Novo-Nordisk A/S (NVO)

$72.17 (As of 04/16/21)

Price Target (6-12 Months): **$76.00**

Long Term: 6-12 Months	**Zacks Recommendation:** (Since: 02/12/19) Prior Recommendation: Outperform	**Neutral**
Short Term: 1-3 Months	**Zacks Rank:** (1-5)	**3-Hold**
	Zacks Style Scores:	VGM:B
	Value: B | Growth: C | Momentum: A	

Summary

Novo Nordisk's Ozempic is off to a solid start and the launch of Rybelsus looks impressive. Novo Nordisk has one of the broadest diabetes portfolios in the industry. Victoza, Ozempic, Xultophy and Saxenda have been helping the company maintain momentum. Label expansion of existing drugs will further boost sales. In 2021, the company will continue its focus on commercial execution, while conducting more late-stage clinical studies than ever to meet the needs of the people living with diabetes and other serious chronic diseases. However, lower realized prices in the Unites States, loss of exclusivity for products in hormone replacement therapy and intensifying competition will affect sales. Estimates have gone up ahead of Q1 results. Novo Nordisk has a positive record of earnings surprises in recent quarters.

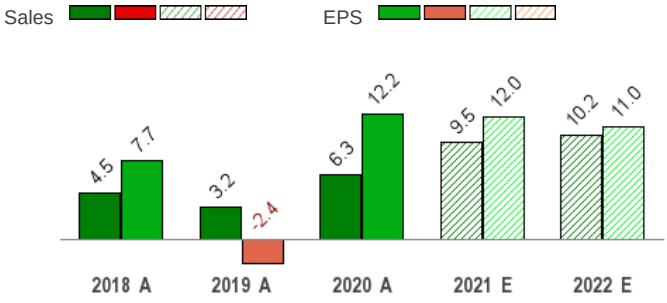
Price, Consensus & Surprise

Source: Zacks Investment Research

Data Overview

52-Week High-Low	**$75.86 - $61.53**
20-Day Average Volume (Shares)	**801,965**
Market Cap	**$169.9 B**
Year-To-Date Price Change	**3.3%**
Beta	**0.40**
Dividend / Dividend Yield	**$1.33 / 1.8%**
Industry	**Large Cap Pharmaceuticals**
Zacks Industry Rank	**Bottom 5% (241 out of 254)**
Last EPS Surprise	**8.5%**
Last Sales Surprise	**4.8%**
EPS F1 Estimate 4-Week Change	**0.5%**
Expected Report Date	**05/05/2021**
Earnings ESP	**1.3%**
P/E TTM	**26.2**
P/E F1	**23.4**
PEG F1	**2.6**
P/S TTM	**8.7**

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of $)

	Q1	Q2	Q3	Q4	Annual*
2022					23,454 E
2021	5,021 E	5,202 E	5,430 E	5,629 E	21,292 E
2020	5,001 A	4,429 A	4,856 A	5,150 A	19,449 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2022					$3.43 E
2021	$0.79 E	$0.80 E	$0.79 E	$0.75 E	$3.09 E
2020	$0.75 A	$0.67 A	$0.69 A	$0.64 A	$2.76 A

*Quarterly figures may not add up to annual.

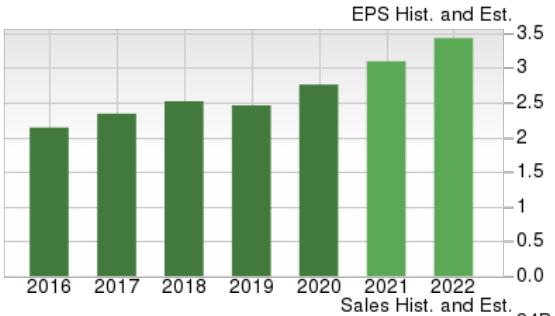
The data in the charts and tables, including the Zacks Consensus EPS and sales estimates, is as of 04/16/2021. The report's text and the analyst-provided price target are as of 04/19/2021.

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

© 2021 Zacks Investment Research, All Rights Reserved

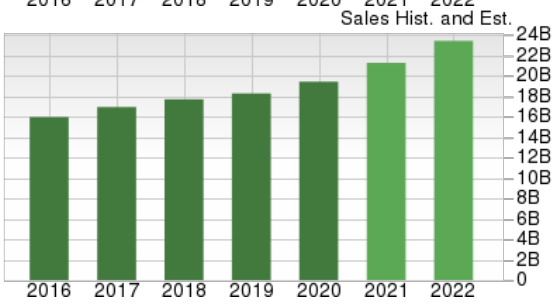
Overview

Bagsværd, Denmark-based Novo Nordisk is a global healthcare company and a leader in the worldwide diabetes market. The company is also a key player in hemophilia care, growth hormone therapy, hormone replacement therapy and obesity.



Novo Nordisk operates through two segments: Diabetes and obesity care and Biopharmaceuticals. While the Diabetes and obesity care segment covers insulins, glucagon-like peptide 1 (GLP-1), other protein-related products, obesity and oral anti-diabetic drugs, the Biopharmaceuticals segment includes hemophilia, growth hormone therapy and hormone replacement therapy.

Novo Nordisk's most well-known drugs include Levemir, NovoRapid, Victoza, Ozempic, NovoMix 30, NovoMix 50, NovoMix 70, NovoSeven, NovoThirteen and Norditropin. The company launched its first product for weight management, Saxenda, in the United States in May 2015.



In August 2018, Novo Nordisk announced that it has acquired all of the shares of Ziylo Ltd. Ziylo is a University of Bristol spin-out company based at Unit DX science incubator in the United Kingdom. The acquisition gives Novo Nordisk full rights to Ziylo's glucose binding molecule platform to develop glucose responsive insulins (GRIs). Novo Nordisk is focused on developing this technology in order to develop this next generation of insulin, which would lead to a safer and more effective insulin therapy.

Novo Nordisk reported 2020 revenues of $5.14 billion, down 1% in Danish kroner (DKK). Sales of diabetes and obesity products increased 5% in DKK. Sales of biopharmaceutical products, however, decreased 1% in DKK.

Source: Zacks Investment Research

Reasons To Buy:

Novo Nordisk has a strong presence in the Diabetes Care market and boasts of a strong pipeline, with focus on therapeutic proteins within insulin. Victoza remains the growth engine for the company.

- **Strong Foothold in the Diabetes Market:** Novo Nordisk has a strong presence in the Diabetes care market with one of the broadest diabetes portfolios in the industry. Novo Nordisk has improved its global diabetes value market share over the past 12 months by 0.7 percentage point to 29.3%.

- **Other Drugs Performing Well:** Obesity drug, Saxenda (liraglutide 3 mg) was launched in the United States in 2015 and the drug is doing well. In December 2020, the FDA approved an updated label for Saxendainjection 3 mg to include treatment of obesity in adolescents (12-17 years) with a body weight above 60 kg and an initial body mass index (BMI) corresponding to 30 kg/m2 or greater for adults, as an adjunct to a reduced-calorie diet and increased physical activity. In March 2021, the European Medicines Agency's (EMA) Committee for Medicinal Products for Human Use (CHMP) recommended the use of Saxenda for the treatment of obesity in adolescents aged 12 to 17 years.

  The FDA approved Ozempic (semaglutide) once-daily pre-filled pen to improve glycemic control in type II diabetes patients in December 2017. In January 2020, Ozempic was approved in the United States for cardiovascular (CV) risk reduction in people with type II diabetes and established cardiovascular diseases.Label expansion of drugs will boost sales. Ozempic is currently approved in the United States in 0.5 mg and 1.0 mg doses for the treatment of type II diabetes in adults.

  In December 2020, the company submitted regulatory applications for semaglutide 2.4 mg in obesity to the FDA and European Medicines Agency (EMA).

  On Dec 29, 2020 and Jan 20, 2021 respectively, the company announced the submissions of label extension applications to the EMA and the FDA for Ozempic to introduce the 2.0 mg dose. The submission is supported by the results from the SUSTAIN FORTE study, which included 961 people with type II diabetes in need of treatment intensification. With the 2.0 mg dose, more people with type II diabetes will be able to achieve the treatment target.

  In December 2020, Novo Nordisk announced the decision to enter phase III development in Alzheimer's disease with 14 mg oral semaglutide, a once-daily oral formulation of the long-acting GLP-1 analogue semaglutide.The study is expected to be initiated in first half 2021 and will investigate the efficacy and safety of once-daily oral semaglutide compared to placebo.

  In September 2019, the FDA approved semaglutide in a tablet form, which is marketed under the brand name, Rybelsus. It is approved as an adjunct to diet and exercise to improve glycemic control in adults with type II diabetes mellitus. The drug is off to a good start in the United States. It is the first approved glucagon-like peptide-1 (GLP-1) receptor agonist in a tablet form.Rybelsus is also approved in Europe and Japan. Approval in other geographies should boost sales.

  On Aug 28, 2020, once-weekly somapacitan was approved by the FDA under the brand name Sogroya for substitution of endogenous growth hormone in adults with growth hormone deficiency (AGHD). Sogroya for AGHD is currently under regulatory review in the EU, Switzerland and Japan.In January 2021, the Committee for Medicinal Products for Human Use (CHMP), under the EMA, adopted a positive opinion for the use of once-weekly Sogroya, recommending marketing authorisation for the treatment of adults with AGHD.

  These approvals will further boost sales.

- **Encouraging Pipeline Progress**: Novo Nordisk is making efforts to broaden its portfolio.

  During the second quarter of 2020, Novo Nordisk reported the successful completion of the phase II study with AM833 and the phase I combination study with AM833 and semaglutide 2.4 mg, all in obesity care. During the third quarter of 2020, Novo Nordisk initiated a phase IIIb study investigating the effects of Ozempic (once-weekly subcutaneous semaglutide) in around 800 people with type II diabetes and peripheral artery disease. In the study,the effects of semaglutide are being evaluated compared to standard of care.

  In January 2021, Novo Nordisk initiated a phase III study with higher doses of oral semaglutide than currently marketed. The objective of the study is to assess the safety and efficacy of oral semaglutide 25 mg and 50 mg once daily versus oral semaglutide (Rybelsus) 14 mg once dailyin people with type II diabetes.

  In September 2020, the company completed the phase II proof-of-concept study investigating the combinations of semaglutide and two small molecule inhibitors from Gilead. The study investigated the saftely and tolerability of semaglutide(2.4 mg) in combination with acetyl-CoA carboxylase (ACC) inhibitor, firsocostat, and/or the selective farnesoid X receptor (FXR) agonist, cilofexor in 108 people with non-alcoholic steatohepatitis (NASH).

- **Diversification other than diabetes:** We are encouraged by the company's efforts to develop new treatments. In February 2019, the FDA approved Novo Nordisk's biologics license application (BLA) for Esperoct (turoctocogalfapegol, N8-GP) for the treatment of hemophilia A in adults and children. The drug is approved for the routine prophylactic to reduce the frequency of bleeding episodes, on-demand treatment and control of bleeding episodes plus perioperative management of bleeding in the given patient population. In July, the European Commission granted marketing authorization to the drug for the treatment of adolescents (?12 years of age) and adults with hemophilia A. The authorization covers all 28 European Union member states.

- **Acquisitions To Boost Portfolio:** In November 2020, Novo Nordisk entered into a definitive agreement to acquire Emisphere Technologies Inc. a drug delivery company with proprietary technologies, such as the Eligen SNAC technology, that enable oral formulations of therapeutics. The total acquisition price is $1.8 billion. With these acquisitions, Novo Nordisk eliminates its future royalty obligations to

Emisphere and MHR and obtains full access to the Eligen SNAC technology platform which in turn will enable it to expand the portfolio of oral biologic pipeline assets across therapy areas. The acquisition of Emisphere provides Novo Nordisk with full ownership of the Eligen SNAC technology, which has been successfully used under a licence agreement to develop the first oral biologic, Rybelsus.

In June 2020, Novo Nordisk acquired AstraZeneca Plc's spin-off, Corvidia Therapeutics, for an upfront payment of $725 million in cash. With the acquisition, the company seeks to expand presence across a range of cardiometabolic diseases that are closely linked to Novo Nordisk's core business within diabetes and obesity. Corvidia's leading drug candidate, ziltivekimab, is in mid-stage clinical trials.

Reasons To Sell:

Novo Nordisk is going through a rough patch with several drugs in its portfolio losing patent protection. The company is also facing pricing pressure for some of its drugs.

- **Generic Competition a Threat to Key Products:** The patent expiry on some of the products in Novo Nordisk's portfolio is highly concerning. The formulation patent on Norditropin expired in the United States, Europe and Japan in 2017. Victoza is slated to lose patent protection in the United States and the EU in 2023. Novo Nordisk is also facing a risk from biosimilars in the human growth hormone market. Moreover, the diabetes market is already crowded with a number of drugs. Merck's Januvia and Janumet (type II diabetes), Eli Lilly's Trulicity (type II diabetes), Sanofi's Toujeo (type I and II diabetes) are already approved. The company also faces stiff competition from Eli Lilly and Astra Zeneca in the global GLP-1 market.

- **Pipeline Setbacks:** With generic competition looming large over the company, Novo Nordisk's pipeline needs to deliver. The company received a setback with the discontinuation of the development of liraglutide as a joint therapy to insulin in type I diabetes. In March 2021, Novo Nordisk received a Refusal to File letter from the FDA regarding the label expansion filing for once-weekly semaglutide 2 mg for the treatment of type II diabetes which was filed in January 2021. Such setbacks does not bode well for the company.

  Novo Nordisk also halted three (two phase III and one phase II) ongoing studies investigating its anti-TFPI mAB, concizumab, in hemophilia A and B patients with or without inhibitors. The decision was taken due to the occurrence of non-fatal thrombotic events in three patients in the phase III studies. While the company will not recruit any additional patients in the studies, it will also cease further treatment of patients already enrolled in the studies. Novo Nordisk and an independent Data Monitoring Committee are evaluating all available data to decide whether to continue the studies.

  In 2019, Novo Nordisk successfully completed a phase II study evaluating the effects of the combination of anti-IL-21 and Saxendaas therapy for patients recently diagnosed with type I diabetes. Following an evaluation of the regulatory path forward, Novo Nordisk decided to discontinue the development of anti-IL-21 in combination with Saxenda.

- **Pricing Pressure:** Market conditions within the pharmaceutical industry continue to change with efforts by governmental entities to reduce or control costs. In most of the countries in which Novo Nordisk sells insulin, product prices are subsidized or are subject to price control. Moreover, the company continues to face pricing pressure from other players in the market. Going forward, the company may encounter a tough pricing environment in the United States basal insulin market. Downward pricing pressure could negatively impact future.

Last Earnings Report

Novo Nordisk's Q4 Earnings and Sales Beat Estimates

Quarter Ending	12/2020
Report Date	Feb 03, 2021
Sales Surprise	4.83%
EPS Surprise	8.47%
Quarterly EPS	0.64
Annual EPS (TTM)	2.75

Novo Nordisk reported fourth-quarter 2020 earnings of 64 cents per American Depositary Receipt (ADR), which beat the Zacks Consensus Estimate of 59 cents and increased from 55 cents in the year-ago quarter.

Revenues of $5.14 billion decreased 1% in DKK and increased 5% at constant exchange rate (CER). Revenues outpaced the Zacks Consensus Estimate of $4.91 billion. Increased global sales of 5% CER was driven by higher Diabetes and Obesity care sales owing to elevated GLP-1 sales, offset by insulin revenue decline of 3%.

Sales were negatively impacted by fewer patient treatment initiations, unemployment in the United States and COVID-related destocking.

Quarter in Detail

Novo Nordisk operates in two segments — Diabetes and Obesity Care, and Biopharmaceuticals.

The Diabetes and Obesity Care segment sales grew 8% at CER. In Diabetes Care, fast-acting insulin (Fiasp and NovoRapid) revenues declined 8% at CER and Human insulin revenues were down 18% at CER. Premix insulin (Ryzodeg and NovoMix) revenues rose 7%. Sales of long-acting insulin (Tresiba, Xultophy and Levemir) increased 4%. Ozempic had a strong launch and recorded sales of DKK 6.19 billion for the quarter, up 51% at CER.

Obesity Care (Saxenda) sales were down 3% at CER year over year.

Sales in the Biopharm segment were down 9% year over year to DKK 4.37 billion. Hemophilia sales (NovoSeven and NovoEight) were down 11% to DKK 2.14 billion.

Sales and distribution costs increased 2% in DKK and 9% at CER year over year. The increase was driven by North America Operations, reflecting the launch of Rybelsus and promotional activities related to Ozempic.

Research and development costs increased 2% in DKK and 6% at CER from the year-ago quarter. The costs were driven by increased clinical trial activity and patient recruitment in ongoing cardiovascular outcome studies SOUL and SELECT, partially offset by lower costs following the conclusion of the semaglutide obesity phase IIIa program, STEP.

Administrative costs decreased 3% in Danish kroner but increased 1% at CER from the same period in 2019.

2021 Outlook

Novo Nordisk expects 5-9% sales growth at CER. The guidance reflects persistent sales growth in International operations. The guidance also reflects robust sales performance of GLP-1 diabetes care products, Ozempic and Rybelsus, as well as growth within Obesity Care. The guidance also reflects intensifying competition in both Diabetes care and Biopharm.

Recent News

Gets Positive CHMP Opinion for Saxenda Label Expansion – Mar 26

Novo Nordisk announced that the European Medicines Agency's (EMA) Committee for Medicinal Products for Human Use (CHMP) has recommended the use of Saxenda for the treatment of obesity in adolescents aged 12 to 17 years.

Gets Refusal to File Letter for Semaglutide – Mar 22

Novo Nordisk announced that it has received a Refusal to File letter from the FDA regarding the label expansion filing for once-weekly semaglutide 2 mg for the treatment of type II diabetes which was filed in January 2021. The FDA requested additional information including data relating to a proposed new manufacturing site, in the Refusal to File letter.

The company plans to resubmit the application to the FDA during the second quarter of 2021.

Expands Nash Collaboration with Gilead – Mar 18

Novo Nordisk announced that it has expanded the clinical collaboration in non-alcoholic steatohepatitis (NASH) with Gilead Sciences.

Per the latest development, the companies will conduct a placebo-controlled phase IIb study to evaluate the safety and efficacy of Novo Nordisk's semaglutide and a fixed dose combination of Gilead's cilofexor and investigational ACC inhibitor firsocostat, alone and in combination in people with compensated cirrhosis due to NASH.

Receives Positive Opinion from the European Regulatory Authorities for Once-Weekly Sogroya - Jan 29

Novo Nordisk announced that the CHMP, under the EMA, adopted a positive opinion for the use of once-weekly Sogroya (somapacitan), recommending marketing authorisation for the treatment of adults AGHD. The CHMP recommends once-weekly Sogroya to be indicated for the replacement of endogenous growth hormone in adults with AGHD.

Sogroya is a new long-acting human growth hormone therapy that is taken once a week by injection under the skin. This recommendation is based on the results from REAL 1, a clinical trial programme investigating the efficacy and safety of Sogroya in adults with growth hormone deficiency.

Another phase III study, REAL 4, is ongoing, which is investigating the efficacy and safety of somapacitan in children living with growth hormone deficiency.

Sogroya for the treatment of adult growth hormone deficiency was approved by the FDA on Aug 28, 2020 and the Ministry of Health, Labour and Welfare in Japan on Jan 22, 2021.

Novo Nordisk Files for Ozempic's Label Expansion in US- Jan 20

Novo Nordisk announced that it has submitted a label expansion application to the FDA for the existing marketing authorization for Ozempicto include a new dose of 2.0 mg.

We note that Ozempic is currently approved in the United States in 0.5 mg and 1.0 mg doses for the treatment of type II diabetes in adults. In January 2020, the drug was approved in the United States for CV risk reduction in people with type II diabetes and established cardiovascular diseases.

The submission is supported by results from the SUSTAIN FORTE study, which included 961 people with type II diabetes in need of treatment intensification. In the study, people treated with semaglutide 2.0 mg achieved a statistically significant and superior reduction in HbA_{1c} at week 40 compared to semaglutide 1.0 mg. In the study, most people achieved the treatment target of HbA_{1c} levels below 7%.

The company also submitted an application to the EMA for the same in December 2020.

With the 2.0 mg dose, more people with type II diabetes will be able to achieve the treatment target.

Valuation

Novo Nordisk's shares are up 3.3% in the year-to-date period and 12.6% over the trailing 12-month period. Stocks in the Zacks sub-industry are up 1.8% and down 0.3% in the Zacks Medical sector in the year-to-date period. Over the past year, the Zacks sub-industry is up 6% and the sector is up 5.9%.

The S&P 500 index is up 12.3% in the year-to-date period and up 51.2% in the past year.

The stock is currently trading at 22.60X forward 12-month earnings per share, which compares to 14.07X for the Zacks sub-industry, 23.14X for the Zacks sector and 23.29X for the S&P 500 index.

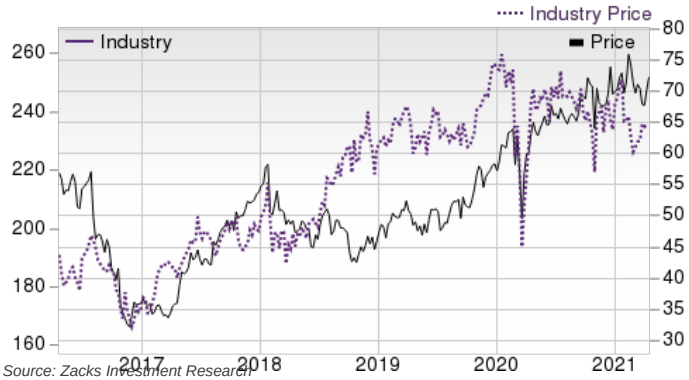
Over the past five years, the stock has traded as high as 25.62X and as low as 13.75X, with a 5-year median of 19.32X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our $76.00 price target reflects 23.79X forward 12-month earnings per share.

The table below shows summary valuation data for NVO

Valuation Multiples - NVO					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	22.6	14.07	23.14	23.29
	5-Year High	25.62	16.62	23.14	23.83
	5-Year Low	13.75	13.18	15.87	15.3
	5-Year Median	19.32	15.04	19.25	18.01
P/S F12M	Current	7.75	4.48	2.7	4.83
	5-Year High	8.62	4.85	3.16	4.83
	5-Year Low	4.73	3.88	2.27	3.21
	5-Year Median	6.77	4.43	2.78	3.71
P/B TTM	Current	17.52	5.62	3.96	7.11
	5-Year High	27.12	7.37	5.07	7.11
	5-Year Low	12.39	3.99	3.02	3.83
	5-Year Median	16.66	5.41	4.34	4.99

As of 04/16/2021 *Source: Zacks Investment Research*

Industry Analysis **Zacks Industry Rank:** Bottom 5% (241 out of 254)



Source: Zacks Investment Research

Top Peers

Company (Ticker)	Rec	Rank
AbbVie Inc. **(ABBV)**	Neutral	3
AstraZeneca PLC **(AZN)**	Neutral	3
H Lundbeck AS **(HLUYY)**	Neutral	4
Eli Lilly and Company **(LLY)**	Neutral	3
Merck & Co., Inc. **(MRK)**	Neutral	3
Sanofi **(SNY)**	Neutral	3
GlaxoSmithKline plc **(GSK)**	Underperform	5
Innoviva, Inc. **(INVA)**	Underperform	4

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

Industry Comparison Industry: Large Cap Pharmaceuticals

	NVO	X Industry	S&P 500	Industry Peers ABBV	AZN	LLY
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	3	-	-	3	3	3
VGM Score	B	-	-	A	A	C
Market Cap	169.95 B	181.49 B	30.15 B	190.44 B	133.17 B	181.49 B
# of Analysts	5	4	12	8	4	6
Dividend Yield	1.84%	2.43%	1.28%	4.82%	3.67%	1.80%
Value Score	B	-	-	A	B	B
Cash/Price	0.01	0.06	0.06	0.04	0.06	0.02
EV/EBITDA	17.88	17.03	17.10	21.36	17.03	22.73
PEG F1	2.57	1.92	2.40	1.79	1.20	1.89
P/B	17.52	5.28	4.08	14.55	8.52	31.08
P/CF	23.16	10.69	17.07	7.86	15.82	21.15
P/E F1	23.36	13.80	22.39	8.63	19.86	23.10
P/S TTM	8.74	4.15	3.46	4.16	5.00	7.40
Earnings Yield	4.28%	7.25%	4.41%	11.59%	5.05%	4.33%
Debt/Equity	0.05	0.65	0.66	5.92	1.12	2.85
Cash Flow ($/share)	3.12	3.67	6.78	13.74	3.21	8.95
Growth Score	C	-	-	C	B	B
Historical EPS Growth (3-5 Years)	5.16%	5.22%	9.34%	21.40%	-2.00%	19.69%
Projected EPS Growth (F1/F0)	12.10%	8.94%	15.70%	18.47%	27.11%	3.32%
Current Cash Flow Growth	9.69%	3.67%	0.61%	58.71%	1.31%	25.86%
Historical Cash Flow Growth (3-5 Years)	6.83%	6.26%	7.37%	25.16%	0.43%	10.99%
Current Ratio	0.94	1.16	1.39	0.84	0.96	1.40
Debt/Capital	4.37%	39.31%	41.26%	85.55%	52.82%	74.01%
Net Margin	33.11%	16.69%	10.59%	10.08%	12.01%	25.24%
Return on Equity	71.58%	34.02%	14.98%	199.21%	38.18%	158.24%
Sales/Assets	0.94	0.43	0.51	0.34	0.43	0.57
Projected Sales Growth (F1/F0)	9.56%	9.05%	7.43%	21.91%	20.62%	11.88%
Momentum Score	A	-	-	B	B	F
Daily Price Change	0.92%	0.95%	0.49%	0.95%	-0.18%	1.79%
1-Week Price Change	3.64%	0.87%	1.54%	-0.90%	0.83%	-0.40%
4-Week Price Change	1.78%	2.82%	5.18%	3.99%	2.86%	2.89%
12-Week Price Change	-0.48%	-3.17%	11.23%	-3.01%	-3.44%	-6.47%
52-Week Price Change	17.03%	3.97%	59.10%	31.82%	3.28%	22.31%
20-Day Average Volume (Shares)	801,965	2,293,098	1,960,937	6,810,814	8,011,002	2,861,828
EPS F1 Estimate 1-Week Change	0.45%	0.00%	0.00%	0.01%	0.00%	-0.34%
EPS F1 Estimate 4-Week Change	0.45%	-0.01%	0.04%	0.02%	1.39%	-0.18%
EPS F1 Estimate 12-Week Change	5.10%	0.71%	1.93%	2.75%	0.46%	0.97%
EPS Q1 Estimate Monthly Change	2.56%	0.00%	0.00%	0.00%	0.00%	0.52%

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

Value Score	B
Growth Score	C
Momentum Score	A
VGM Score	B

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

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

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

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 forwardlooking 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 mediumterm 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 mostrecent 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.