

Becton, Dickinson (BDX)

\$226.15 (As of 09/15/20)

Price Target (6-12 Months): **\$237.00**

Long Term: 6-12 Months

Zacks Recommendation:

Neutral

(Since: 04/02/20)

Prior Recommendation: Underperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

3-Hold

Zacks Style Scores:

VGM:C

Value: C

Growth: B

Momentum: D

Summary

BD continues to see strong demand for its product portfolio that supports the global COVID-19 response, especially the recent launch of its COVID-19 rapid point-of-care antigen test. The company exited the fiscal third quarter on a mixed note, with earnings beating but revenues missing estimates. Within the United States, the Diagnostic Systems unit witnessed strong revenue growth on COVID-19 testing. However, decline in each of its core segments viz. BD Medical, BD Interventional and BD Lifesciences during the quarter is concerning. Both domestic and international revenues decreased year over year in the quarter under review. Contraction in both the gross and adjusted operating margins raises concern. Unfavorable foreign currency impacted BD's quarterly bottom line. Year-to-date, shares of BD have underperformed its industry.

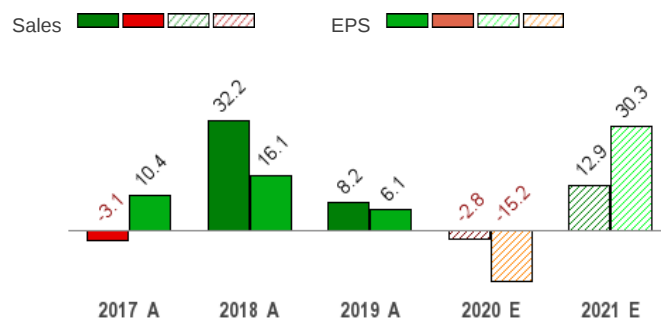
Price, Consensus & Surprise



Data Overview

52-Week High-Low	\$286.72 - \$197.75
20-Day Average Volume (Shares)	1,499,354
Market Cap	\$65.6 B
Year-To-Date Price Change	-16.9%
Beta	0.85
Dividend / Dividend Yield	\$3.16 / 1.4%
Industry	Medical - Dental Supplies
Zacks Industry Rank	Top 39% (99 out of 251)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	7.3%
Last Sales Surprise	-1.9%
EPS F1 Estimate 4-Week Change	-0.1%
Expected Report Date	11/03/2020
Earnings ESP	-5.9%
P/E TTM	21.1
P/E F1	22.8
PEG F1	2.6
P/S TTM	3.9

Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	4,517 E	4,682 E	4,641 E	4,961 E	18,971 E
2020	4,225 A	4,253 A	3,855 A	4,465 E	16,810 E
2019	4,160 A	4,195 A	4,350 A	4,584 A	17,290 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$3.05 E	\$3.17 E	\$3.20 E	\$3.55 E	\$12.90 E
2020	\$2.65 A	\$2.55 A	\$2.20 A	\$2.55 E	\$9.90 E
2019	\$2.70 A	\$2.59 A	\$3.08 A	\$3.31 A	\$11.68 A

*Quarterly figures may not add up to annual.

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 09/15/2020. The reports text is as of 09/16/2020.

Overview

Based in Franklin Lakes, NJ, Becton, Dickinson and Company (BDX) commonly known as BD, is a medical technology company engaged principally in the development, manufacture and sale of medical devices, instrument systems and reagents.

In fiscal 2019, BD's revenues increased 8.2% to \$17.29 billion.

Earlier, BD's operations consisted of three business segments: BD Medical, BD Diagnostics and BD Biosciences. However, the company's organizational structure was realigned to form two principal business segments: **BD Medical**, **BD Life Sciences** and **BD Interventional**.

BD Medical (52.4% of fiscal 2019 revenues)

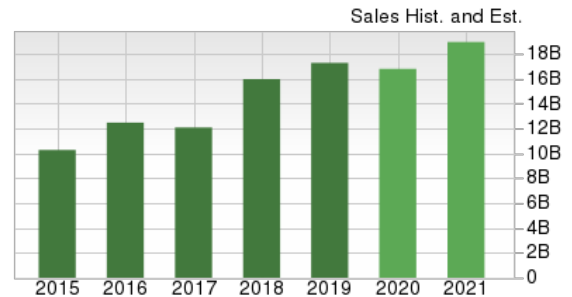
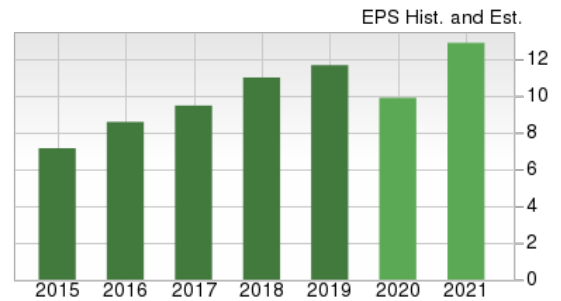
BD Medical's major product lines include needles, syringes and intravenous catheters for medication delivery; prefilled IV flush syringes; syringes and pen needles for diabetes care; refillable drug delivery systems; regional anesthesia needles and trays; sharps disposal containers; closed-system transfer devices; and generic prefilled injectables.

BD Life Sciences (24.9% of fiscal 2019 revenues)

BD Diagnostics provides products for the safe collection and transport of diagnostics specimens, as well as instruments and reagent systems to detect a broad range of infectious diseases, healthcare-associated infections and cancer.

BD Biosciences produces research and clinical tools that facilitate the study of cells to gain a better understanding of normal and disease processes.

With the acquisition of C.R. Bard, BD added a new segment — **BD Interventional** (21.9% of fiscal 2019 revenues) — in which C.R. Bard has been integrated.



Source: Zacks Investment Research

Reasons To Buy:

▲ **Positive Developments:** In recent times, BD announced the launch of two cloud-based applications, BD HealthSight Data Manager and BD HealthSight Diversion Analytics, which enable an enterprise-wide connected medication management system. Notably, both form part of the BD HealthSight platform.

In April 2020, BD attained FDA's EUA for a new diagnostic test that will help hospitals to screen for COVID-19 (coronavirus) on site and get results in under three hours. Around the same time, the company attained FDA EUA for an additional molecular diagnostic test for COVID-19 that can provide results in two to three hours. The new test has also attained CE mark. Again in April, in collaboration with a molecular diagnostic company BioGX Inc., BD announced the receipt of EUA from the FDA for a new diagnostic test that will help hospitals to screen for COVID-19 on site and obtain results in under three hours. Notably, the test will run on the BD MAX System, which is a molecular diagnostic platform.

However, due to challenges pertaining to the global COVID pandemic, among other factors, the company was unable to submit its Alaris 510(k) filing in the fiscal fourth quarter. However, management expects to submit the updated 510(k) in late fiscal second quarter or early fiscal third quarter of 2021 based on ongoing dialogue with the FDA.

In the fiscal third quarter, BD submitted its summative testing protocols to the FDA and expects feedback soon. Once it receives the feedback, it will be able to complete summative testing. Moreover, in its ongoing feedback discussions with the FDA, management decided to include an update to its specialty EtCO2 module, which is crucial for clinical care and especially COVID-19 response. The EtCO2 module is used to help monitor patients on ventilators while medication is being administered.

Within BD Interventional, the company recently received FDA clearance for its next-generation targeted temperature management system, namely the AS Stat Temperature Management System. It offers a way to non-invasively control temperature within a narrow range for all suitable patients.

In July 2020, BD received the EUA from the FDA for a rapid, point-of-care, SARS-CoV-2 diagnostic test for use with its widely available BD Veritor Plus System. This marks the company's third diagnostic test to receive EUA for the detection of COVID-19. In July, BD announced the receipt of approval for a pre-market approval (PMA) supplement from the FDA for an expanded version of its BD Onclarity HPV Assay.

▲ **Leading Player in Safety-Needle Space:** BD is a global leader in safety-needle products as well as several diagnostic laboratory instruments. The company has recently launched BD Ultra-Fine micro pen needle 6mm x 32G for use with pen injection devices. The needles offer comfortable injection experience, enhancing customer satisfaction. BD has widened the needle length options for diabetic people. Interestingly, most insurance plans, including Medicare part D, cover BD Ultra-Fine micro 6mm pen needles.

According to a report by bccResearch, the global diabetes market should reach a worth of \$155 billion by 2021, at a CAGR of 4.4% from 2016 to 2021. Considering the huge potential of the market, we believe the latest developments are strategic fits.

▲ **Formation of BD Interventional – A New Segment:** BD had established a third business segment — BD Interventional. Notably, C.R. Bard is integrated in this vertical. BD is already a leading player in interventional specialties solutions. The company promotes positive clinical outcomes using minimally invasive and percutaneous techniques for obtaining samples of liver, breast, lung and kidney biopsy. Further, the company provides facilities for peritoneal drainage at home.

In the fiscal second quarter, this segment registered 2.8% year-over-year revenue growth. At cc, revenues grew 3.3% on strong performance by the Peripheral Intervention, Urology and Critical Care units. However in the fiscal third quarter, this segment generated worldwide revenues of \$0.78 billion, down 20.3% from the year-ago quarter and 19.2% at cc. This was due to the performance in the Surgery and Peripheral Intervention units which indicates continued deferral of elective procedures as a result of the pandemic.

▲ **Product Portfolio Solid:** A diversified product portfolio has been the key catalyst for BD.

In recent times, other products like WavelinQ, Covera and Venovo products performed impressively. Also, BD MAX and BD COR have received positive feedback in Europe. In fact, management at BD has announced a \$1-billion investment in R&D in fiscal 2020.

During the fiscal second quarter, BD closed the acquisition of NAT Diagnostics, an early-stage company with a very innovative platform in the fast-growing molecular point-of-care market. This acquisition will strengthen BD's presence in the molecular point-of-care testing market. Recently, BD completed the acquisition of Straub Medical, which is a privately-held company focused on devices that treat or restore blood flow to clotted or blocked vessels. This acquisition will further boost BD's arterial atherectomy and thrombectomy portfolios. The recent collaboration with Medcaptain Medical Technology is also expected to boost BD's medication management portfolio.

In July 2020, BD formed a strategic, public-private partnership with the Biomedical Advanced Research and Development Authority (BARDA), which is part of the U.S. Health and Human Services Office of the Assistant Secretary for Preparedness and Response. The primary objective of this collaboration is to create new manufacturing lines for injection devices that will offer priority access to the U.S. government for hundreds of millions of syringes and needles. This collaboration is likely to provide a boost to the company's BD Medical segment.

In the fiscal third quarter, BD also inked a partnership with AdvaMed on the national diagnostic supply registry to help ensure widespread availability of testing.

▲ **Plethora of Launches:** BD has launched several products in recent times.

BD's focus on expanding into overseas markets, in particular, the emerging markets, new product launches as well as its acquisition-driven strategy are significant growth catalysts.

During the fiscal second quarter, BD unveiled both the 300-millimeter and AV low profile Lutonix balloons. Banking on these launches, the company continued to register sequential improvement in the use of drug-coated balloons prior to COVID. The company is also in the early stages of launch of Dry-Doc 2.0, which is a technology designed to facilitate the continued use of the PureWick female incontinent device in post-acute and home environment.

In March 2020, the company in partnership with BioMedomics announced the launch of a new point-of-care test that can diagnose antibodies in blood to confirm current or past exposure to COVID-19 in a mere span of 15 minutes.

In July 2020, BD launched the SARS-COVID-2 antigen assay for the Veritor Plus system, which received FDA EUA early that month. The company believes this platform can dramatically expand access to COVID-19 testing at the point of care and efficiently diagnose SARS-COVID-2 in 15 minutes. Within the first month since launch, BD saw strong demand for both the Veritor Plus system and the SARS-COVID-2 assay.

In July, the company launched BD PurPrep patient preoperative skin preparation with sterile solution, the first and only fully sterile povidone-iodine plus isopropyl alcohol single-use antiseptic skin preparation commercially available in the United States. This is expected to boost the company's Life Sciences segment. Also, in the same month, BD launched in Europe the new CE-marked BD Kiestra Inoqua system powered by BD Synapsys informatics solution. It is a next-generation microbiology solution for liquid and non-liquid sample processing.

▲ **Geographical Expansion:** BD remains focused on geographical expansion into overseas markets, in particular, emerging markets. Per management, International revenues grew 1.5% at cc on strength within Europe and Latin America in the second quarter. The company saw COVID-driven demand surge in Europe in the quarter. Also, the company saw continued commercialization of DCBs in Japan. However, in the fiscal third quarter, net revenues outside the United States grossed \$1.74 billion, down 9.2% from the year-ago quarter. At cc, revenues at the segment fell 4.7%. Per management, this downside was owing to declines in China and Latin America, partially offset by growth in Europe and EMA.

Nonetheless, BD saw revenue growth in the Medication Management Solutions unit which reflects solid demand for infusion pumps in the United States under medical necessity and strong growth outside the United States, particularly in Europe. China delivered steady growth in the month of June in all three BDI businesses.

▲ **Strong Liquidity Position:** The company exited the third quarter of fiscal 2020 with cash and cash equivalents of \$2.98 billion, up sequentially from \$2.45 billion. Meanwhile, the company's long-term debt totaled \$17.09 billion in the fiscal third quarter, up sequentially from \$16.81 billion. Also, we can see that the current debt level of \$1.63 billion in the quarter has substantially decreased from the preceding quarter's \$4.36 billion. Moreover, the current debt level is noticeably lower than the company's short-term cash level, which is particularly good when it comes to company's solvency position, as at least during a year of economic downturn, the company has sufficient cash for debt repayment.

Reasons To Sell:

▼ **Stock Down:** Year-to-date, shares of BD have lost 12.4% wider than the industry's 5.4% fall. Decline in each of its core segments viz. BD Medical, BD Interventional and BD Lifesciences during the quarter is concerning. Both domestic and international revenues decreased year over year in the quarter under review.

▼ **Headwinds Expected in Fiscal 2020:** Management at BD expects a few headwinds to mar the company's prospects in fiscal 2020.

Despite the continued uncertainty due to the pandemic, the company has provided revenue and earnings expectation for the remainder of the fiscal year. For the fourth quarter of fiscal 2020, it expects revenues to be in low single digits and adjusted earnings per share to be between \$2.40 and \$2.60. As a result, it expects a revenue decline of a negative 2% to a negative 1.5% and earnings per share of \$9.80 to \$10 for the full fiscal year 2020.

▼ **Foreign Exchange:** BD generates more than half of its revenues from international operations, which is adversely affected by fluctuations in foreign currency exchange rates. We note that U.S. manufacturers such as BD are being hurt by a strengthening U.S. dollar, which has benefited from more upbeat U.S. economic prospects compared to the rest of the world.

▼ **Fiscal Q3 Downsides:** In the third quarter of fiscal 2020, BD's bottomline declined 28.6% year over year.

In the quarter under review, the company reported worldwide revenues of \$2.12 billion, down 8.2% from the year-ago quarter and 6% at cc. Per management, the downside can be attributed to strong performance by the Medication Delivery Solutions unit. Worldwide revenues in the segment totaled \$0.95 billion, down 10.1% year over year and 7.8% at cc. Per management, lackluster performance by the Preanalytical Systems and Biosciences units resulted in the downside.

▼ **Product Recalls/ Shipment Issues:** Within the Diabetes Care business, BD temporarily has paused shipments of its insulin infusion sets. This was due to a moderately-higher-than-anticipated rate of complaints associated with insertion that occurred during the pilot launch of the product. However, management at BD conducted a clinical trial to gather further insights and to ensure that patients ultimately realize the full benefits of BD FlowSmart technology. In recent times, management declared that BD has decided to discontinue the infusion sets.

▼ **Significant Consolidation:** The medical technology industry has experienced a significant amount of consolidation. As a result, competition to provide goods and services to customers has increased significantly. BD faces a wide range of competitors in each of its three business segments. Moreover, the entry of manufacturers located in China and other low-cost manufacturing locations are intensifying pricing pressure, particularly in developing markets. In addition, group purchasing organizations and integrated health delivery networks have served to concentrate purchasing decisions for some customers, which has also exerted pricing pressure on medical device suppliers like BD. Further consolidation in the industry could exert additional pressure.

Lower demand for healthcare products, increasing competition, significant exposure to foreign exchange volatility pose major headwinds.

Last Earnings Report

Becton Dickinson Q3 Earnings Surpass Estimates

Becton, Dickinson and Company, also known as BD, reported third-quarter fiscal 2020 adjusted earnings per share of \$2.20, which beat the Zacks Consensus Estimate of \$2.05 by 7.3%. The bottom line however dropped 28.6% on a year-over-year basis and fell 25% at constant currency (cc).

The company raked in revenues of \$3.86 billion, missing the Zacks Consensus Estimate of \$3.93 billion by 1.9%. The reported figure declined 11.4% from the year-ago quarter. At cc, revenues fell 9.4%.

Segment Details

BD Medical

In the quarter under review, the company reported worldwide revenues of \$2.12 billion, down 8.2% from the year-ago quarter and 6% at cc. Per management, the downside can be attributed to performance in the Medication Delivery Solutions unit. However, growth in the Medication Management Solutions and Pharmaceutical Systems units partially offset the downside.

BD Life Science

Worldwide revenues in the segment totaled \$0.95 billion, down 10.1% year over year and 7.8% at cc. Per management, lackluster performance by the Preanalytical Systems and Biosciences units resulted in the downside. However, robust growth in the Diagnostic Systems unit, which was driven by sales related to COVID-19 diagnostic testing, mainly on the BD Max platform, partially made up for the downside.

BD Interventional

This segment generated worldwide revenues of \$0.78 billion, down 20.3% from the year-ago quarter and 19.2% at cc. This was due to the performance in the Surgery and Peripheral Intervention units which indicates continued deferral of elective procedures as a result of the COVID-19 pandemic.

Geographic Results

US

In the fiscal third quarter, revenues in the United States declined 13.1% to \$2.12 billion. Per management, performance in the United States reflects the net impact of COVID-19 across each of the three operating segments. Within the United States, the Diagnostic Systems unit witnessed strong revenue growth due to COVID-19 testing.

International

Revenues outside the United States grossed \$1.74 billion, down 9.2% from the year-ago quarter. At cc, revenues at the segment fell 4.7%. Per management, this downside was owing to declines in China and Latin America, partially offset by growth in Europe and EMA.

Margin Analysis

In the third quarter, gross profit amounted to \$1.66 billion, down 19.9% from the prior-year quarter tally. Gross margin was 43.1%, down 462 bps from the prior-year quarter.

Adjusted operating profit amounted to \$418 million, down 41.6% from the year-ago figure. Adjusted operating margin was 10.8%, down 562 bps.

Guidance

Full fiscal 2020, revenues are projected to decline in the range of 2.5% to 3% as reported, or 1.5% to 2% on a currency-neutral basis. The Zacks Consensus Estimate for the same is pegged at \$16.98 billion.

Full fiscal 2020, adjusted diluted EPS is estimated in the range of \$9.80 - \$10.00. This reflects a decline of around 14% to 16%, or 12.5% to 14.5% on a currency-neutral basis from fiscal 2019 adjusted diluted EPS of \$11.68. The Zacks Consensus Estimate for the same is pegged at \$10.36.

Quarter Ending	06/2020
Report Date	Aug 06, 2020
Sales Surprise	-1.88%
EPS Surprise	7.32%
Quarterly EPS	2.20
Annual EPS (TTM)	10.71

Recent News

BD launches BD PurPrep patient preoperative skin preparation: Jul 7

BD launched BD PurPrep patient preoperative skin preparation with sterile solution, the first and only fully sterile povidone-iodine plus isopropyl alcohol single-use antiseptic skin preparation commercially available in the United States.

BD receives FDA EUA for a rapid, point-of-care, SARS-CoV-2 diagnostic test: Jul 6

BD received the Emergency Use Authorization (EUA) from the FDA for a rapid, point-of-care, SARS-CoV-2 diagnostic test for use with its widely available BD Veritor Plus System. This marks the company's third diagnostic test to receive EUA for the detection of COVID-19.

Notably, BD is likely to ramp up manufacturing capacity to two million tests per week by the end of September. The company anticipates to deliver up to 10 million tests from July through September.

Valuation

Becton, Dickinson's shares are down 16.9% and 12.4% in the year-to-date period and trailing 12-month periods, respectively. Stocks in the Zacks sub-industry are up 3.3% in the year-to-date period, while that in the Zacks Medical sector are down 0.04%. Over the past year, the Zacks sub-industry is down 5.3% while sector is up 7.9%.

The S&P 500 index is up 5.1% in the year-to-date period and 13.1% in the past year.

The stock is currently trading at 17.7X Forward 12-months earnings, which compares to 18.1X for the Zacks sub-industry, 21.7X for the Zacks sector and 22.4X for the S&P 500 index.

Over the past five years, the stock has traded as high as 24X and as low as 15.2X, with a 5-year median of 19X.

Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$237 price target reflects 18.5X forward 12-months earnings.

The table below shows summary valuation data for BDX.

Valuation Multiples - BDX					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	17.69	18.12	21.73	22.39
	5-Year High	24	19.77	23.19	23.44
	5-Year Low	15.18	13.63	15.89	15.26
	5-Year Median	19	16.47	19.01	17.63
P/S F12M	Current	3.47	0.36	2.8	4.12
	5-Year High	4.43	0.38	3.25	4.29
	5-Year Low	2.15	0.23	2.23	3.11
	5-Year Median	3.57	0.28	2.89	3.66
P/B TTM	Current	2.73	4.15	3.9	5.82
	5-Year High	5.23	4.73	5.07	6.17
	5-Year Low	2.57	2.54	2.95	3.75
	5-Year Median	3.39	3.45	4.29	4.84

As of 09/15/2020

Source: Zacks Investment Research

Industry Analysis Zacks Industry Rank: Top 39% (99 out of 251)



Source: Zacks Investment Research

Top Peers

Company (Ticker)	Rec	Rank
West Pharmaceutical Services, Inc. (WST)	Outperform	2
Align Technology, Inc. (ALGN)	Neutral	3
The Cooper Companies, Inc. (COO)	Neutral	3
Henry Schein, Inc. (HSIC)	Neutral	3
Laboratory Corporation of America Holdings (LH)	Neutral	3
Patterson Companies, Inc. (PDCO)	Neutral	3
Straumann Holding AG (SAUHF)	Neutral	2
DENTSPLY SIRONA Inc. (XRAY)	Neutral	4

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

Industry Comparison Industry: Medical - Dental Supplies				Industry Peers		
	BDX	X Industry	S&P 500	HSIC	LH	PDCO
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	3	-	-	3	3	3
VGM Score	C	-	-	D	A	A
Market Cap	65.55 B	2.42 B	23.70 B	9.10 B	18.11 B	2.34 B
# of Analysts	11	5	13.5	9	8	8
Dividend Yield	1.40%	0.00%	1.61%	0.00%	0.00%	4.28%
Value Score	C	-	-	B	A	B
Cash/Price	0.04	0.09	0.07	0.03	0.03	0.05
EV/EBITDA	19.58	12.85	13.22	10.18	10.89	12.92
PEG F1	2.59	2.87	2.98	4.00	1.54	1.74
P/B	2.73	4.83	3.26	2.51	2.46	2.74
P/CF	10.89	14.13	12.81	13.20	9.56	2.55
P/E F1	22.95	33.90	21.70	25.63	13.24	15.42
P/S TTM	3.88	2.67	2.45	0.98	1.58	0.43
Earnings Yield	4.38%	2.37%	4.39%	3.91%	7.55%	6.50%
Debt/Equity	0.71	0.41	0.70	0.14	0.75	0.69
Cash Flow (\$/share)	20.77	1.73	6.93	4.83	19.44	9.54
Growth Score	B	-	-	F	B	C
Historical EPS Growth (3-5 Years)	10.16%	9.48%	10.41%	3.81%	8.86%	-13.39%
Projected EPS Growth (F1/F0)	-15.20%	2.44%	-4.75%	-29.12%	24.01%	1.70%
Current Cash Flow Growth	14.64%	3.87%	5.26%	-9.03%	12.16%	327.70%
Historical Cash Flow Growth (3-5 Years)	24.86%	12.65%	8.49%	2.76%	17.70%	27.55%
Current Ratio	1.45	1.54	1.35	1.48	1.12	1.49
Debt/Capital	41.57%	31.97%	42.95%	18.00%	42.90%	40.76%
Net Margin	5.30%	0.23%	10.25%	6.35%	3.16%	-10.99%
Return on Equity	14.19%	12.35%	14.66%	11.51%	14.39%	13.30%
Sales/Assets	0.32	0.90	0.50	1.28	0.65	1.76
Projected Sales Growth (F1/F0)	-2.75%	0.00%	-1.40%	-8.49%	10.32%	0.64%
Momentum Score	D	-	-	F	A	A
Daily Price Change	-4.13%	0.00%	0.14%	0.03%	1.52%	-1.44%
1-Week Price Change	0.73%	0.00%	-1.87%	-1.93%	3.27%	-8.56%
4-Week Price Change	-14.29%	-3.00%	0.12%	-3.82%	-0.32%	-8.11%
12-Week Price Change	-4.91%	0.00%	7.05%	7.41%	14.57%	19.85%
52-Week Price Change	-12.40%	2.09%	1.26%	1.58%	8.48%	35.03%
20-Day Average Volume (Shares)	1,499,354	439,435	1,845,558	971,554	844,573	1,125,010
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	0.00%	1.41%	0.00%
EPS F1 Estimate 4-Week Change	-0.11%	0.00%	0.00%	-0.09%	1.34%	15.79%
EPS F1 Estimate 12-Week Change	-5.11%	11.07%	4.10%	17.35%	36.55%	41.64%
EPS Q1 Estimate Monthly Change	-2.61%	0.00%	0.00%	-1.93%	0.45%	24.12%

Source: Zacks Investment Research

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.

Value Score	C
Growth Score	B
Momentum Score	D
VGM Score	C

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.

Disclosures

This report contains independent commentary to be used for informational purposes only. The analysts contributing to this report do not hold any shares of this stock. The analysts contributing to this report do not serve on the board of the company that issued this stock. The EPS and revenue forecasts are the Zacks Consensus estimates, unless indicated otherwise on the reports first page. Additionally, the analysts contributing to this report certify that the views expressed herein accurately reflect the analysts personal views as to the subject securities and issuers. ZIR certifies that no part of the analysts compensation was, is, or will be, directly or indirectly, related to the specific recommendation or views expressed by the analyst in the report.

Additional information on the securities mentioned in this report is available upon request. This report is based on data obtained from sources we believe to be reliable, but is not guaranteed as to accuracy and does not purport to be complete. Any opinions expressed herein are subject to change.

ZIR is not an investment advisor and the report should not be construed as advice designed to meet the particular investment needs of any investor. Prior to making any investment decision, you are advised to consult with your broker, investment advisor, or other appropriate tax or financial professional to determine the suitability of any investment. This report and others like it are published regularly and not in response to episodic market activity or events affecting the securities industry.

This report is not to be construed as an offer or the solicitation of an offer to buy or sell the securities herein mentioned. ZIR or its officers, employees or customers may have a position long or short in the securities mentioned and buy or sell the securities from time to time. ZIR is not a broker-dealer. ZIR may enter into arms-length agreements with broker-dealers to provide this research to their clients. Zacks and its staff are not involved in investment banking activities for the stock issuer covered in this report.

ZIR uses the following rating system for the securities it covers. **Outperform-** ZIR expects that the subject company will outperform the broader U.S. equities markets over the next six to twelve months. **Neutral-** ZIR expects that the company will perform in line with the broader U.S. equities markets over the next six to twelve months. **Underperform-** ZIR expects the company will underperform the broader U.S. equities markets over the next six to twelve months.

No part of this report can be reprinted, republished or transmitted electronically without the prior written authorization of ZIR.

Additional Disclosure

This material represents an assessment of the market and economic environment at a specific point in time and is not intended to be a forecast of future events, or a guarantee of future results. Forward-looking statements are subject to certain risks and uncertainties. Any statements that refer to expectations, projections or characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. Actual results, performance, or achievements may differ materially from those expressed or implied.

Returns quoted represent past performance which is no guarantee of future results. Investment returns and principal value will fluctuate so that when shares are redeemed, they may be worth more or less than their original cost. Current performance may be higher or lower than the performance shown.

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.

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.

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.