

## PTC Inc. (PTC)

**\$63.29** (As of 05/13/20)

Price Target (6-12 Months): **\$66.00**

Long Term: 6-12 Months

**Zacks Recommendation:**

**Neutral**

(Since: 03/23/20)

Prior Recommendation: Outperform

Short Term: 1-3 Months

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

**2-Buy**

Zacks Style Scores:

VGM:B

Value: C

Growth: B

Momentum: A

## Summary

PTC's second-quarter fiscal 2020 earnings benefited from improvement in AR and IoT bookings. Synergies from Onshape acquisition also aided growth. New deal wins on the back of strategic alliances with Rockwell Automation and Microsoft bode well. Additionally, growing cloud of ThingWorx and Windchill platforms are noteworthy. Further, the company's increasing investments on emerging trends like IoT, AR/VR and autonomous vehicle sub-systems hold significant prospects. However, declining trend in net new bookings due to COVID-19 hurt growth in the fiscal second quarter. Further, the company reduced its 2020 guidance. Also, unfavorable foreign exchange rates and stiff competition in the computer-aided design market are headwinds. Notably, shares have underperformed the industry in the year-to-date period.

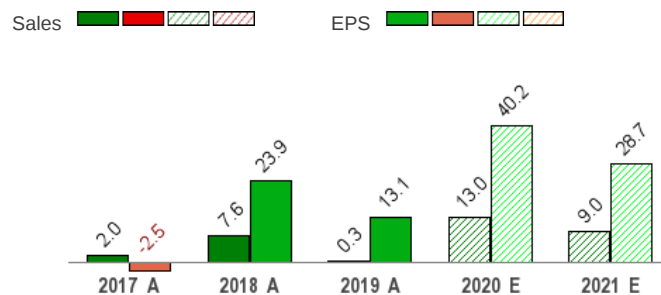
## Price, Consensus & Surprise



## Data Overview

|                            |                                     |
|----------------------------|-------------------------------------|
| 52 Week High-Low           | <b>\$93.34 - \$43.90</b>            |
| 20 Day Average Volume (sh) | <b>916,064</b>                      |
| Market Cap                 | <b>\$7.3 B</b>                      |
| YTD Price Change           | <b>-15.5%</b>                       |
| Beta                       | <b>1.18</b>                         |
| Dividend / Div Yld         | <b>\$0.00 / 0.0%</b>                |
| Industry                   | <a href="#">Computer - Software</a> |
| Zacks Industry Rank        | <b>Top 21% (53 out of 253)</b>      |

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



|                           |                   |
|---------------------------|-------------------|
| Last EPS Surprise         | <b>28.3%</b>      |
| Last Sales Surprise       | <b>4.8%</b>       |
| EPS F1 Est- 4 week change | <b>16.4%</b>      |
| Expected Report Date      | <b>07/22/2020</b> |
| Earnings ESP              | <b>-5.7%</b>      |

## Sales Estimates (millions of \$)

|      | Q1    | Q2    | Q3    | Q4    | Annual* |
|------|-------|-------|-------|-------|---------|
| 2021 | 392 E | 393 E | 386 E | 426 E | 1,547 E |
| 2020 | 356 A | 360 A | 338 E | 366 E | 1,419 E |
| 2019 | 335 A | 316 A | 323 A | 335 A | 1,256 A |

## EPS Estimates

|      | Q1       | Q2       | Q3       | Q4       | Annual*  |
|------|----------|----------|----------|----------|----------|
| 2021 | \$0.69 E | \$0.69 E | \$0.70 E | \$0.90 E | \$2.96 E |
| 2020 | \$0.57 A | \$0.59 A | \$0.47 E | \$0.68 E | \$2.30 E |
| 2019 | \$0.56 A | \$0.38 A | \$0.36 A | \$0.64 A | \$1.64 A |

\*Quarterly figures may not add up to annual.

|         |             |
|---------|-------------|
| P/E TTM | <b>29.3</b> |
| P/E F1  | <b>27.5</b> |
| PEG F1  | <b>NA</b>   |
| P/S TTM | <b>5.3</b>  |

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 05/13/2020. The reports text is as of 05/14/2020.

## Overview

Boston, MA-based PTC Inc. provides software solutions and services globally, that aid manufacturing companies to design, operate, and manage products. Founded in 1985, the company was formerly known as Parametric Technology Corporation and changed its name to PTC Inc. in January 2013.

The company offers comprehensive portfolio of software solutions comprising computer-aided design (CAD) modeling, product lifecycle management (PLM), data orchestration (IIoT), and experience creation (AR) products.

Creo is the company's flagship 3D CAD product. Creo offers design engineers with design flexibility, assembly design, surfacing, and virtual prototyping design capabilities.

PTC's primary PLM product, Windchill software offers a unified repository for comprehensive product information. Windchill also includes AR capabilities, to aid customers develop a digital product definition and publish the illustration of the product in AR.

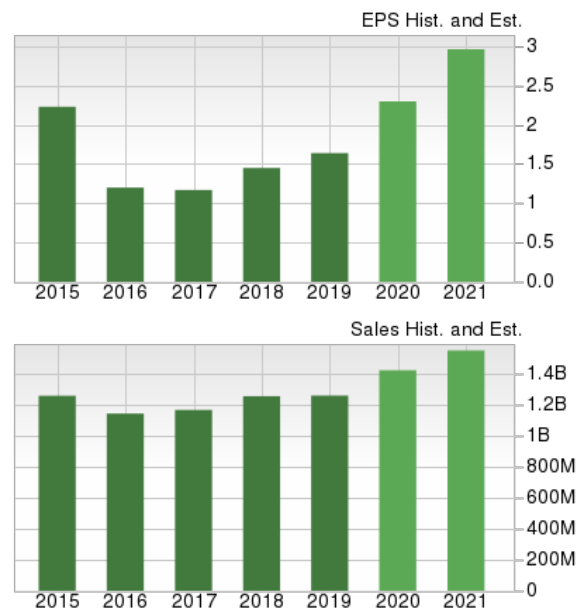
Meanwhile, ThingWorx product helps customers to develop and deploy IoT applications; manage connected devices; and analyze complex industrial IoT data, in a cost- and time-efficient manner.

Vuforia Studio product aids industrial enterprises to publish AR experiences superimpose vital digital information from CAD, IoT, and other related sources onto the view of the material things on which users work.

In fiscal 2019, revenues came in at \$1.311 billion as per ASC 605. Under ASC 606, the company reported revenues of \$1.256 billion.

PTC has two operating and reportable segments: Software Products (44.6% of fiscal 2019 revenues), which includes subscription, license and associated support revenues; and Professional Services (55.4%), which includes implementation, consulting and training services.

Per ASC 606, the company generated 43% of revenues from Americas, while the balance 57% came from foreign operations in fiscal 2019.



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## Reasons To Buy:

- ▲ PTC is well poised to gain from strength in product portfolio. The company's solutions aid industrial enterprises to enhance operational efficiency, accelerate product and service innovation, and boost workforce productivity. Growing clout of the company's major technology platforms including, 3D modeling (CAD) offering; Creo, lifecycle management (PLM) solution; Windchill, data orchestration (IIoT) offering; ThingWorx, and experience creation (AR) product; Vuforia Studio, is expected to drive the top-line.
- ▲ Global 3D CAD software market is set to hit \$14.5 billion by 2026, at a CAGR of 5.9% between 2019 and 2026, per Acumen Research and Consulting data. Increased adoption of computer-based design in the automotive sector, and growing clout of additive production by manufacturers, are tailwinds. Solid demand for precision in design, complex prototyping and digitalization of construction is expected to drive demand for 3D-CAD offerings in the automotive, aerospace, manufacturing, healthcare and defense verticals.
- ▲ Moreover, increasing spending by enterprises on emerging categories like IoT and AR/VR presents significant prospects for PTC. Market research firm IDC estimates global IoT spending to hit \$1.1 trillion in 2023. Moreover, the firm estimates AR/VR spending to accelerate at a CAGR of 77% over 2019-2023 timeframe. This presents significant growth opportunity for semiconductor chip makers and electronics sensor developers. We believe that the company's expanding product portfolio will help it to win frequent orders and new customers from these emerging markets. Notably, IDC's "MarketScape: Worldwide Industrial IoT Platforms in Manufacturing 2019 Vendor Assessment" report places PTC in the "Leaders" quadrant, which reflects the company's growing clout in the IIoT vertical on robust adoption of its ThingWorx offering.
- ▲ The company's collaborations with advanced technology suppliers, hardware vendors, specialized application developers, and CAD and PLM providers is a key catalyst. For instance, PTC's partnership with ANSYS enables integration of Creo with ANSYS' Discovery Live real-time simulation capabilities. The company also teamed up with Rockwell Automation, which is expected to enhance PTC's Vuforia and ThingWorx platforms. It has also partnered with Microsoft to deploy the ThingWorx Industrial Innovation Platform on Azure cloud platform. We believe that the strong partner network will help the company win customers more frequently, which in turn will drive the top line.
- ▲ Strategic acquisition strategy has played a pivotal part in developing the company's business in the last few years. Recently, the company acquired Onshape for \$470 million in cash to enhance Creo and Windchill products with advanced SaaS capabilities. The company's buyout of TWINKLS will strengthen its industrial AR offerings. These along with Frustum (advanced patented desktop and cloud-based generative design software provider), Waypoint Labs and Reality Editor (adding more IoT and AR product development capabilities) acquisitions have enabled the company to offer new and innovative products. We anticipate PTC to pursue tuck-in acquisitions, which will further expand product portfolio in the long term.
- ▲ We also note that it has a diversified customer base, which is evident from the fact that no single customer accounted for more than 5% of revenues in the last three years. Markedly, at the end of fiscal 2019, total deferred revenues (including unbilled deferred revenues and backlog) came in at \$1.135 billion. We also believe that PTC's increasing investments on emerging trends like IoT, AR/VR and autonomous vehicle sub-systems presents significant prospects for the company in the long haul.

Robust adoption driven by high demand for SaaS-based CAD, PLM and IIoT solutions, new business bookings on the back of strategic alliances with Rockwell Automation and Microsoft, are key catalysts.

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## Reasons To Sell:

- ▼ PTC generated a significant portion (57%) of revenues from the International market in fiscal 2019. Adverse foreign currency exchange rates, particularly the Euro, impacted European revenues unfavorably in 2019 by \$26 million. Unfavorable changes in foreign currency exchange rates impacted Asia Pacific revenues by \$6 million in 2019. This is anticipated to weigh on revenue growth in the near term owing to the strengthening of the U.S. dollar compared with the Euro and other foreign currencies, which is a significant concern.
- ▼ Moreover, Europe continues to remain a major headwind for PTC. Uncertainty related to Brexit, growing data privacy regulations and overall macro-weakness in the region is anticipated to hurt top line in the near term. Notably, the company generated 37% of fiscal 2019 revenues (per ASC 606) from Europe.
- ▼ Further, PTC has been incurring operating losses since inception and has an accumulated deficit of \$150 million as of Mar 28. Continuing investments on research & development and sales & marketing, are likely to weigh on profitability. Despite the improving top line, mounting losses doesn't augur well for investor confidence in our view.
- ▼ PTC faces stiff competition in the computer-aided design (CAD) market from Cadence Design Systems (as it recently ventured into the market with 3D Solver offering), Autodesk, ANSYS and Synopsys, to mention a few. Considering IIoT vertical, similar solutions from large established companies like Amazon, IBM, Oracle, SAP, Siemens AG, and GE are likely to affect adoption of PTC's ThingWorx IoT platform. New entrants are likely to pose a threat to the company's market share. This might compel the company resort to competitive pricing to maintain and capture further market share.
- ▼ Frequent acquisitions have escalated integration risks for PTC. We note that the frequent acquisitions negatively impacted the company's balance sheet in the form of high level of goodwill and intangible assets, which accounted for approximately \$1.85 billion or 48% of total assets as of Mar 28. The acquisitions also increase PTC's debt burden, which increases the risk profile of the business. As of Mar 28, the company's net debt was \$746 million compared with \$825.5 billion as of Dec 28, 2019. Moreover, total debt to total capital ratio of 51.3% is higher compared to the industry's figure of 44.6%. Further, times interest earned is currently at 1.4X compared with the industry's figure of 16.5X. Thus, the company is required to constantly generate adequate amount of cash flows to meet debt requirements.

Uncertainty over Brexit adverse foreign currency exchange volatility, and integration risks from buyouts, are likely to weigh on PTC's financial performance.

## Last Earnings Report

### PTC Beats Earnings Estimates in Q2, Lowers 2020 Guidance

PTC Inc. reported second-quarter fiscal 2020 non-GAAP earnings of 59 cents per share, up 168.1% on a year-over-year basis.

Revenues came in at \$359.6 million, up 23.8% year over year. Solid AR and IoT bookings as well as synergies from Onshape acquisition drove growth.

However, due to the COVID-19 outbreak, the company witnessed a decline in new bookings during the last few weeks of the quarter. The impact was most prominent among smaller channel customers in Europe and Asia.

#### Top Line in Detail

Recurring revenues of \$315.9 million improved 32% year over year. Perpetual license of almost \$8.2 million declined 20.5% from the year-ago quarter's figure due to end of perpetual license sales on Jan 1, 2019.

#### Revenues by License, Support and Services

License revenues (35.5% of total revenues) were \$127.6 million, up 106.2% from the year-ago quarter's figure.

Support and cloud services revenues (54.6%) of \$196.5 million improved 4.7% year over year.

Professional services revenues (9.9%) of \$35.5 million, declined 13.2% year over year.

#### Revenues by Product Group

Revenues from Core Product Group — which includes computer-aided design (CAD) & Product Lifecycle Management (PLM) offerings — came in at \$252.8 million, up 27% year over year (up 29% at constant currency or cc).

Revenues from Growth Product Group (which includes IoT, AR & Onshape) totaled \$53.3 million, up 29% year over year (31% at cc).

Revenues from Focused Solutions Group (FSG) amounted to \$53.5 million, up 6% year over year (7% at cc).

#### ARR Performance

Annualized recurring revenues (ARR) were \$1.179 billion, up 10% year over year, driven by strength across Europe and Asia as well as solid performance in the Core product group.

ARR from Core Product Group (CAD & PLM) came in at \$848 million, up 9% year over year (up 10% at cc). Growth was driven by strength in PLM as well as robust performance across Japan and Europe.

ARR from Growth Product Group (IoT, AR & Onshape) came in at \$153 million, up 29% year over year (30% at cc). Year-over-year growth can be attributed to improvement in AR and IoT bookings as well as strength across Europe and Japan. However, performance was dampened by decline in transaction at the end of quarter due to COVID-19 outbreak.

ARR from FSG came in at \$178 million, up 1% year over year (2% at cc). The low growth rate reflects on the APAC region's weak performance.

#### Operating Details

Non-GAAP gross margin contracted 370 basis points (bps) on a year-over-year basis to 79.7%.

Non-GAAP operating expenses came in at \$183 million. GAAP operating expenses declined 3% year over year to \$227 million. This can be attributed to the company's restructuring efforts to control expenses.

Operating income on a non-GAAP basis increased 132.6% year over year to \$103.2 million.

Consequently, operating margin on a non-GAAP basis came in at 28.7% compared with 15.3% reported in the year-ago quarter.

#### Balance Sheet & Cash Flow

As of Mar 28, cash, cash equivalents and marketable securities were \$884 million compared with prior quarter's figure of \$294.5 million.

Total debt, net of deferred issuance costs, was \$1.63 billion, up from prior quarter's \$1.12 billion.

Cash provided by operating activities came in at \$87.8 million compared with prior-quarter figure of \$7.5 million.

Free cash flow was \$82.3 million compared with \$2.8 million reported in the previous quarter.

#### Guidance

Due to weakening macroeconomic conditions induced by the coronavirus pandemic, the company reduced its guidance for fiscal 2020.

Quarter Ending 03/2020

| Report Date      | Apr 29, 2020 |
|------------------|--------------|
| Sales Surprise   | 4.75%        |
| EPS Surprise     | 28.26%       |
| Quarterly EPS    | 0.59         |
| Annual EPS (TTM) | 2.16         |

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Fiscal 2020 revenues are now projected between \$1.40 billion and \$1.43 billion compared with the earlier guidance of \$1.445-\$1.525 billion.

Further, non-GAAP earnings are now expected between \$2.20 and \$2.35 per share compared with the prior range of \$2.15-\$2.65 per share.

ARR is now expected to be \$1.220-\$1.255 billion, which calls for a rise of 9-12% year over year. The prior guidance for ARR was in the range of \$1.270-\$1.295 billion.

Adjusted free cash flow is projected to be \$200 million compared with the prior range of \$218-\$238 million.

Further, non-GAAP operating margin is expected to be 27-28%. The previous guidance range for non-GAAP operating margin was 26-29%.

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## Recent News

On Apr 23, PTC announced the release of the Vuforia Spatial Toolbox platform, designed to solve spatial computing problems and speed-up the spatial AR programming of machines.

On Apr 14, PTC announced the launch of the latest version of its Creo 3D computer-aided design (CAD) software – Creo 7.0, which added artificial intelligence (AI) capabilities to the software.

On Mar 24, PTC announced that its Onshape product development software will be available free of charge to students around the world to enable remote STEM learning amid the COVID-19 pandemic.

On Jan 29, PTC announced senior notes offering of \$750 million in aggregate principal amount slated to mature in 2025 and 2028.

On Jan 28, PTC declared it has been recognized as a leader by Forrester Research, in the latest report titled, "The Forrester Wave: Industrial IoT Software Platforms, Q4 2019."

On Jan 16, PTC announced the appointment of Kathleen Mitford as the company's chief strategy officer.

## Valuation

PTC shares are down 15.5% in the year to date period, and 27.4% over the trailing 12-month period. Stocks in the Zacks sub-industry are up 7% while the Zacks Computer & Technology sector is down 2.2% in the year to date period. Over the past year, the Zacks sub-industry and sector are up 22.3% and 10.5% respectively.

The S&P 500 index is down 12.5% in the year to date period and 1.5% in the past year.

The stock is currently trading at 4.89X forward 12-month sales, which compares to 7.11X for the Zacks sub-industry, 3.49X for the Zacks sector and 3.18X for the S&P 500 index.

Over the past five years, the stock has traded as high as 9.96X and as low as 2.61X, with a 5-year median of 5.31X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$66 price target reflects 5.1X forward 12-month sales.

The table below shows summary valuation data for PTC

| Valuation Multiples - PTC |               |       |              |        |         |
|---------------------------|---------------|-------|--------------|--------|---------|
|                           |               | Stock | Sub-Industry | Sector | S&P 500 |
| P/S F12M                  | Current       | 4.89  | 7.11         | 3.49   | 3.18    |
|                           | 5-Year High   | 9.96  | 7.23         | 3.59   | 3.44    |
|                           | 5-Year Low    | 2.61  | 3.88         | 2.32   | 2.54    |
|                           | 5-Year Median | 5.31  | 5.51         | 3.1    | 3.02    |
| P/B TTM                   | Current       | 5.74  | 9.12         | 4.62   | 3.7     |
|                           | 5-Year High   | 15    | 10.56        | 5.38   | 4.55    |
|                           | 5-Year Low    | 3.8   | 4.11         | 3.16   | 2.84    |
|                           | 5-Year Median | 7.33  | 6.54         | 4.29   | 3.65    |
| EV/Sales TTM              | Current       | 5.77  | 7.17         | 3.81   | 2.69    |
|                           | 5-Year High   | 10.45 | 8.11         | 4.43   | 3.45    |
|                           | 5-Year Low    | 2.95  | 3.19         | 2.58   | 2.15    |
|                           | 5-Year Median | 6.22  | 5.62         | 3.57   | 2.8     |

As of 05/13/2020

## Industry Analysis Zacks Industry Rank: Top 21% (53 out of 253)



## Top Peers

| Company (Ticker)                  | Rec          | Rank |
|-----------------------------------|--------------|------|
| Autodesk Inc (ADSK)               | Neutral      | 2    |
| ANSYS Inc (ANSS)                  | Neutral      | 3    |
| Blackbaud Inc (BLKB)              | Neutral      | 3    |
| Cadence Design Systems Inc (CDNS) | Neutral      | 2    |
| CommVault Systems Inc (CVLT)      | Neutral      | 3    |
| Nuance Communications Inc (NUAN)  | Neutral      | 3    |
| Pegasystems Inc (PEGA)            | Neutral      | 2    |
| Verint Systems Inc (VRNT)         | Underperform | 4    |

| Industry Comparison Industry: Computer - Software |         |            |           | Industry Peers |           |              |
|---------------------------------------------------|---------|------------|-----------|----------------|-----------|--------------|
|                                                   | PTC     | X Industry | S&P 500   | ANSS           | CDNS      | VRNT         |
| Zacks Recommendation (Long Term)                  | Neutral | -          | -         | Neutral        | Neutral   | Underperform |
| Zacks Rank (Short Term)                           | 2       | -          | -         | 3              | 2         | 4            |
| VGM Score                                         | B       | -          | -         | F              | C         | A            |
| Market Cap                                        | 7.32 B  | 1.44 B     | 18.76 B   | 21.58 B        | 22.69 B   | 2.69 B       |
| # of Analysts                                     | 7       | 4          | 14        | 6              | 6         | 4            |
| Dividend Yield                                    | 0.00%   | 0.00%      | 2.23%     | 0.00%          | 0.00%     | 0.00%        |
| Value Score                                       | C       | -          | -         | F              | C         | C            |
| Cash/Price                                        | 0.10    | 0.09       | 0.06      | 0.03           | 0.04      | 0.14         |
| EV/EBITDA                                         | 55.11   | 17.83      | 11.39     | 35.36          | 35.54     | 16.05        |
| PEG Ratio                                         | NA      | 2.37       | 2.54      | NA             | 2.93      | 0.85         |
| Price/Book (P/B)                                  | 5.74    | 4.78       | 2.56      | 6.58           | 10.52     | 2.24         |
| Price/Cash Flow (P/CF)                            | 39.21   | 20.66      | 10.04     | 38.44          | 20.37     | 9.94         |
| P/E (F1)                                          | 27.52   | 28.22      | 18.48     | 42.18          | 32.95     | 11.87        |
| Price/Sales (P/S)                                 | 5.33    | 4.10       | 1.91      | 14.35          | 9.55      | 2.07         |
| Earnings Yield                                    | 3.63%   | 3.26%      | 5.09%     | 2.37%          | 3.04%     | 8.43%        |
| Debt/Equity                                       | 1.04    | 0.16       | 0.75      | 0.16           | 0.16      | 0.74         |
| Cash Flow (\$/share)                              | 1.61    | 1.18       | 7.01      | 6.56           | 3.98      | 4.20         |
| Growth Score                                      | B       | -          | -         | D              | C         | B            |
| Hist. EPS Growth (3-5 yrs)                        | -2.79%  | 10.66%     | 10.82%    | 14.49%         | 27.77%    | 4.93%        |
| Proj. EPS Growth (F1/F0)                          | 40.16%  | 0.11%      | -10.51%   | -9.17%         | 11.74%    | -2.02%       |
| Curr. Cash Flow Growth                            | -3.70%  | 10.44%     | 5.83%     | 8.84%          | 138.95%   | 10.44%       |
| Hist. Cash Flow Growth (3-5 yrs)                  | -9.76%  | 8.91%      | 8.52%     | 7.79%          | 24.55%    | 0.84%        |
| Current Ratio                                     | 1.13    | 1.44       | 1.27      | 2.40           | 1.38      | 1.42         |
| Debt/Capital                                      | 50.87%  | 27.51%     | 44.25%    | 13.88%         | 13.82%    | 42.63%       |
| Net Margin                                        | 4.67%   | 6.84%      | 10.59%    | 27.34%         | 41.74%    | 2.20%        |
| Return on Equity                                  | 15.35%  | 11.18%     | 16.36%    | 13.73%         | 55.35%    | 12.80%       |
| Sales/Assets                                      | 0.44    | 0.63       | 0.54      | 0.37           | 0.77      | 0.44         |
| Proj. Sales Growth (F1/F0)                        | 8.46%   | 3.45%      | -2.55%    | 4.28%          | 9.40%     | 3.45%        |
| Momentum Score                                    | A       | -          | -         | D              | B         | A            |
| Daily Price Chg                                   | -7.62%  | -1.60%     | -2.85%    | -2.96%         | -0.06%    | -2.61%       |
| 1 Week Price Chg                                  | 7.79%   | 4.04%      | 3.23%     | 2.89%          | 8.73%     | 10.73%       |
| 4 Week Price Chg                                  | -1.83%  | 2.01%      | -0.28%    | -0.74%         | 7.00%     | 3.73%        |
| 12 Week Price Chg                                 | -28.45% | -14.68%    | -23.80%   | -14.87%        | 1.22%     | -29.54%      |
| 52 Week Price Chg                                 | -27.31% | 0.00%      | -13.31%   | 34.85%         | 17.83%    | -31.09%      |
| 20 Day Average Volume                             | 916,064 | 122,260    | 2,552,088 | 566,819        | 2,351,977 | 460,600      |
| (F1) EPS Est 1 week change                        | 0.00%   | 0.00%      | 0.00%     | -4.60%         | 0.00%     | 0.00%        |
| (F1) EPS Est 4 week change                        | 16.38%  | -1.49%     | -6.15%    | -5.26%         | 6.62%     | -11.92%      |
| (F1) EPS Est 12 week change                       | 3.06%   | -8.02%     | -16.21%   | -15.68%        | 3.87%     | -29.44%      |
| (Q1) EPS Est Mthly Chg                            | 23.39%  | -0.91%     | -12.28%   | -23.87%        | -16.44%   | -22.06%      |

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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 have an excellent 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    | C |
| Growth Score   | B |
| Momentum Score | A |
| VGM Score      | 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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