

Boston Beer Company (SAM)

\$1,054.07 (As of 10/27/20)

Price Target (6-12 Months): **\$1,238.00**

Long Term: 6-12 Months

Zacks Recommendation:

Outperform

(Since: 06/22/20)

Prior Recommendation: Neutral

Short Term: 1-3 Months

Zacks Rank: (1-5)

1-Strong Buy

Zacks Style Scores:

VGM:D

Value: F

Growth: A

Momentum: B

Summary

Boston Beer outpaced the industry in the past three months, courtesy of earnings beat in third-quarter 2020 on strong shipments and depletions growth. This marked the tenth straight quarter of double-digit depletions growth, backed by strength in Truly Hard Seltzer and Twisted Tea brands. It expects investing heavily in the Truly brand to enhance the brand's position in the hard seltzer category. Moreover, it revised depletions and earnings guidance for 2020 based on the trends witnessed in the first nine months and expectations for the remainder of the year, including strong performance for the Truly brand. Additionally, it expects all of its brands to witness growth in 2021. However, significant reduction in keg demand from the on-premise channel, higher productions costs, and increased labor costs at its breweries are hurting gross margin.

Data Overview

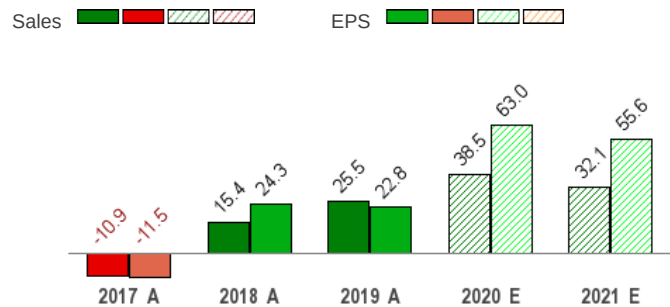
52-Week High-Low	\$1,092.80 - \$290.02
20-Day Average Volume (Shares)	118,910
Market Cap	\$13.1 B
Year-To-Date Price Change	184.9%
Beta	1.00
Dividend / Dividend Yield	\$0.00 / 0.0%
Industry	Beverages - Alcohol
Zacks Industry Rank	Top 26% (66 out of 254)

Last EPS Surprise	16.4%
Last Sales Surprise	-5.5%
EPS F1 Estimate 4-Week Change	16.5%
Expected Report Date	02/17/2021
Earnings ESP	0.0%
P/E TTM	80.6
P/E F1	70.5
PEG F1	7.1
P/S TTM	8.2

Price, Consensus & Surprise



Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	496 E	651 E	692 E	656 E	2,286 E
2020	331 A	452 A	493 A	456 E	1,731 E
2019	252 A	318 A	378 A	301 A	1,250 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$3.35 E	\$8.16 E	\$9.57 E	\$6.94 E	\$23.27 E
2020	\$1.32 A	\$4.69 A	\$6.10 A	\$3.05 E	\$14.95 E
2019	\$1.87 A	\$2.34 A	\$3.58 A	\$1.24 A	\$9.17 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 10/27/2020. The reports text is as of 10/28/2020.

Overview

Founded by Jim Koch, Harry M. Rubin, and Lorenzo Lamadrid in Boston, MA in 1984, Boston Beer Co. Inc. is one of the largest craft brewers in the United States. Boston Beer produces beer, malt beverages, and cider products at company-owned breweries and under contract. The company sells alcoholic beverages in the United States, Canada, Europe, Israel, Australia, New Zealand, the Caribbean, the Pacific Rim, Mexico, and Central and South America through a formidable network of wholesale distributors.

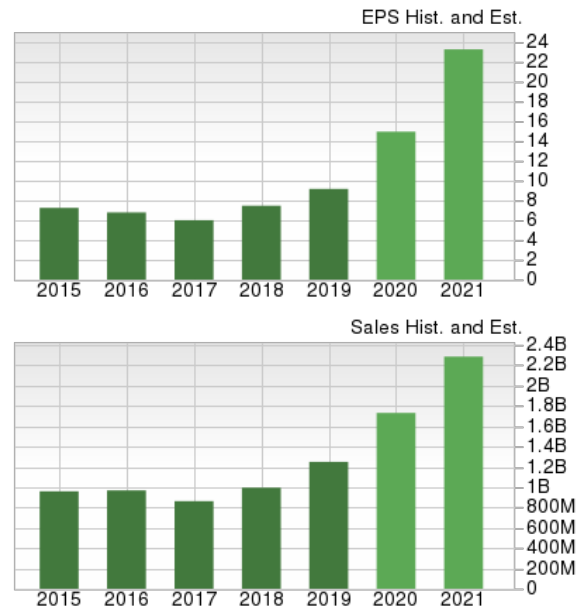
Boston Beer has four company-owned breweries, namely **Boston Brewery** located at Boston, MA; **Cincinnati Brewery** at Cincinnati, OH; **Pennsylvania Brewery** at Breinigsville, PA; and **Angel City Brewery** at Los Angeles, CA.

The company produces and sells three types of alcoholic beverages:

Beer: The company's beer products are primarily positioned in the "Better Beer" category of the beer industry, which includes craft beers, domestic specialty beers and imported beers. The category is decided on the basis of premium price, quality, image and taste. The company is known for its Samuel Adams Boston Lager or Sam Adams Boston Lager beer brands under which it sells about 60 different types of beers. Alongside, the company sells 20 beers of various other brands.

Malt Beverages: Apart from producing beer, the company also produces a malt beverage known as Twisted Tea which contains Iced Tea and alcohol.

Cider: The company sells alcoholic ciders under the Angry Orchard brand.



Source: Zacks Investment Research

Reasons To Buy:

▲ **Q3 Earnings Beat:** Shares of Boston Beer have gained 31.8% in the past three months against the industry's decline of 2.6%. The stock has been witnessing momentum owing to the company's robust performance, aided by strong shipments and depletion growth. Notably, the company reported earnings beat for the second straight quarter in third-quarter 2020. Moreover, both top and bottom lines improved on a year over year basis. Earnings growth can be attributed to an increase in revenues on the back of shipment growth, partly offset by soft gross margins and a rise in operating expenses. Meanwhile, top line gained from robust shipments and depletion growth in the third quarter.

Truly is the only hard seltzer brand, which was not launched in 2020, but has significantly grown market share sequentially since early 2020. The company expects Truly to lead business growth in 2021.

▲ **Strong Shipments & Depletions:** Boston Beer's shipments advanced 30.5% year over year to 2.1 million barrels in third-quarter 2020. Excluding the addition of the Dogfish Head brand, beginning Jul 3, 2019, shipments increased 35.3%. Depletions grew 36%, marking the tenth successive quarter of double-digit growth in depletions. Depletions growth was driven by key innovations, quality and strong brands as well as sales execution and support from distributors. Further, growth was backed by strength in Truly Hard Seltzer and Twisted Tea brands. Depletions for the year-to-date period through the 42 weeks ended Oct 17, 2020 have grown nearly 39% from that witnessed in the year-ago period. Excluding the Dogfish Head brewery, depletions grew 37%.

▲ **Upbeat Outlook:** Boston Beer revised its depletions growth and earnings guidance for 2020 based on the trends witnessed in the first nine months and expectations for the remainder of the year. This was mainly driven by strong performance for the company's Truly brand so far this year. For 2020, management now envisions earnings per share of \$14-\$15 compared with \$11.70-\$12.70 per share expected earlier. Depletions and shipments are now likely to grow 37-42%, wherein the addition of the Dogfish Head brand is expected to contribute 1-2%. Earlier, it expected depletions and shipments growth of 27-35%. The company expects national price increases of 1-2% for 2020. Advertising, promotional and selling expenses are forecast to be \$55-\$65 million compared with \$70-\$80 million mentioned earlier. The expected decline in advertising, promotional and selling expenses is attributed to lower selling expenses, excluding freight costs for the shipment of products to its distributors. Capital expenditure is likely to be \$160-\$190 million compared with \$180-\$200 million stated earlier.

Additionally, the company expects all of its brands to witness growth in 2021, including the Truly brand. Consequently, it expects volume growth of 35-45% for 2021. The company also outlined its depletion and cost view for 2021. Its initial guidance predicts depletion and shipment growth of 35-45% and national price increases of 1-2% for 2021. Moreover, it expects advertising, promotional and selling expenses of \$130-\$150 million, excluding freight costs for the shipment of products to its distributors. Capital spending for 2021 is anticipated to be \$300-\$400 million.

▲ **Boasts a Portfolio of Strong Brands:** Boston Beer is the largest premium craft brewer in the United States and commands a strong portfolio of globally recognized brands. Apart from selling alcoholic beverages in the United States, the company distributes its beverages in Canada, Europe, Israel, the Caribbean, the Pacific Rim, Mexico, and Central and South America through a strong network of wholesale distributors. We expect the company's continued focus on pricing, product innovation, growth of non-beer categories alongside brand development to boost its operational performance and position in the market. The company's innovation in the non-beer categories, including hard teas, ciders and seltzer has been a hit among liquor drinkers, which should continue to drive growth. Its diversified brand portfolio has fueled double-digit growth for the tenth straight quarter in third-quarter 2020.

Moreover, it plans some major innovations for all brands, which are likely to be introduced in 2021. These innovations will include Truly Iced Tea Hard Seltzer, Samuel Adams' Just the Haze – its first non-alcoholic beer, Dogfish Head Scratch-Made Canned Cocktails and Angry Orchard Hard Fruit Cider.

▲ **Truly & Twisted Tea Brands Hold Potential:** Boston Beer has been lately witnessing robust trends for the Truly and Twisted Tea brands, which is driving depletions. In the third quarter, the company witnessed accelerated depletions growth for the Truly and Twisted Tea brands. The growth at Truly was led by the Truly Lemonade Hard Seltzer, which is witnessing solid trends with the momentum likely to continue. Truly has been growing its velocity and market share sequentially since early 2020, despite several hard seltzer brands entering the market. Notably, Truly is the only hard seltzer brand that was not launched in 2020 but has significantly grown share in 2020. Driven by the Truly brand's robust performance so far this year, the company raised depletions growth guidance for 2020. Moreover, the company expects the Truly brand to continue leading business growth in 2021.

In early 2021, it plans to launch Truly Iced Tea Hard Seltzer, Truly Extra — a higher ABV version of Truly, and other new Truly flavors and package sizes, as part of its continued innovation in the Hard Seltzer category. The Truly Iced Tea Hard Seltzer, combining the refreshment of hard seltzer with real brewed tea and fruit flavor with less calories and sugar, is expected to further strengthen its position in the category. It expects to continue investing heavily in the Truly brand to enhance the brand's position in the hard seltzer category as competition continues to increase. Moreover, it is optimistic about the "Live Truly" advertising campaign that showcases colors, variety, and joy to hard seltzer drinkers. Further, the Twisted Tea brand continues to generate double-digit volume growth rates driven by increased at-home consumption, despite stark rise in competition from new entrants.

▲ **Strategic Initiatives:** Boston Beer remains committed to the three-point growth plan focused on the revival of its Samuel Adams and Angry Orchard brands, cost-saving initiatives and long-term innovation. Firstly, it plans to revive the Samuel Adams brand through packaging, innovation, promotion and brand communication initiatives. Further, it remains keen on retaining Angry Orchard and Twisted Tea's momentum while ensuring Truly Spiked & Sparkling's leadership position in the hard sparkling-water category. Secondly, the company is focused on accelerated cost savings and efficiency projects with savings directed for further brand development. Its third priority is long-term innovation and maximizing the shareholder value. Boston Beer remains optimistic about the future of craft beer and cider categories.

▲ **Financial Stability & Shareholder Returns:** Boston Beer's balance sheet is reasonably healthy, indicating that its cash position should be able to fund strategic investments. As of Sep 26, 2020, the company's cash and cash equivalents improved 81.2% sequentially to \$157.1

million. Additionally, it had \$150 million in its line of credit for use to enhance the cash position and liquidity amid the coronavirus pandemic, at the end of the third quarter. Notably, the company had no short term debt obligations. During the third quarter, and the period between Sep 27 and Oct 16, Boston Beer did not repurchase shares. As a result, the company has \$90.3 million remaining under the \$931-million share buyback authorization.

Risks

- **Margins Remain Soft:** Although top and bottom lines improved year over year in the third quarter, the company witnessed a decline in gross margin. Notably, COVID-19-related safety measures led to the reduction in brewery productivity, leading to the shifting of more volumes to third-party breweries. This resulted in higher production costs and negatively impacted the gross margin. This has been a major headwind over the past few quarters. Consequently, gross margin contracted 280 basis points to 46.9% in the third quarter. Going forward, the company expects to incur incremental costs due to increased usage of third-party breweries and an increasing percentage of variety packs in the company's overall product mix. Consequently, it anticipates gross margin for 2020 and 2021 to be negatively impacted until the volume growth stabilizes. For 2020, it now anticipates gross margin to be 46-47%, compared with 46-48% expected earlier. Gross margin for 2021 is expected to be 46-48%.
 - **Impacts of Coronavirus Pandemic:** As a result of the pandemic, Boston Beer has been witnessing a significant reduction in keg demand from the on-premise channel, and higher labor and safety-related costs at its breweries as a result of the ongoing pandemic. In third-quarter 2020, it recorded \$0.1 million of coronavirus-related pre-tax reductions in net revenues and increases in other costs. Year to date, pre-tax reductions in net revenues and escalation in other costs were \$14.2 million, of which \$10.0 million was recorded in the first quarter and \$4.1 million in the second quarter. This included \$3.4 million related to reduced revenues due to keg returns from distributors and retailers, and \$10.8 million of other COVID-19-related direct costs, of which \$7.4 million was for cost of goods sold and \$3.4 million in operating expenses. As already stated, this resulted in higher production costs and negatively impacted gross margin.
 - **Higher Operating Costs:** Higher advertising, promotional and selling expenses remain a threat to the company's overall profitability. In third-quarter 2020, advertising, promotional and selling expenses rose 11.8% driven by higher investments in media and production; elevated salaries and benefits costs; and increased freight to distributors, owing to higher volumes. Moreover, increase in salaries and benefits costs partly impacted general and administrative expenses.
 - **Softness in Samuel Adams & Angry Orchard Brands:** Soft volume for Boston Beer's Samuel Adams (craft beer) and Angry Orchard brands have been key headwind, which is weighing on the overall volumes, depletions growth as well as the top line. These brands are struggling due to softening of the craft beer growth rates and increased choices for drinkers on retail shelves. In third-quarter 2020, depletion growth was somewhat offset by sluggishness in Samuel Adams, Angry Orchard and Dogfish Head brands, which were most impacted by the pandemic and the related on-premise closures. However, the company notes that these brands closed September on a strong note, reflecting strong growth in off-premise channels compared with September 2019. Nevertheless, the extent of recovery in these brands remains to be seen.
 - **Competitive Pressure:** Boston Beer faces intense competition from well-established players in the industry such as Molson Coors Brewing Co. and Anheuser-Busch InBev SA/NV on taste, product quality, brand image, price and consumer preference fronts. The company has been a major player in the industry with its Samuel Adams brand over the past few years. Looking ahead, the company expects competition to intensify due to the increasing popularity of craft beer, hard seltzers and the entry of new players.
-

Last Earnings Report

Boston Beer Q3 Earnings Beat, Updates View

Boston Beer reported upbeat third-quarter 2020 earnings performance. Meanwhile, the top line lagged estimates. Nonetheless, both earnings and sales improved year over year, backed by strong shipment and depletions trends.

However, the company has been witnessing a significant reduction in keg demand from the on-premise channel, and higher labor and safety-related costs at its breweries as a result of the ongoing pandemic. In third-quarter 2020, it recorded \$0.1 million of coronavirus-related pre-tax reductions in net revenues and increases in other costs. Year to date, pre-tax reductions in net revenues and escalation in other costs were \$14.2 million, of which \$10.0 million was recorded in the first quarter and \$4.1 million in the second quarter. This included \$3.4 million related to reduced revenues due to keg returns from distributors and retailers, and \$10.8 million of other COVID-19-related direct costs, of which \$7.4 million was for cost of goods sold and \$3.4 million in operating expenses.

Further, COVID-19-related safety measures led to the reduction in brewery productivity, leading to the shifting of more volumes to third-party breweries. This resulted in higher production costs and negatively impacted the gross margin.

Boston Beer's third-quarter adjusted earnings of \$6.51 per share surpassed the Zacks Consensus Estimate of \$5.24. Further, the bottom line grew 78.4% from \$2.86 earned in the year-ago period, mainly driven by an increase in revenues on the back of shipment growth. This was partly offset by soft gross margins and a rise in operating expenses.

Net revenues advanced 30.2% year over year to \$492.8 million but lagged the Zacks Consensus Estimate of \$521.4 million. Excluding excise taxes, the top line rose 30.4% year over year from \$525.2 million.

The increase in the top line can primarily be attributed to a 30.5% improvement in shipments to 2.1 million barrels. Depletions grew 36%, marking the tenth successive quarter of double-digit growth in depletions. Depletions growth was driven by key innovations, quality and strong brands as well as sales execution and support from distributors. Further, growth was backed by strength in Truly Hard Seltzer and Twisted Tea brands. This was somewhat offset by sluggishness in Samuel Adams, Angry Orchard and Dogfish Head brands, which were most impacted by the pandemic and the related on-premise closures. However, the company notes that these brands closed September on a strong note, reflecting strong growth in off-premise channels compared with September 2019.

Depletions for the year-to-date period through the 42 weeks ended Oct 17, 2020 have grown nearly 39% from that witnessed in the year-ago period. Excluding the Dogfish Head brewery, depletions grew 37%.

Costs & Margins

Gross profit improved 28.1% year over year to \$240.6 million. However, gross margin contracted 280 basis points to 46.9% due to elevated processing costs, stemming from higher production at third-party breweries. This was partly negated by price increases and cost-saving initiatives at company-owned breweries.

Advertising, promotional and selling expenses rose 11.8% in the quarter to \$108 million. The increase was driven by higher investments in media and production; elevated salaries and benefits costs; and increased freight to distributors, owing to higher volumes.

General and administrative expenses totaled \$30.3 million, down 3.5% from the year-ago quarter. The decline was mainly due to one-time costs of \$3.6 million related to the Dogfish Head transaction, which was incurred in the third quarter of 2019. This was somewhat offset by higher salaries and benefits costs.

Financials

As of Sep 26, 2020, Boston Beer had cash and cash equivalents of \$157.1 million, and total stockholders' equity of \$318.5 million. The company currently has \$150 million in its line of credit for use to enhance the cash position and liquidity amid the coronavirus pandemic.

During the third quarter and the period between Sep 27 and Oct 16, Boston Beer did not repurchase any shares. As a result, the company has \$90.3 million remaining under the \$931-million share buyback authorization.

Outlook

Boston Beer revised its depletions growth and earnings guidance for 2020 based on the trends witnessed in the first nine months and expectations for the remainder of the year. This was mainly driven by strong performance for the company's Truly brand so far this year.

Furthermore, the company expects the Truly brand to continue to lead business growth in 2021. In early 2021, it plans to launch Truly Iced Tea Hard Seltzer, Truly Extra — a higher ABV version of Truly, and other new Truly flavors and package sizes, as part of its continued innovation in the Hard Seltzer category.

For 2020, management envisions earnings per share of \$14-\$15. Depletions and shipments are likely to grow 37-42%, wherein the addition of the Dogfish Head brand is expected to contribute 1-2%. The company expects national price increases of 1-2% for 2020.

Moreover, gross margin is anticipated to be 46-47%. Advertising, promotional and selling expenses are forecast to be \$55-\$65 million compared with \$70-\$80 million mentioned earlier. The expected decline in advertising, promotional and selling expenses is attributed to lower selling expenses, excluding freight costs for the shipment of products to its distributors. Capital expenditure is likely to be \$160-\$190 million compared

Quarter Ending	09/2020
Report Date	Oct 22, 2020
Sales Surprise	-5.49%
EPS Surprise	16.41%
Quarterly EPS	6.10
Annual EPS (TTM)	13.35

with \$180-\$200 million stated earlier.

Additionally, the company expects all of its brands to witness growth in 2021. Consequently, it expects volume growth of 35-45% for 2021. The company also outlined its depletion and cost view for 2021.

For 2021, its initial guidance predicts depletion and shipment growth of 35-45%, national price increases of 1-2%, and gross margin of 46-48%. Moreover, it expects advertising, promotional and selling expenses of \$130-\$150 million, excluding freight costs for the shipment of products to its distributors. Capital spending for 2021 is anticipated to be \$300-\$400 million.

Valuation

Boston Beer shares are up 184.9% in the year-to-date period and nearly 188.3% for the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Consumer Staples sector are down 21.6% and 7% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and the sector are down 13.5% and 2.4%, respectively.

The S&P 500 index is up 5.2% in the year-to-date period and 11.8% in the past year.

The stock is currently trading at 60.74X forward 12-month earnings, which compares to 24.4X for the Zacks sub-industry, 19.22X for the Zacks sector and 21.75X for the S&P 500 index.

Over the past five years, the stock has traded as high as 63.34X and as low as 19.85X, with a 5-year median of 30.02X. Our Outperform recommendation indicates that the stock will perform better than the market. Our \$1,238 price target reflects 69.85X forward 12-month earnings.

The table below shows summary valuation data for SAM

Valuation Multiples - SAM					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	60.74	24.4	19.22	21.75
	5-Year High	63.34	27.51	22.37	23.47
	5-Year Low	19.85	18.78	16.61	15.27
	5-Year Median	30.02	23.63	19.56	17.68
P/S F12M	Current	6.8	16.56	9.33	4.03
	5-Year High	6.8	20.68	11.16	4.31
	5-Year Low	1.82	13.06	8.14	3.18
	5-Year Median	2.65	17.2	9.89	3.67
EV/EBITDA TTM	Current	47.84	39.86	37.72	14.81
	5-Year High	47.84	53.29	45.1	15.68
	5-Year Low	8.1	27.04	27.2	9.55
	5-Year Median	16.02	43.31	38.46	13.12

As of 10/27/2020

Source: Zacks Investment Research

Industry Analysis Zacks Industry Rank: Top 26% (66 out of 254)



Source: Zacks Investment Research

Top Peers

Company (Ticker)	Rec	Rank
BrownForman Corporation (BF.B)	Outperform	2
Diageo plc (DEO)	Neutral	3
Eastside Distilling, Inc. (EAST)	Neutral	3
Heineken NV (HEINY)	Neutral	3
Pernod Ricard SA (PDRDY)	Neutral	3
Constellation Brands Inc (STZ)	Neutral	3
Molson Coors Beverage Company (TAP)	Neutral	3
AnheuserBusch InBev SANV (BUD)	Underperform	4

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

Industry Comparison Industry: Beverages - Alcohol				Industry Peers		
	SAM	X Industry	S&P 500	BUD	HEINY	TAP
Zacks Recommendation (Long Term)	Outperform	-	-	Underperform	Neutral	Neutral
Zacks Rank (Short Term)	1	-	-	4	3	3
VGM Score	D	-	-	C	C	A
Market Cap	13.14 B	12.38 B	23.55 B	111.41 B	54.14 B	7.33 B
# of Analysts	1	1.5	13	3	3	6
Dividend Yield	0.00%	0.00%	1.68%	1.51%	1.95%	0.00%
Value Score	F	-	-	B	C	A
Cash/Price	0.01	0.06	0.07	0.22	0.09	0.10
EV/EBITDA	64.73	8.77	13.09	8.51	NA	8.95
PEG F1	7.05	3.74	2.67	NA	22.50	1.54
P/B	14.31	2.83	3.35	1.63	50.85	0.55
P/CF	77.89	15.70	12.78	8.74	10.87	3.94
P/E F1	70.51	28.29	20.70	28.93	37.80	9.22
P/S TTM	8.19	2.05	2.55	2.33	NA	0.60
Earnings Yield	1.39%	3.46%	4.54%	3.46%	2.64%	10.85%
Debt/Equity	0.00	0.61	0.70	1.55	16.10	0.61
Cash Flow (\$/share)	13.82	1.59	6.92	6.32	4.32	8.59
Growth Score	A	-	-	D	B	B
Historical EPS Growth (3-5 Years)	11.57%	7.14%	10.10%	-7.49%	NA	7.18%
Projected EPS Growth (F1/F0)	63.03%	2.55%	-1.78%	-53.19%	-48.84%	-19.24%
Current Cash Flow Growth	18.44%	-0.66%	5.49%	11.61%	2.45%	-5.29%
Historical Cash Flow Growth (3-5 Years)	5.61%	4.16%	8.50%	0.84%	5.02%	11.28%
Current Ratio	1.72	1.81	1.37	1.17	0.86	0.67
Debt/Capital	0.00%	37.72%	42.02%	60.81%	94.15%	37.83%
Net Margin	10.77%	8.09%	10.41%	2.55%	NA	-1.33%
Return on Equity	20.36%	9.55%	14.92%	9.03%	NA	7.18%
Sales/Assets	1.35	0.48	0.50	0.41	NA	0.42
Projected Sales Growth (F1/F0)	38.54%	0.00%	-0.46%	-14.73%	-11.36%	-8.01%
Momentum Score	B	-	-	B	F	D
Daily Price Change	2.77%	0.00%	-1.23%	-2.51%	-1.34%	-3.07%
1-Week Price Change	15.24%	0.00%	0.01%	3.92%	4.02%	0.79%
4-Week Price Change	22.28%	0.41%	1.76%	1.79%	4.70%	0.84%
12-Week Price Change	30.09%	0.00%	1.86%	-0.84%	0.61%	-8.00%
52-Week Price Change	188.25%	-10.29%	-0.11%	-31.22%	-7.02%	-38.18%
20-Day Average Volume (Shares)	118,910	41,101	1,803,058	1,532,913	180,849	2,168,504
EPS F1 Estimate 1-Week Change	14.93%	0.00%	0.00%	0.00%	0.00%	0.00%
EPS F1 Estimate 4-Week Change	16.50%	0.00%	0.28%	-11.98%	-0.93%	-0.50%
EPS F1 Estimate 12-Week Change	20.94%	4.11%	3.06%	8.22%	-18.47%	30.49%
EPS Q1 Estimate Monthly Change	78.36%	0.00%	0.12%	-25.00%	NA	-5.43%

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	F
Growth Score	A
Momentum Score	B
VGM Score	D

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.