteristics outperform the market. The Zacks Style Scores rate stocks on each of these individual styles and assigns a rating of A, B, C, D and F. We also produce the VGM Score (V for Value, G for Growth and M for Momentum), which combines the weighted average of the individual Style Scores into one score. This is perfectly suited for those who want their stocks to have the best scores across the board.

As an investor, you want to buy stocks with the highest probability of success. That means buying stocks with a Zacks Recommendation of Outperform, which also has a Style Score of an A or a B.

|                |   |
|----------------|---|
| Value Score    | C |
| Growth Score   | C |
| Momentum Score | C |
| VGM Score      | D |

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## Glossary of Terms and Definitions

**52-Week High-Low:** The range of the highest and lowest prices at which a stock has traded during the past year. This range is determined based on the stock's daily closing price which may differ from the intra-day high or low. Many investors use it as a technical indicator to determine a stock's current value and future price movement. The idea here is that if price breaks out from the 52-week range, in either direction, the momentum may continue in the same direction.

**20-Day Average Volume (Shares):** The average number of shares of a company traded in a day over the last 20 days. It is a direct indication of a security's overall liquidity. The higher the average daily trading volume, the easier it is to enter or exit the stock at a desired price with more buyers and sellers being available.

**Daily Price Change:** This is the percentage difference between a trading day's closing price and the prior trading day's closing price. This item is updated at 9 p.m. EST each day.

**1-Week Price Change:** This is the percentage change in a stock's closing price over the last 5 trading days. This change reflects the collective buying and selling sentiment over the 1-week period.

A strong weekly price increase for the stock, especially when accompanied by increased volume, is an indication of it gaining momentum.

**4-Week Price Change:** This is the percentage change in a stock's closing price over the last 20 trading days or past 4 weeks. This is a medium-term price change metric and an indication of the stock gaining momentum.

**12-Week Price Change:** This is the percentage change of a stock's closing price over the last 60 trading days or past 12 weeks. Similar to 4-week price change, this is a medium-term price change metric. It shows whether a stock has been enjoying strong investor demand, or if it has been in consolidation, or distress over this period.

**52-Week Price Change:** This is the percentage change in a stock's closing price over the last 260 trading days or past 52 weeks. This long-term price change metric is a good reference point for investors. Some investors seek stocks with the best percentage price change over the last 52 weeks, expecting the momentum to continue.

**Market Cap:** The number of outstanding common shares of a company times its latest price per share. This figure represents a company's size, which indicates various characteristics, including price stability and risk, in which investors could be interested.

**Year-To-Date Price Change:** Change in a stock's daily closing price in the period of time beginning the first day of the current calendar year through to the previous trading day.

**# of Analysts:** Number of EPS estimates used in calculating the current-quarter consensus. These estimates come from the brokerage analysts tracking this stock. However, the number of such analysts tracking this stock may not match the number of estimates, as all brokerage analysts may not come up with an estimate or provide it to us.

**Beta:** A measure of risk commonly used to compare the volatility of a stock to the overall market. The S&P 500 Index is the base for calculating beta and carries a value of 1. A stock with beta below 1 is less risky than the market as a whole. And a stock with beta above 1 is riskier.

**Dividend:** The portion of earnings a company is expected to distribute to its common shareholders in the next 12 months for each share they own. Dividends are usually paid quarterly. Dividend payments reflect positively on a company and help maintain investors' trust. Investors typically find dividend-paying stocks appealing because the dividend adds to any market price appreciation to result in higher return on investment (ROI). Moreover, a steady or increasing dividend payment provides investors a cushion in a down market.

**Dividend Yield:** The ratio of a company's annual dividend to its share price. The annual dividend used in the ratio is calculated based on the most recent dividend paid by the company. Dividend yield is an estimate of the dividend-only return from a stock in the next 12 months. Since dividend itself doesn't change frequently, dividend yield usually changes with a stock's price movement. As a result, often an unusually high dividend yield is a result of weak stock price.

**S&P 500 Index:** The Standard & Poor's 500 (S&P 500) Index is an unmanaged group of securities considered to be representative of the stock market in general. It is a market-capitalization-weighted index of stocks of the 500 largest U.S. companies. Each stock's weight in the index is

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proportionate to its market value.

**Industry:** One of the 250+ groups that Zacks classifies all stocks into based on the nature of business. These groups are termed as expanded (aka "X") industries and map to their respective (economic) sectors; Zacks has 16 sectors.

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**Zacks Industry Rank:** The Zacks Industry Rank is determined by calculating the average Zacks Rank for all stocks in the industry and then assigning an ordinal rank to it. For example, an industry with an average Zacks Rank of 1.6 is better than an industry with an average Zacks Rank of 2.3. So, the industry with the better average Zacks Rank would get a better Zacks Industry Rank. If an industry has the best average Zacks Rank, it would be considered the top industry (1 out of 250+), which would place it at the top 1% of Zacks-ranked industries. Studies have shown that roughly half of a stock's price movement can be attributed to the industry group it belongs to. In fact, the top 50% of Zacks-ranked industries outperforms the bottom 50% by a factor of more than 2 to 1.

**Last EPS Surprise:** The percentage deviation of a company's last reported earnings per share from the Zacks Consensus Estimate. Companies with a positive earnings surprise are more likely to surprise again in the future (or miss again if they recently missed).

**Last Sales Surprise:** The percentage deviation of a company's last reported sales from the Zacks Consensus Estimate.

**Expected Report Date:** This is an estimated date of a company's next earnings release. The information originated or gathered by Zacks Investment Research from its information providers or publicly available sources is the basis of this estimate.

**Earnings ESP:** The Zacks Earnings ESP compares the Most Accurate Estimate to the Zacks Consensus Estimate for the yet-to-be reported quarter. The Most Accurate Estimate is the most recent version of the Zacks Consensus EPS Estimate. The idea here is that analysts revising their estimates closer to an earnings release have the latest information, which could potentially be more accurate than what they and others contributing to the consensus had predicted earlier. Thus, a positive or negative Earnings ESP reading theoretically indicates the likely deviation of the actual earnings from the consensus estimate. However, the model's predictive power is significant for positive ESP readings only. A positive Earnings ESP is a strong predictor of an earnings beat, particularly when combined with a Zacks Rank #1 (Strong Buy), #2 (Buy) or #3 (Hold). Our research shows that stocks with this combination produce a positive surprise nearly 70% of the time.

**Periods:**

**TTM:** Trailing 12 months. Using TTM figures is an effective way of analyzing the most-recent financial data in an annualized format that helps neutralize the effects of seasonality and other quarter-to-quarter variation.

**F1:** Current fiscal year. This period is used to analyze the estimates for the ongoing full fiscal year.

**F2:** Next fiscal year. This period is used to analyze the estimates for the next full fiscal year.

**F12M:** Forward 12 months. Using F12M figures is an effective way of analyzing the near-term (the following four unreported quarters) estimates in an annualized manner. Instead of typically representing estimates for the full fiscal year, which may not represent the nitty-gritty of each quarter, F12M figures suggest an all-inclusive annualized estimate for the following four quarters. The annualization helps neutralize the potential effects of seasonality and other quarter-to-quarter variations.

**P/E Ratio:** The price-to-earnings ratio measures a company's current market price per share relative to its earnings per share (EPS). Usually, the trailing-12-month (TTM) EPS, current-fiscal-year (F1) EPS estimate, or forward-12-month (F12M) EPS estimate is used as the denominator. In essence, this ratio shows what the market is willing to pay today for each dollar of EPS. In other words, this ratio gives a sense of what the relative value of the company is at the already reported level of earnings or at a future level of earnings.

It is one of the most widely-used multiples for determining the value of a company and helps comparing its valuation with that of a competitor, the industry group or a benchmark.

**PEG Ratio:** The price/earnings to growth ratio is a stock's P/E ratio using current fiscal year (F1) EPS estimate divided by its expected EPS growth rate over the coming 3 to 5 years. This ratio essentially determines a stock's value by factoring in the company's expected earnings growth and is thus believed to provide a more complete picture than just the P/E ratio, particularly for faster-growing companies.

**P/S Ratio:** The price-to-sales ratio is calculated as a company's current price per share divided by trailing 12 months (TTM) sales or revenues per share. This ratio shows what the market is willing to pay today for each dollar of TTM sales per share. The P/S ratio is at times the only valuation metric when the company has yet to become profitable.

**Cash/Price Ratio:** The cash-to-price ratio or Cash Yield is calculated as cash and marketable securities per share divided by the company's current share price. Like the earnings yield, which shows the anticipated yield (or return) on a stock from earnings for each dollar invested, the cash yield does the same, with cash being the source of return instead of earnings. For example, a cash/price ratio of 0.08 suggests a return of 8% or 8 cents for every \$1 investment.

**EV/EBITDA Ratio:** The EV/EBITDA ratio, also known as Enterprise Multiple, is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by EBITDA (earnings before interest, taxes, depreciation and amortization). Usually, trailing-12-month (TTM) or forward-12-month (F12M) EBITDA is used as the denominator.

**EV/Sales Ratio:** The enterprise value-to-sales ratio is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by annual sales. It is an expansion of the P/S valuation, which uses market value instead of enterprise value. The EV/Sales ratio is perceived as more accurate than P/S, in part, because the market capitalization does not take a company's debt into account when valuing it.

**EV/CF Ratio:** The enterprise value-to-cash flow ratio is calculated as a company's enterprise value (market capitalization + value of total long-

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term debt + book value of preferred shares - cash and marketable securities) divided by the trailing-12-month (TTM) operating cash flow. It's a measure of how long it would take to buy the entire business if you were able to use all the company's operating cash flow.

The EV/CF ratio is perceived as more accurate than the P/CF ratio, in part, because the market price does not take a company's debt into account when valuing it.

**EV/FCF Ratio:** The enterprise value-to-free cash flow metric compares a company's enterprise value to its trailing-12-month (TTM) free cash flow (FCF). This metric is very similar to the EV/CF ratio, but is considered a more exact measure owing to the fact that it uses free cash flow, which subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding growth activities and payments to shareholders.

**P/EBITDA Ratio:** The P/EBITDA ratio is calculated as a company's per share market value divided by EBITDA (earnings before interest, taxes, depreciation, and amortization). This metric is very similar to the EV/EBITDA ratio, but is considered a little less exact measure as it uses market price, which does not take a company's debt into account. However, since EBITDA is often considered a proxy for cash income, the metric is used as a measure of what the market is willing to pay today for each dollar of the company's cash profitability in the trailing 12 months (TTM) or forward 12 months (F12M).

**P/B Ratio:** The price-to-book ratio is calculated as a company's current price per share divided by its book value (total assets – liabilities – preferred stocks) per share. In short, the book value is how much a company is worth. In other words, it reflects the total value of a company's assets that its common shareholders would receive if it were to be liquidated. So, the P/B ratio indicates whether you're paying higher or lower than what would remain if the company went bankrupt immediately. Investors typically use this metric to determine how a company's stock price stacks up to its intrinsic value.

**P/TB Ratio:** The price-to-tangible-book value ratio is calculated as the per share market value of a company divided by the value of its tangible assets (total assets – liabilities – preferred stocks – intangible assets) per share. Tangible book value is the same thing as book value except it excludes the value of intangible assets to get a step closer to the baseline value of the company.

**P/CF Ratio:** The price-to-cash flow ratio measures a company's per share market price relative to its trailing-12-month (TTM) operating cash flow per share. This metric is used to determine whether a company is undervalued or overvalued relative to another stock, industry or sector. And like the P/E ratio, a lower number is typically considered better from the value perspective.

One of the reasons why P/CF ratio is often preferred over P/E ratio is the fact that operating cash flow adds back non-cash expenses such as depreciation and amortization to net income. This feature helps valuing stocks that have positive cash flow but are not profitable because of large noncash charges.

**P/FCF Ratio:** The price-to-free cash flow ratio is an extension of P/CF ratio, which uses trailing-12-month (TTM) free cash flow per share instead of operating cash flow per share. This metric is considered a more exact measure than P/CF ratio, as free cash flow subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding activities that generate additional revenues.

**Earnings Yield:** The earnings yield is calculated as current fiscal year (F1) EPS estimate divided by the company's current share price. The ratio, which is the inverse of the P/E ratio, measures the anticipated yield (or return) from earnings for each dollar invested in a stock today.

For example, earnings yield for a stock, which is trading at \$35 and expected to earn \$3 per share in the current fiscal year (F1), would be  $0.0857$  ( $3/35 = 0.0857$ ) or 8.57%. In other words, for \$1 invested in the stock today, the yield from earnings is anticipated to be 8.57 cents.

Investors most commonly compare the earnings yield of a stock to that of a broad market index (such as the S&P 500) and prevailing interest rates, such as the current 10-year Treasury yield. Since bonds and stocks compete for investors' dollars, stock investors typically demand a higher yield for the extra risk they assume compared to investors of U.S. Treasury-backed securities that offer virtually risk-free returns. This additional return is referred to as the risk premium.

**Debt/Equity Ratio:** The debt-to-equity ratio is calculated as a company's total liabilities divided by its shareholder equity. This metric is used to gauge a company's financial leverage. In other words, it is a measure of the degree to which a company is financing its operations through debt versus its own funds. The higher the ratio, the higher the risk for shareholders.

However, this ratio is difficult to compare across industry groups where ideal amounts of debt vary. Some businesses are more capital intensive than others and typically require higher debt to finance their operations. So, a company's debt-to-equity ratio should be compared with other companies in the same industry.

**Cash Flow (\$/share):** Cash flow per share is calculated as operating cash flow (after-tax earnings + depreciation + other non-cash charges) divided by common shares outstanding. It is used by many investors as a measure of a company's financial strength. Since cash flow per share takes into consideration a company's ability to generate cash by adding back non-cash expenses, it is regarded by some as a more accurate measure of a company's financial situation than earnings per share, which could be artificially deflated.

**Current Ratio:** The current ratio or liquidity ratio is a company's current assets divided by its current liabilities. It measures a company's ability to pay short-term obligations. A current ratio that is in line with the industry average or slightly higher is generally considered acceptable. A current ratio that is lower than the industry average would indicate a higher risk of distress or default. A higher number is usually better. However, a very high current ratio compared to the industry average could be an indication of inefficient use of assets by management.

**Debt/Capital Ratio:** Debt-to-capital ratio is a company's total debt (interest-bearing debt + both short- and long-term liabilities) divided its total capital (interest-bearing debt + shareholders' equity). It is a measure of a company's financial leverage. All else being equal, the higher the debt-to-capital ratio, the riskier the stock.

However, this ratio can vary widely from industry to industry, the ideal amount of required debt being different. Some businesses are more capital



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intensive than others and typically require higher debt to finance their operations. So, a company's debt-to-capital ratio should be compared with the same for its industry.

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**Net Margin:** Net margin is calculated as net income divided by sales. It shows how much of each dollar in sales generated by a company translates into profit. For example, if a company's net margin is 15%, its net income is 15 cents for every \$1 of sales it makes.

A change in margin can reflect either a change in business conditions, or a company's cost controls, or both. If a company's expenses are growing faster than sales, its net margin will decline. However, different net margin rates are considered good for different industries, so it's better to compare net margin rates of companies in the same industry group.

**Return on Equity:** Return on equity (ROE) is calculated as trailing-12-month net income divided by trailing-12-month average shareholder equity (including reinvested earnings). This metric is considered a measure of how effectively management is using a company's assets to generate profits. For example, if a company's ROE is 10%, it creates 10 cents profits for every \$1 shareholder equity, which is basically the company's assets minus debt. A company's ROE deemed good or bad depends on what's normal for its peers or industry group.

**Sales/Assets Ratio:** The sales-to-assets ratio or asset utilization ratio or asset turnover ratio is calculated as a company's annual sales divided by average assets (average of assets at the beginning of the year and at the year's end). This metric helps investors understand how effectively a company is using its assets to generate sales. For example, a sales-to-assets ratio of 2.5 indicates that the company generated \$2.50 in sales for every \$1 of assets on its books.

The higher the sales-to-assets ratio, the better the company is performing. However, similar to many other ratios, the asset turnover ratio tends to be higher for companies in certain industries/sectors than in others. So, a company's sales-to-assets ratio should be compared with the same for its industry/sector.

**Historical EPS Growth (3-5 Years):** This is the average annual (trailing-12-month) EPS growth rate over the last 3-5 years. This metric helps investors see how a company's EPS has grown from a long-term perspective.

Note: There are many factors that can influence short-term numbers — a recession will reduce this number, while a recovery will inflate it. The longterm perspective helps smooth out short-term events.

**Projected EPS Growth (F1/F0):** This is the estimated EPS growth rate for the current financial year. It is calculated as the consensus estimate for the current fiscal year (F1) divided by the reported EPS for the last completed fiscal year (F0).

**Current Cash Flow Growth:** It measures the latest year-over-year change in operating cash flow. Cash flow growth tells an investor how quickly a company is generating inflows of cash from operations. A positive change in the cash flow is desired and shows that more 'cash' is coming in than going out.

**Historical Cash Flow Growth (3-5 Years):** This is the annualized change in cash flow over the last 3-5 years. The change in a longer period helps put the current reading into proper perspective. By looking at the rate, rather than the actual dollar value, the comparison across the industry and peers becomes easier.

**Projected Sales Growth (F1/F0):** This metric looks at the estimated sales growth for the current year. It is calculated as sales estimate for the current fiscal year (F1) divided by the reported sales for the last completed fiscal year (F0).

Like EPS growth, a higher rate is better for sales growth. A look at a company's projected sales growth instantly tells you what the outlook is for their products and services. However, different sales growth rates are considered good for different industries, so it's better to compare sales growth rates of companies in the same industry group.

**EPS F1 Estimate 1-Week Change:** The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past week. The change in a company's consensus EPS estimate (or earnings estimate revision) has proven to be strongly correlated with the near-term price movement of its shares. It is an integral part of the Zacks Rank.

If a stock's consensus EPS estimate is \$1.10 now versus \$1.00 a week ago, that will be reflected as a 10% upward revision. If, on the other hand, it went from \$1.00 to 90 cents, that would be a 10% downward revision.

**EPS F1 Estimate 4-Week Change:** The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past four weeks.

A stock's earnings estimate revision in a 1-week period is important. But it's more meaningful to look at the longer-term revision. And, of course, the 4-week change helps put the 1-week change into proper perspective.

**EPS F1 Estimate 12-Week Change:** The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past 12 weeks.

This metric essentially shows how the consensus EPS estimate has changed over a period longer than 1 week or 4 weeks.

**EPS Q1 Estimate Monthly Change:** The percentage change in the Zacks Consensus EPS estimate for the current fiscal quarter over the past four weeks.

While the revision in consensus EPS estimate for the current fiscal year is strongly correlated with the near-term price movement of its shares, the estimate revision for the current fiscal quarter is an important metric as well, especially over the short term, and particularly as a stock approaches its earnings date. If a stock's Q1 EPS estimate decreases ahead of its earnings release, it's usually a negative sign, whereas an increase is a positive sign.