

## Jazz Pharmaceuticals (JAZZ)

**\$144.31** (As of 11/23/20)

Price Target (6-12 Months): **\$152.00**

Long Term: 6-12 Months

**Zacks Recommendation:**

**Neutral**

(Since: 03/29/20)

Prior Recommendation: Underperform

Short Term: 1-3 Months

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

**3-Hold**

Zacks Style Scores:

VGM:A

Value: A

Growth: B

Momentum: C

## Summary

Jazz reported encouraging third-quarter results wherein both earnings and sales beat estimates. The company's key drug, Xyrem, has witnessed improved volume so far in 2020 on the back of awareness efforts and label expansion in pediatric patients. Management expects Xyrem's volume growth to continue going forward. Sunosi's launch complements the sleep franchise and its successful commercialization may offset a decline in Xyrem's sales following patent expiry in 2023. However, shares of Jazz have underperformed the industry so far this year. Meanwhile, Erwinaze has been facing supply crunch due to constrained manufacturing capacity, which is likely to continue in 2021. The study on Defitelio for the prevention of VOD was discontinued, which hampered pipeline progress.

## Price, Consensus & Surprise



Source: Zacks Investment Research

## Data Overview

|                                |                                    |
|--------------------------------|------------------------------------|
| 52-Week High-Low               | <b>\$158.98 - \$86.88</b>          |
| 20-Day Average Volume (Shares) | <b>567,878</b>                     |
| Market Cap                     | <b>\$8.0 B</b>                     |
| Year-To-Date Price Change      | <b>-3.3%</b>                       |
| Beta                           | <b>1.17</b>                        |
| Dividend / Dividend Yield      | <b>\$0.00 / 0.0%</b>               |
| Industry                       | <b>Medical - Drugs</b>             |
| Zacks Industry Rank            | <b>Bottom 30% (178 out of 254)</b> |

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

|       |  |  |  |  |     |  |  |  |  |
|-------|--|--|--|--|-----|--|--|--|--|
| Sales |  |  |  |  | EPS |  |  |  |  |
|-------|--|--|--|--|-----|--|--|--|--|

|                               |                   |
|-------------------------------|-------------------|
| Last EPS Surprise             | <b>7.0%</b>       |
| Last Sales Surprise           | <b>4.7%</b>       |
| EPS F1 Estimate 4-Week Change | <b>2.7%</b>       |
| Expected Report Date          | <b>02/23/2021</b> |
| Earnings ESP                  | <b>-0.0%</b>      |

## Sales Estimates (millions of \$)

|      | Q1    | Q2    | Q3    | Q4    | Annual* |
|------|-------|-------|-------|-------|---------|
| 2021 | 610 E | 609 E | 645 E | 672 E | 2,547 E |
| 2020 | 535 A | 562 A | 601 A | 637 E | 2,336 E |
| 2019 | 508 A | 534 A | 538 A | 582 A | 2,162 A |

## EPS Estimates

|      | Q1       | Q2       | Q3       | Q4       | Annual*   |
|------|----------|----------|----------|----------|-----------|
| 2021 | \$3.96 E | \$3.62 E | \$4.01 E | \$4.26 E | \$16.85 E |
| 2020 | \$0.45 A | \$3.71 A | \$4.31 A | \$4.26 E | \$12.72 E |
| 2019 | \$3.67 A | \$4.05 A | \$4.10 A | \$4.42 A | \$16.23 A |

\*Quarterly figures may not add up to annual.

|         |             |
|---------|-------------|
| P/E TTM | <b>11.2</b> |
| P/E F1  | <b>11.4</b> |
| PEG F1  | <b>1.3</b>  |
| P/S TTM | <b>3.5</b>  |

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 11/23/2020. The reports text is as of 11/24/2020.

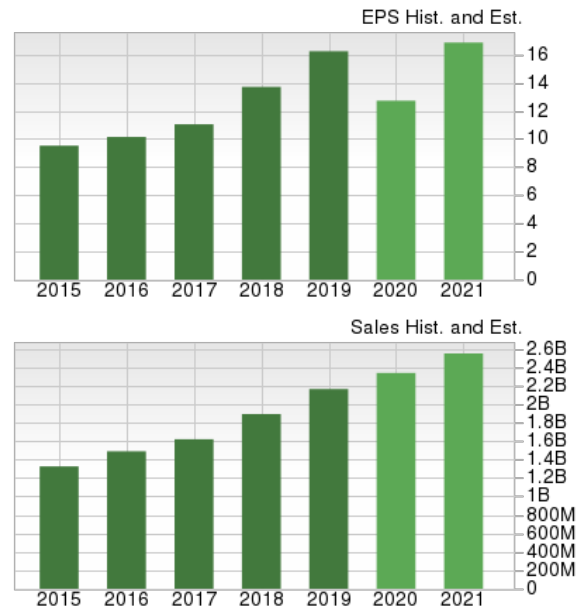
## Overview

Dublin, Ireland-based Jazz Pharmaceuticals is a specialty biopharmaceutical company with a focus in the areas of sleep and hematology/oncology. Key drugs include Xyrem for cataplexy and excessive daytime sleepiness (EDS) in narcolepsy patients, Erwinaze for acute lymphoblastic leukemia (ALL) patients who have developed hypersensitivity to E.coli-derived asparaginase, Defitelio for the treatment of patients with hepatic veno-occlusive disease (VOD) with renal or pulmonary dysfunction following hematopoietic stem cell transplantation (HSCT) and Vyxeos for the treatment of adults with two types of acute myeloid leukemia (AML). Sunosi (solriamfetol) was approved for excessive sleepiness in narcolepsy & obstructive sleep apnea (OSA) in March 2019. While Zepzelca (lurbinectedin) received approval for metastatic small cell lung cancer (SCLC) in June 2020, Xywav was approved for cataplexy and EDS in July 2020.

Jazz has bolstered its commercial portfolio and pipeline through acquisitions. Jazz added Sunosi to its sleep franchise with acquisition of Aerial BioPharma in 2014. Others include addition of marketed drugs – Defitelio, Vyxeos and Erwinaze. Addition of oncology drugs also diversified the company's product portfolio.

Meanwhile, the company is also developing a few new pipeline candidates. The company has launched two drugs, Zepzelca and Xywav in 2020 boosting its commercial portfolio.

The company generates the majority of its revenues from Xyrem sales. The drug registered sales of \$1.64 billion in 2019, up 16.9% from 2018 and generated almost 76% of total revenues, in 2019. Full-year sales for the company rose 14% year over year to \$2.16 billion in 2019.



Source: Zacks Investment Research

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## Reasons To Buy:

- ▲ **Demand for Xyrem Remains Strong:** Xyrem has demonstrated its immense commercial potential in its targeted indication of both cataplexy and EDS. Volume trends for Xyrem improved in the last two years supported by the company's disease awareness education efforts, which led to increased diagnosis rate of new narcolepsy patients.

The company has also expanded Xyrem's label to include new patient population in last two years. In 2018, the FDA granted approval for Xyrem's label expansion to include the pediatric patients with cataplexy or EDS. Jazz launched the drug for pediatric patients in March 2019, which is bringing in additional sales. Moreover, settlement of all patent litigation related to generic version removes an overhang. There is no generic competition expected till 2022 as of now.

Jazz's sleep franchise should continue to perform well. The company is looking to broaden Xyrem's label by expanding the targeted patient population.

- ▲ **Strong Sleep Disorder Portfolio:** Jazz's sleep disorder portfolio looks strong with the launch of Sunosi and several ongoing and planned development activities in the sleep therapeutic area.

In 2019, Sunosi (solriamfetol) received approval in the United States for excessive sleepiness in narcolepsy & OSA. The drug has shown encouraging demand trend along with improved coverage. The drug was approved in Europe for a similar indication in January 2020 with rolling launch started in Germany in May 2020. According to Jazz, there is significant unmet need in narcolepsy and OSA in both the United States and Europe. The company plans to develop Sunosi as a potential treatment for EDS in other sleep or central nervous system disorders, including major depressive disorder (MDD).

Other than Sunosi, Jazz received approval for Xywav (JZP-258; a low sodium formulation of Xyrem) in July 2020 for EDS and cataplexy in narcolepsy patients. The drug's low sodium content of Xywav boosts its potential as it can cater to more patients compared to Xyrem. In October 2020, the company successfully completed a phase III study evaluating Xywav for Idiopathic hypersomnia, or IH. A supplemental new drug application (sNDA) is planned to be filed in the first quarter of 2021.

- ▲ **Oncology Drugs Add Strong Growth and Diversification:** Apart from a strong sleep disorder, Jazz also has three marketed oncology drugs in its portfolio, which were internally developed or added through acquisitions. The company is also developing a few new oncology candidates and is also focused on expanding the labels of marketed drugs — Defitelio, Vyxeos and Erwinaze. These products bring additional revenues as well as diversify Jazz's marketed portfolio. The marketed oncology drugs generated more than 20% of the product revenues in 2019. Successful label expansion and new drug development will further boost revenues.

A mid-stage study is evaluating Defitelio for the prevention of CAR T-cell associated neurotoxicity in patients with relapsed or refractory DLBCL. The company is also developing the drug as a potential treatment for the prevention of acute graft versus host disease (aGVHD). Meanwhile, Jazz is also evaluating Vyxeos in other AML patient populations, such as pediatric patients and adults with standard or intermediate risk AML, in combination with targeted AML treatments and in new populations (myelodysplastic syndromes, or MDS).

In June 2020, Zepzelca received accelerated approval for treating relapsed small cell lung cancer (SCLC). The company has a late-stage oncology candidate in its pipeline — JZP-458. A pivotal phase II/III study is evaluating JZP-458 as a treatment for patients with acute lymphoblastic leukemia (ALL)/lymphoblastic lymphoma (LBL) who are hypersensitive to E. coli-derived asparaginase products. The company expects to file a biologics license application (BLA) for the candidate by 2020-end.

- ▲ **Regular Acquisitions/Collaborations to Boost Portfolio:** Jazz has added several drugs to its marketed portfolio and clinical-stage candidates to its pipeline through acquisitions or collaborations. In November 2020, the company acquired fatty acid amide hydrolase ("FAAH") inhibitor program including PF-04457845 from SpringWorks Therapeutics. The company plans to develop PF-04457845 for the potential treatment of post-traumatic stress disorder (PTSD) and associated symptoms. In 2019, Jazz acquired private biotech Cavion adding mid-stage movement disorder candidate (JZP-358) and Redx Pharma's pan-RAF inhibitor program for developing treatment for RAF and RAS mutant tumors. The company also collaborated with Codiak BioSciences, to develop and commercialize exosome therapeutics to treat cancer including an exclusive license for five targets. Jazz added Defitelio in 2013, Sunosi in 2014 and Vyxeos in 2016 through previous acquisitions.

The company continues to look for portfolio expansion through acquisitions or partnerships.

- ▲ **Favorable Debt Profile:** Jazz has a favorable debt profile. The company's debt to total capital ratio was 0.38 as of Sep 31, 2020, which compared favorably with the previous quarter's 0.4. With a cash position of \$1.92 billion and a favorable debt ratio, Jazz has a sound debt profile. Moreover, the company's cash resources are sufficient to pay its short-term debt of \$244 million in case of insolvency.

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## Reasons To Sell:

- ▼ **Regulation on Xyrem and Competition:** Xyrem is a controlled substance with a highly restricted distribution channel subject to a risk evaluation and mitigation strategy (REMS). In February 2015, the FDA approved Jazz's Xyrem REMS requiring distribution through a single pharmacy. Single pharmacy can put pressure on patient access as well as the overall healthcare delivery system. Moreover, the FDA plans to evaluate the Xyrem REMS on an ongoing basis and reserves the rights to make modifications if required, which can either lower entry barriers for companies looking to market generic versions of Xyrem or make it more expensive or difficult to market the drug.

The earlier-than-expected entry of Xyrem generics and any pipeline setback would weigh heavily on the stock.

Jazz had been involved in patent infringement lawsuits with generic drug makers for Xyrem. Several generic versions of Xyrem may hit the market in 2023. Launch of Xyrem's generic will unfavorably impact sales of the company's major drug. With nearly three-fourth of sales coming from Xyrem this will severely impact the company's top-line and weigh on share price. Moreover, the market for EDS in patients with narcolepsy is highly competitive, given the presence of Teva's Nuvigil and generic versions of Provigil, among others. Moreover, other companies are also developing treatments for similar indication including Avadel Pharmaceuticals' sodium oxybate formulation, FT-218, and Axsome Therapeutics' reboxetine.

- ▼ **Erwinaze Supply Constraints:** In 2019 and 2018, Jazz faced supply constraints for Erwinaze due to supply and manufacturing issues at the sole manufacturer, PDL. Supply disruptions to continue in 2021. Moreover, in February 2019, Jazz received termination notice from Porton Biopharma related to license and supply of Erwinaze which is set to expire by 2020 end. Without renewing the agreement, Jazz will not be able to sell Erwinaze beginning 2021, except for certain Erwinaze inventory for 12 months post termination of the agreement.
- ▼ **Pipeline Setbacks:** Jazz has had its share of pipeline setbacks. The company discontinued enrollment in the study evaluating Defitelio for the prevention of VOD in high-risk patients in April 2020 as it was highly unlikely that it will reach its primary endpoint. However, the company decided to continue to evaluate already enrolled patients. Although solriamfetol achieved improvement in patients in a phase II study evaluating it in EDS and Parkinson's disease, the company discontinued further development in May 2019.

In January 2016, the company terminated a phase II pivotal study on JZP-416 due to the occurrence of hypersensitivity-like reactions in patients suffering from ALL who are hypersensitive to pegylated E. coli-derived asparaginase. In addition to this, the company terminated a study evaluating Erwinaze in patients (18 to 39 years) suffering from ALL who are hypersensitive to E. coli-derived asparaginase due to its inability to enroll patients. Moreover, the company along with its partner Concert Pharmaceuticals decided not to move sleep disorder candidate, JZP-386, into the next stage of development following phase I study results.

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## Last Earnings Report

### Jazz Pharmaceuticals Beats on Q3 Earnings & Sales

Jazz Pharmaceuticals delivered adjusted earnings of \$4.31 per share for the third quarter of 2020, which beat the Zacks Consensus Estimate of \$4.03. Earnings rose 5.1% year over year driven by higher revenues.

Total revenues in the reported quarter rose 11.8% year over year to \$600.9 million and beat the Zacks Consensus Estimate of \$574 million.

| Quarter Ending   | 09/2020      |
|------------------|--------------|
| Report Date      | Nov 02, 2020 |
| Sales Surprise   | 4.71%        |
| EPS Surprise     | 6.95%        |
| Quarterly EPS    | 4.31         |
| Annual EPS (TTM) | 12.89        |

### Quarter in Detail

Net product sales increased 12.1% from the year-ago quarter to \$597.0 million driven by continued strong performance of Xyrem, strong initial Zepzelca sales, and recovery in sales of Defitelio and Vyxeos. Royalties and contract revenues declined 26.8% to \$3.9 million in the quarter.

### Neuroscience Products

Sales of neuroscience products increased 7% to \$456.9 million.

Sales of Xyrem, rose 5% year over year to \$447.8 million. Sales were driven by 4% rise in bottle volume growth. The average number of active Xyrem patients increased 2%. New patient diagnoses and enrollments of Xyrem are being hurt due to COVID-19, a trend expected to continue during the pandemic. However, the negative trend improved somewhat in the third quarter from the second-quarter level.

Jazz's newest drug Sunosi recorded sales of \$9.1 million in the quarter, higher than \$8.6 million in the previous quarter. U.S. prescriptions rose 7% from the previous quarter.

### Oncology Products

Oncology product sales in the third quarter of 2020 increased 37% to \$138.2 million.

Erwinaze/Erwinase (for acute lymphoblastic leukemia ["ALL"]) revenues were \$20.1 million, down 41% year over year due to supply constraints.

Defitelio sales increased 34% to \$50.2 million in the quarter due to recovery in hematopoietic stem cell transplants that had previously been postponed due to the COVID-19 pandemic.

Vyxeos generated sales of \$30.8 million, up 4% from the year-ago period

Zepzelca (lurbinectedin) was approved by the FDA in June for the treatment of adult patients with metastatic small cell lung cancer (SCLC) with disease progression on or after platinum-based chemotherapy. The company launched the drug in the U.S. market in July. The drug recorded sales of \$36.9 million in the third quarter.

Other product sales declined 58.2% to \$1.87 million.

### Cost Discussion

Adjusted selling, general and administrative (SG&A) expenses rose 17.6% to \$186.2 million due to higher expenses for multiple product launches.

Adjusted research and development (R&D) expenses declined 3% to \$71.1 million, as easy comparison with the year-ago quarter offset the impact of escalating expenses related to pipeline development. The year-ago quarter's R&D costs included a milestone payment to Pfenex, which was missing in the third quarter of 2020

### 2020 Guidance

The company raised its financial guidance for 2020 based on strong performance of its drugs during the third quarter and the robust launch of Zepzelca,

The company expects 2020 earnings in the range of \$12.20-\$13.00 compared with the prior expectation of \$11.90-\$13.00. Total revenues are expected to be in the range of \$2.32-\$2.38 billion versus \$2.23-\$2.33 billion expected previously.

Total product sales are anticipated in the range of \$2.30-\$2.36 billion versus \$2.21-\$2.31 billion expected previously.

In neuroscience, Jazz raised the lower end of the guidance range. Neuroscience sales are expected in the range of \$1.76 billion to \$1.8 billion compared with the previous range of \$1.73 billion to \$1.8 billion. The Oncology franchise is expected to record sales of \$525 million to \$565 million, higher than the previous range of \$445 million to \$525 million, reflecting the robust launch of Zepzelca and improving trends for Defitelio and Vyxeos.

While adjusted SG&A expenses are anticipated in the range of \$735 million to \$765 million (previously \$700 million to \$750 million), adjusted R&D expenses are expected to be in the band of \$275 million to \$305 million (maintained).

## Recent News

### Appoints New Board of Directors – Nov 17

Jazz announced that it has appointed Jennifer Cook and Mark Smith to the Company's Board of Directors. The appointment will be effective from Dec 1, 2020. While Jennifer has a vast experience of more than three decades in biopharmaceutical industry, Mark is a nationally-recognized expert in health policy, reimbursement and delivery systems.

### Signs Agreement to Boost Pipeline – Oct 26

Jazz announced that it has entered into an asset purchase and exclusive license agreement with SpringWorks Therapeutics. Per the agreement, Jazz acquired SpringWorks' fatty acid amide hydrolase ("FAAH") inhibitor program including PF-04457845. Jazz paid an upfront payment of \$35 million to SpringWorks and will pay up to \$375 million in milestone payments. Jazz has also assumed all milestone and royalty obligations owed by SpringWorks to Pfizer related to development and potential sales of PF-04457845.

### Xywav Succeeds in Idiopathic Hypersomnia Study – Oct 8

Jazz announced positive top-line data from a phase III study evaluating Xywav for the treatment of adult patients with idiopathic hypersomnia. Jazz plans to file a sNDA for Xywav to get the drug's label updated for including the idiopathic hypersomnia indication in the first quarter of 2021.

## Valuation

Jazz's shares are down 3.3% in the year-to-date period and 2.3% over the trailing 12-month period. Stocks in the Zacks sub-industry are down 3% which stocks in the Zacks sector remained flat in the year-to-date period. Over the past year, stocks in the sub-industry and the sector are down 3% and up 2.1%, respectively.

The S&P 500 Index is up 11.3% in the year-to-date period and 14.5% in the past year.

The stock is currently trading at 3.56X trailing 12-month sales per share which compares to 2.37X for the Zacks sub-industry, 3.2X for the Zacks sector and 4.54X for the S&P 500 Index.

Over the past five years, the stock has traded as high as 7.27X and as low as 2.32X, with a 5-year median of 5.25X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$152.00 price target reflects 3.75X trailing 12-month sales per share.

The table below shows summary valuation data for JAZZ.

| Valuation Multiples - JAZZ |               |       |              |        |         |
|----------------------------|---------------|-------|--------------|--------|---------|
|                            |               | Stock | Sub-Industry | Sector | S&P 500 |
| P/S TTM                    | Current       | 3.56  | 2.37         | 3.2    | 4.54    |
|                            | 5-Year High   | 7.27  | 4.33         | 3.69   | 4.6     |
|                            | 5-Year Low    | 2.32  | 1.71         | 2.31   | 2.81    |
|                            | 5-Year Median | 5.25  | 2.54         | 3.19   | 3.86    |
| P/B TTM                    | Current       | 2.38  | 1.56         | 3.98   | 6.07    |
|                            | 5-Year High   | 5.91  | 13.43        | 5.09   | 6.17    |
|                            | 5-Year Low    | 1.6   | 1.03         | 2.97   | 3.74    |
|                            | 5-Year Median | 3.33  | 2.4          | 4.29   | 4.91    |

As of 11/23/2020

Source: Zacks Investment Research

## Industry Analysis Zacks Industry Rank: Bottom 30% (178 out of 254)



Source: Zacks Investment Research

## Top Peers

| Company (Ticker)                                   | Rec        | Rank |
|----------------------------------------------------|------------|------|
| Horizon Therapeutics Public Limited Company (HZNP) | Outperform | 3    |
| Alkermes plc (ALKS)                                | Neutral    | 3    |
| Alexion Pharmaceuticals, Inc. (ALXN)               | Neutral    | 3    |
| Avadel Pharmaceuticals PLC. (AVDL)                 | Neutral    | 3    |
| BioMarin Pharmaceutical Inc. (BMRN)                | Neutral    | 3    |
| Endo International plc (ENDP)                      | Neutral    | 3    |
| Incyte Corporation (INCY)                          | Neutral    | 4    |
| Ionis Pharmaceuticals, Inc. (IONS)                 | Neutral    | 3    |

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

| Industry Comparison Industry: Medical - Drugs |         |            |           | Industry Peers |           |           |
|-----------------------------------------------|---------|------------|-----------|----------------|-----------|-----------|
|                                               | JAZZ    | X Industry | S&P 500   | ALKS           | ALXN      | BMRN      |
| Zacks Recommendation (Long Term)              | Neutral | -          | -         | Neutral        | Neutral   | Neutral   |
| Zacks Rank (Short Term)                       | 3       | -          | -         | 3              | 3         | 3         |
| VGM Score                                     | A       | -          | -         | B              | A         | B         |
| Market Cap                                    | 8.04 B  | 167.15 M   | 25.83 B   | 2.90 B         | 26.83 B   | 13.99 B   |
| # of Analysts                                 | 10      | 3          | 14        | 8              | 14        | 10        |
| Dividend Yield                                | 0.00%   | 0.00%      | 1.49%     | 0.00%          | 0.00%     | 0.00%     |
| Value Score                                   | A       | -          | -         | C              | A         | C         |
| Cash/Price                                    | 0.24    | 0.27       | 0.07      | 0.20           | 0.09      | 0.11      |
| EV/EBITDA                                     | 8.45    | -2.24      | 14.64     | -25.28         | 10.25     | 424.22    |
| PEG F1                                        | 1.27    | 2.17       | 2.76      | 17.56          | 0.87      | 1.29      |
| P/B                                           | 2.38    | 3.25       | 3.55      | 2.68           | 2.42      | 3.45      |
| P/CF                                          | 6.50    | 11.12      | 13.80     | 31.35          | 10.49     | 120.91    |
| P/E F1                                        | 11.31   | 20.95      | 21.67     | 46.89          | 10.18     | 48.54     |
| P/S TTM                                       | 3.53    | 7.52       | 2.79      | 2.48           | 4.58      | 7.51      |
| Earnings Yield                                | 8.81%   | -15.84%    | 4.40%     | 2.14%          | 9.82%     | 2.06%     |
| Debt/Equity                                   | 0.55    | 0.00       | 0.70      | 0.25           | 0.22      | 0.26      |
| Cash Flow (\$/share)                          | 22.22   | -0.58      | 6.92      | 0.58           | 11.68     | 0.64      |
| Growth Score                                  | B       | -          | -         | A              | A         | B         |
| Historical EPS Growth (3-5 Years)             | 15.17%  | 9.59%      | 9.72%     | NA             | 30.18%    | NA        |
| Projected EPS Growth (F1/F0)                  | -21.65% | 21.59%     | 0.42%     | -45.25%        | 14.36%    | 70.65%    |
| Current Cash Flow Growth                      | 24.39%  | 4.23%      | 5.29%     | -4.72%         | 28.27%    | 200.25%   |
| Historical Cash Flow Growth (3-5 Years)       | 15.52%  | 5.72%      | 8.33%     | -0.32%         | 20.68%    | 27.84%    |
| Current Ratio                                 | 3.98    | 3.60       | 1.38      | 2.71           | 3.81      | 3.20      |
| Debt/Capital                                  | 35.31%  | 0.46%      | 41.99%    | 20.09%         | 18.14%    | 20.95%    |
| Net Margin                                    | 7.86%   | -126.86%   | 10.40%    | -6.28%         | 16.32%    | 45.74%    |
| Return on Equity                              | 20.16%  | -56.13%    | 14.99%    | 9.35%          | 23.16%    | 4.34%     |
| Sales/Assets                                  | 0.39    | 0.27       | 0.50      | 0.64           | 0.34      | 0.36      |
| Projected Sales Growth (F1/F0)                | 8.08%   | 0.00%      | 0.23%     | -12.33%        | 19.72%    | 8.93%     |
| Momentum Score                                | C       | -          | -         | C              | A         | A         |
| Daily Price Change                            | 0.85%   | 0.00%      | 1.06%     | -0.05%         | 1.01%     | 1.44%     |
| 1-Week Price Change                           | -2.73%  | 0.00%      | 0.21%     | 2.47%          | -4.99%    | -2.03%    |
| 4-Week Price Change                           | -3.10%  | 1.89%      | 8.26%     | 14.58%         | 1.53%     | 0.21%     |
| 12-Week Price Change                          | 7.38%   | -0.49%     | 9.20%     | 10.22%         | 7.35%     | -1.27%    |
| 52-Week Price Change                          | -2.27%  | -5.80%     | 5.26%     | -14.85%        | 7.27%     | -3.54%    |
| 20-Day Average Volume (Shares)                | 567,878 | 210,090    | 2,312,054 | 1,268,049      | 1,343,323 | 1,364,758 |
| EPS F1 Estimate 1-Week Change                 | 0.00%   | 0.00%      | 0.00%     | -3.70%         | 0.00%     | 0.00%     |
| EPS F1 Estimate 4-Week Change                 | 2.70%   | 0.00%      | 0.96%     | 63.48%         | 9.18%     | 59.29%    |
| EPS F1 Estimate 12-Week Change                | 2.38%   | 1.59%      | 3.72%     | 63.87%         | 11.47%    | 75.00%    |
| EPS Q1 Estimate Monthly Change                | -0.96%  | 0.00%      | 0.00%     | 60.61%         | 9.09%     | -328.75%  |

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.

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### 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.

|                |          |
|----------------|----------|
| Value Score    | <b>A</b> |
| Growth Score   | <b>B</b> |
| Momentum Score | <b>C</b> |
| VGM Score      | <b>A</b> |

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.

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## Disclosures

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Investing involves risk; principal loss is possible. There is no guarantee that companies that can issue dividends will declare, continue to pay or increase dividends.

## 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 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-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 a 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 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.