

Phibro Animal Health (PAHC)

\$29.09 (As of 06/21/21)

Price Target (6-12 Months): **\$31.00**

Long Term: 6-12 Months

Zacks Recommendation:

Neutral

(Since: 01/08/21)

Prior Recommendation: Underperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

2-Buy

Zacks Style Scores:

VGM:C

Value: B

Growth: C

Momentum: F

Summary

Year to date, Phibro has outperformed its industry. In the third-quarter of fiscal 2021 the company registered solid growth in the Performance Products segment. This was driven by strong demand for copper-based products. Growth in international market of dairy products amid the post-pandemic recovery is impressive. The year-over-year growth in the Mineral Nutrition arm is encouraging as well. The company has provided financial guidance for fourth-quarter fiscal 2021, calling for year-over-year revenue growth. However, the year-over-year decline in the Animal Health segment is discouraging. The decline in vaccine sales due to challenging economic conditions in Eastern Europe is worrying as well. Contraction of both margins does not bode well either.

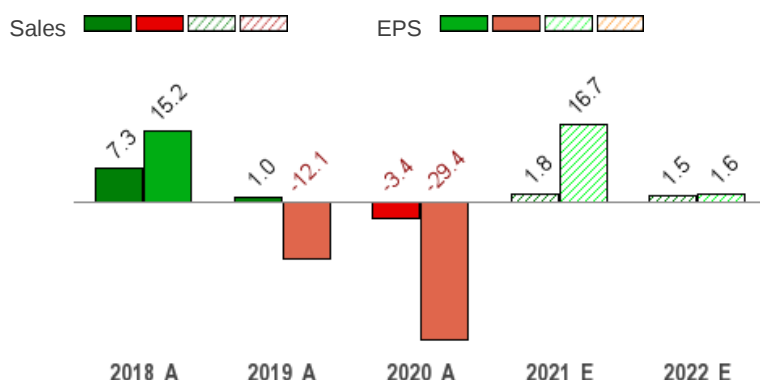
Price, Consensus & Surprise



Data Overview

52-Week High-Low	\$30.56 - \$16.27
20-Day Average Volume (Shares)	118,677
Market Cap	\$1.2 B
Year-To-Date Price Change	49.8%
Beta	0.53
Dividend / Dividend Yield	\$0.48 / 1.7%
Industry	Medical - Products
Zacks Industry Rank	Bottom 22% (197 out of 252)

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2022					826 E
2021	195 A	206 A	212 A		814 E
2020	190 A	214 A	211 A	186 A	800 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2022					\$1.28 E
2021	\$0.27 A	\$0.34 A	\$0.34 A	\$0.32 E	\$1.26 E
2020	\$0.19 A	\$0.34 A	\$0.38 A	\$0.17 A	\$1.08 A

*Quarterly figures may not add up to annual.

Last EPS Surprise	3.0%
Last Sales Surprise	NA
EPS F1 Estimate 4-Week Change	0.0%
Expected Report Date	08/25/2021
Earnings ESP	0.0%
P/E TTM	26.0
P/E F1	23.1
PEG F1	5.2
P/S TTM	1.5

The data in the charts and tables, including the Zacks Consensus EPS and sales estimates, is as of 06/21/2021. The report's text and the

analyst-provided price target are as of 06/22/2021.

Overview

Headquartered in New Jersey, Phibro Animal Health Corporation is a leading global diversified animal health and mineral nutrition company. The company provides a broad range of products for food animals including poultry, swine, beef and dairy cattle and aquaculture. In addition to animal health and mineral nutrition products, Phibro manufactures and markets specific ingredients for use in the personal care, automotive, industrial chemical and chemical catalyst industries. At present, Phibro sells over 1,200 products in more than 65 countries.

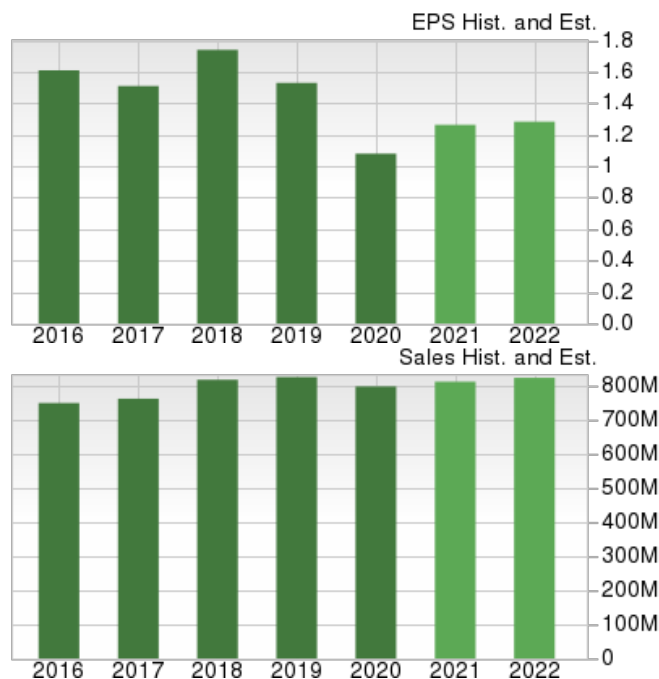
Currently, Phibro focuses on regions where the majority of livestock production is consolidated in large commercial farms such as the U.S., Brazil, China, Russia, Mexico, Australia, Turkey, Israel, Canada and Europe.

Business Segments

Animal Health (65.8% of total revenue in FY20, down 0.9% from FY19) develops, manufactures and markets more than 550 product presentations including antibacterials, anticoccidials, nutritional specialty products and vaccines.

Mineral Nutrition (26.8%, down 8.3%) manufactures and markets more than 400 formulations and concentrations of trace minerals such as zinc, manganese, copper, iron and other compounds, with special focus on customers in North America.

Performance Products (7.4%, down 5.1%) manufactures and markets a number of specialty ingredients for use in the personal care, automotive, industrial chemical and chemical catalyst industries, predominantly in the U.S.



Reasons To Buy:

▲ **Share Price Performance:** Year-to-date, Phibro has outperformed its industry for the past year. The stock has gained 51.2% compared with the industry's 3.6% rise. Phibro exited third-quarter fiscal 2021 with better-than-expected earnings results. Solid growth in the Performance Products segment driven by strong demand for copper-based products drove top-line growth. Growth in international market of dairy products amid the post-pandemic recovery is impressive. The year-over-year growth in the Mineral Nutrition arm is encouraging as well. The company has provided financial guidance for fourth-quarter fiscal 2021, calling for year-over-year revenue growth.

Phibro's diversified product portfolio, the benefits of the recent MJ Biologics deal, and the company's significant presence in the emerging markets bolster our confidence in the stock.

▲ **Diversified Product Portfolio:** With rise in scarcity of natural resources, demand for efficient production of animal food such as poultry, swine and cattle have increased. By 2050, the world will need to double food production to feed an estimated global population of 9.1 billion (as per United Nations World Population Database). Meeting this need requires cost-effective production of safe, high-quality animal protein.

Phibro's key animal health products, including MFAs and nutritional specialty products facilitate in enhancing animal nutrition. Phibro's leading product franchise, Stafac/V-Max/Eskalin, is approved in more than 30 countries for use in poultry and swine. Similarly, the company's nutritional product offerings, such as OmniGen-AF, are used increasingly in the global dairy industry. The company also manufactures vaccines which protect animals from both viral and bacterial disease challenges. On the other hand, Phibro's mineral nutrition products strengthen an animal's diet and helps maintain its optimal health.

Currently, the company is focused on expanding its footprint in the poultry, swine and cattle industries, in both domestic and international markets. Phibro is working actively to expand the cattle markets in the United States, specifically in Mexico and Brazil, as well as in Canada, Australia and South Africa. Also, the company recently signed an agreement with Virbac to distribute their generic DRAXXIN in the Canadian market. Phibro is also looking to expand into the multi-billion dollar pet care industry to add another pillar to its business. In this regard, the company has licensed a unique derma care compound for treatment of atopic dermatitis in dogs. Phibro is also evaluating potential opportunities in the oral space for cats and dogs, a space with an estimated addressable market of more than \$2 billion.

▲ **Potential in Emerging Markets:** Phibro's existing operations and established sales, marketing and distribution network in over 75 countries, provides it ample scope to take advantage of global growth opportunities. Outside the United States, Phibro's global footprint extends to key high-growth regions (countries where the livestock production growth rate is expected to be higher than the average growth rate) including Brazil and other countries in South America, China, India and Asia Pacific, Russia and former CIS countries, Mexico, Turkey, Australia, Canada and South Africa and other countries in Africa.

Phibro has continued to invest in the Far East Asia where huge growth is expected in poultry and dairy industries. Currently, the company is expanding its dairy business in the markets of Australia, Brazil and Mexico. We believe given the turmoil that is currently prevailing in the economies of Russia, Greece, Brazil and China, Phibro has performed quite well of late and bears the potential to continue the healthy performance, going ahead.

In the third quarter of fiscal 2021, Phibro registered growth in nutritional specialties driven by strong international growth in dairy products. Moreover, vaccine sales were primarily driven by growth in APAC and North America regions.

▲ **Prospering Vaccine Business:** Phibro is focusing on new developments along with incremental registrations and growing volumes of existing nutritional specialties and vaccine technologies. Phibro's buyout of the assets of Israel-based developer and manufacturer of vaccines, KoVax, has widened its portfolio of aquaculture products.

In this regard, during the last earnings call, Phibro confirmed the receipt of EU GMP approval for new vaccine facility in Sligo, Ireland. The company's vaccine business is witnessing higher domestic volumes as well as increased demand in the Asia-Pacific region.

Another notable buyout of the company was that of MJ Biologic's swine vaccines in the United States.

Currently, Phibro expects to launch the novel Lyme vaccine delivery system by 2022. Also, the company is expecting to return to double-digit growth in International demand driven by the success of vaccination programs in North America, Europe and in markets where countries depend on vaccines.

The company's pHi-Tech vaccination device had delivered impressive results during the initial trials. The device is now being trialed and sold in more than a dozen countries and increasingly being serviced remotely.

▲ **Stable Solvency Structure with Heavy Payout Load:** Phibro exited the third quarter of fiscal 2021, with cash and cash equivalents of \$93 million compared with \$96 million at the end of the second quarter of fiscal 2021. Meanwhile, total debt came up to \$380 million, down from the last-reported figure of \$387 million. Although, the reported quarter's total debt was much higher than the corresponding cash and cash equivalent level, the company has current-year-payable debt of \$23 million on its balance sheet, much lower than the present level of cash in hand. This is good news in terms of the company's solvency position particularly during the year of global pandemic when it is majorly facing manufacturing and supply halt globally.

The quarter's total debt-to-capital stands at 63.8%, indicating a moderately leveraged balance sheet. It represents a sequential decrease from 67.3% in the second quarter of fiscal 2021.

The company's fiscal third-quarter interest coverage stands at 6.7%, compared with 6.6% in the last-reported quarter.

Phirbo's capital deployment policy is based on the return of shareholders's money through dividends and share buybacks. The company's current payout ratio stands at 43.2%, up from the sequentially last-reported quarter's 41.7%. Amid the pandemic-led economic crisis, if production and supply halt along with lockdowns continue through the next few months, the company might find paying its regular quarterly dividends to be over-burdened.

Reasons To Sell:

▼ **Q3 Challenges:** Phibro saw a decline in performance by Animal Health due to lower international demand as well as unfavorable timing of certain domestic customer orders in fiscal third quarter. Also, lower sales of vaccines during the quarter due to challenging economic conditions in Eastern Europe raise concerns. Escalating operating costs and contraction of both margins are discouraging. Foreign exchange fluctuations and a stiff competitive landscape are other headwinds.

▼ **Decline in Animal Health Performance:** During the third quarter of fiscal 2021, Animal Health segment's MFA and other products declined 4% from the year-ago period due to lower international demand, primarily in APAC and South America. Further, nutritional specialties business witnessed lower demand in domestic poultry products. The overall segment saw a revenue decline of 3% year over year. The vaccine sales declined in the reported quarter owing to challenging economic conditions in the MACI region.

▼ **Foreign Exchange Headwinds:** Phibro conducts operations globally, which entails transactions in a variety of currencies. Although a portion of Phibro's revenues are denominated in various currencies, the selling prices of the majority of its products outside the United States are referenced in U.S. dollars. As a result, Phibro's revenues are not significantly directly affected by currency movements.

Unfavorable currency movement can adversely affect Phibro's revenues. Moreover, headwinds such as tough competitive scenario continue to pose threats.

However, the company is subject to currency risk to the extent that its costs are denominated in currencies other than those in which the company earns revenues. Notably, Phibro manufactures some of its major products in Brazil and Israel, where production costs are largely denominated in local currencies, while selling prices are largely set in U.S. dollars. As such, the company is exposed to changes in cost of goods sold resulting from currency movements and may not be able to adjust its selling prices to offset such movements. In fact, management in particular believes that the current strong U.S. dollar is affecting the company's export market.

▼ **Competitive Landscape:** Phibro is engaged in highly competitive industries. With respect to its major products, it thus faces threat from a substantial number of global and regional competitors. Phibro's competitive position is based principally on its product registrations, customer service and support, breadth of product line, product quality, manufacturing technology, facility location, and product prices. Some of the company's principal competitors, with greater financial, R&D, production and other resources, include Bayer AG, Ceva Santé Animale, Boehringer Ingelheim International GMBH, Eli Lilly and Company (Elanco Animal Health), Huvepharma Inc., Lallemand Inc., Merck & Co., Inc. (Merck Animal Health and MSD Animal Health), Pharmgate LLC, Southeastern Minerals, Inc., Virbac and Zoetis Inc. Moreover, consolidation continues to rise in the animal health market, which might work in favor of Phibro's competitors. Thus, the company faces a tough competitive scenario in nearly all the markets wherein it operates.

▼ **Generic Pressure to Affect Growth:** Phibro also faces competition from generic alternatives of some of its products. The company depends primarily on trade secrets to provide management with competitive advantages for many of its products. The protection afforded is limited by the availability of new competitive products or generic versions of existing products that can successfully compete with Phibro's products. As a result, Phibro faces competition from such new competitive products or lower-priced generic alternatives.

These days, generic competitors are becoming more aggressive in terms of pricing, and generic products form a considerable proportion of overall animal health sales in certain regions. If animal health customers increase their use of new or existing generic products, it will adversely affect Phibro's financial health and operational performance.

Last Earnings Report

Phibro Q3 Earnings Beat Estimates, Margins Decline

Phibro adjusted earnings per share of 34 cents in the third quarter of fiscal 2021 reflected a decline of 10.5% from the year-ago adjusted figure. The metric however surpassed the Zacks Consensus Estimate by 3%.

Meanwhile, without adjustments, GAAP earnings per share for the third quarter was 30 cents, showing a 9.1% decline from the year-ago count.

Quarter Ending 03/2021

Report Date	May 06, 2021
Sales Surprise	NA
EPS Surprise	3.03%
Quarterly EPS	0.34
Annual EPS (TTM)	1.12

Net Sales

In the quarter under review, net sales totaled \$211.7 million compared to the year-ago \$210.7 million. The growth is primarily due to improvement in the Performance Products and Mineral Nutrition segments, partially offset by reduced sales and profitability in the core Animal Health. Vaccine sales also dropped owing to lower international demand.

Segmental Sales Break-Up

During the fiscal third quarter, Animal Health net sales declined 3% to \$134.4 million. Within this segment, sales of medicated feed additives (MFAs) and other were \$78.5 million, reflecting a 5% year-over-year decrease due to lower international demand as well as unfavorable timing of certain domestic customer orders.

Within Animal Health, nutritional specialty product sales rose 7% to \$37 million, primarily on international volume growth in dairy products.

Apart from this, net vaccine sales totaled \$18.9 million, showing a decline of 13% year over year due to challenging economic conditions in Eastern Europe, which was more than offset by higher domestic volumes as well as increased demand in the Asia-Pacific region.

Net sales at the Mineral Nutrition segment rose 3% year over year to \$58.2 million on higher average selling prices.

Net sales at the Performance Products segment rose 23% to \$19.2 million driven by strong demand for copper-based products along with favorable product pricing related to underlying raw material costs.

Margins

Phibro's third-quarter gross profit declined 0.6% year over year to \$69.1 million. Gross margin contracted 34 basis points (bps) to 32.6%.

Selling, general and administrative expenses in the reported quarter were \$49 million, up 1.7% from the year-ago quarter.

Operating profit fell 5.6% year over year to \$20.1 million and operating margin contracted 61 bps to 9.5% in the quarter under review.

Financial Update

The company exited the third quarter of fiscal 2021 with cash and short-term investments in hand of \$93 million compared with \$96 million at the end of the second quarter of fiscal 2021.

Year to date, cumulative net cash provided by operating activities at the end of the third quarter of fiscal 2021 was \$45.2 million compared with net cash provided by operating activities of \$55.5 million a year ago.

Cumulative capital expenditure amounted to \$22.2 million at the end of the third quarter of fiscal 2021, reflecting a decrease from the year-ago \$24 million.

Outlook

Despite pandemic-led business disruptions across the globe, Phibro has provided the fourth-quarter fiscal and fiscal 2021 financial guidance on improving business trends.

The company projects net sales for the fourth quarter of fiscal 2021 in range of \$213-\$217 million, suggesting an increase from the year-ago \$185.9 million.

Adjusted earnings per share is projected in band of 30-32 cents. The Zacks Consensus Estimate for the metric is pegged at 33 cents.

For fiscal 2021, the company projects net sales in range of \$826.1-\$830.1 million. The Zacks Consensus Estimate for the metric is pegged at \$801.5 million.

Adjusted earnings per share for fiscal 2021 is projected in the band of \$1.25-\$1.27. The Zacks Consensus Estimate for the metric is pegged at \$1.18.

Valuation

Phibro shares are up 51.2% in the year-to-date period and up 15.4% in the trailing 12-month period. Stocks in the Zacks sub-industry and Zacks Medical sector are up 3.6% and up 1.9% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and sector are up 17.2% and up 4.9%, respectively.

The S&P 500 index is up 12.6% in the year-to-date period and up 37.3% in the past year.

The stock is currently trading at 22.7X Forward 12-months earnings, which compares to 26.8X for the Zacks sub-industry, 23.0X for the Zacks sector and 21.4X for the S&P 500 index.

Over the past five years, the stock has traded as high as 28.1X and as low as 10.8X, with a 5-year median 19.9X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$31 price target reflects 24.2X forward 12-months earnings.

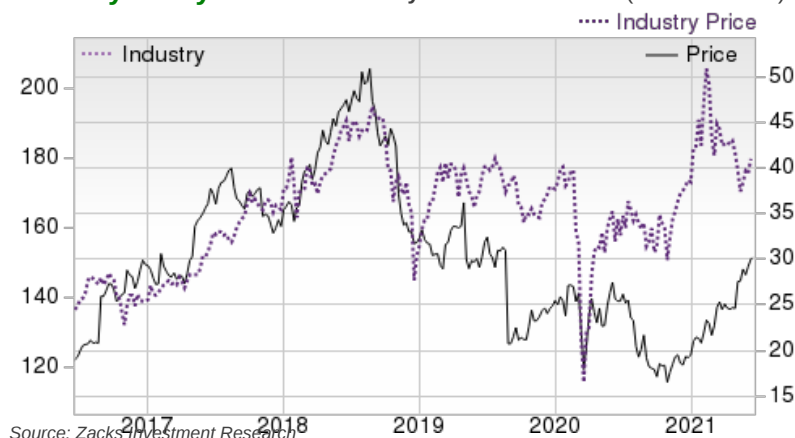
The table below shows summary valuation data for PAHC

Valuation Multiples - PAHC					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	22.68	26.78	23.00	21.35
	5-Year High	28.10	30.08	23.00	23.83
	5-Year Low	10.77	16.75	15.82	15.31
	5-Year Median	19.93	22.05	19.33	18.05
P/S F12M	Current	1.43	3.70	2.67	4.63
	5-Year High	2.53	3.89	3.17	4.74
	5-Year Low	0.83	2.59	2.27	3.21
	5-Year Median	1.41	3.39	2.78	3.72
P/B TTM	Current	5.46	3.45	4.48	6.93
	5-Year High	12.07	3.95	5.05	7.08
	5-Year Low	3.30	2.23	3.03	3.84
	5-Year Median	6.80	3.04	4.35	5.02

As of 06/21/2021

Source: Zacks Investment Research

Industry Analysis Zacks Industry Rank: Bottom 22% (197 out of 252)



Top Peers

Company (Ticker)	Rec	Rank
Elanco Animal Health Incorporated (ELAN)	Outperform	3
Cardiovascular Systems, Inc. (CSII)	Neutral	4
IDEXX Laboratories, Inc. (IDXX)	Neutral	2
Merck & Co., Inc. (MRK)	Neutral	4
Neogen Corporation (NEOG)	Neutral	3
Patterson Companies, Inc. (PDCO)	Neutral	3
Zoetis Inc. (ZTS)	Neutral	3
Eli Lilly and Company (LLY)	Underperform	4

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

Industry Comparison Industry: Medical - Products				Industry Peers		
	PAHC	X Industry	S&P 500	LLY	MRK	ZTS
Zacks Recommendation (Long Term)	Neutral	-	-	Underperform	Neutral	Neutral
Zacks Rank (Short Term)	2	-	-	4	4	3
VGM Score	C	-	-	C	B	C
Market Cap	1.18 B	666.36 M	29.97 B	213.55 B	194.34 B	88.59 B
# of Analysts	3	3	12	6	6	10
Dividend Yield	1.65%	0.00%	1.35%	1.53%	3.39%	0.54%
Value Score	B	-	-	B	A	C
Cash/Price	0.08	0.10	0.06	0.01	0.04	0.04
EV/EBITDA	14.19	2.06	17.02	26.50	17.02	34.32
PEG F1	5.16	2.26	2.08	1.94	1.93	3.23
P/B	5.46	3.58	4.11	30.08	7.18	21.66
P/CF	15.28	24.12	17.39	24.88	10.38	38.81
P/E F1	22.83	27.94	20.94	28.19	11.86	41.60
P/S TTM	1.47	6.11	3.39	8.38	4.05	12.63
Earnings Yield	4.33%	1.63%	4.67%	3.55%	8.43%	2.41%
Debt/Equity	1.65	0.02	0.66	2.28	0.89	1.61
Cash Flow (\$/share)	1.90	0.00	6.83	8.95	7.39	4.81
Growth Score	C	-	-	C	C	B
Historical EPS Growth (3-5 Years)	-7.63%	7.40%	9.59%	20.37%	11.59%	19.90%
Projected EPS Growth (F1/F0)	16.97%	26.76%	21.57%	-0.40%	8.98%	16.52%
Current Cash Flow Growth	-14.84%	-2.29%	0.99%	25.86%	9.82%	5.45%
Historical Cash Flow Growth (3-5 Years)	-3.33%	9.11%	7.28%	10.99%	2.46%	16.00%
Current Ratio	2.79	3.38	1.39	1.42	1.02	3.29
Debt/Capital	62.30%	9.37%	41.51%	69.53%	47.03%	61.68%
Net Margin	5.37%	-9.67%	11.95%	23.91%	14.64%	25.30%
Return on Equity	22.19%	-3.00%	16.48%	132.28%	54.15%	55.11%
Sales/Assets	1.00	0.52	0.51	0.57	0.53	0.52
Projected Sales Growth (F1/F0)	1.76%	10.86%	9.41%	10.93%	2.93%	12.46%
Momentum Score	F	-	-	C	D	F
Daily Price Change	-0.99%	0.04%	1.40%	1.89%	0.18%	0.65%
1-Week Price Change	-1.74%	-1.67%	-0.71%	-2.47%	0.45%	1.75%
4-Week Price Change	3.01%	0.86%	0.66%	10.77%	-2.89%	5.78%
12-Week Price Change	20.60%	0.13%	6.39%	19.50%	-1.98%	17.81%
52-Week Price Change	13.94%	25.82%	35.50%	38.78%	0.00%	36.26%
20-Day Average Volume (Shares)	118,677	245,197	1,885,424	4,178,914	13,306,482	1,718,265
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	-0.02%	0.00%	0.00%
EPS F1 Estimate 4-Week Change	0.00%	0.00%	0.01%	0.08%	-0.54%	0.00%
EPS F1 Estimate 12-Week Change	9.82%	0.00%	3.59%	-3.68%	-1.30%	1.96%

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

EPS Q1 Estimate Monthly Change	0.00%	:	0.00%	:	0.00%	:	0.00%	:	-6.37%	:	0.00%
--------------------------------	-------	---	-------	---	-------	---	-------	---	--------	---	-------

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	B
Growth Score	C
Momentum Score	F
VGM Score	C

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

Disclosures

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

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

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

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

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

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

Additional Disclosure

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

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

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

Glossary of Terms and Definitions

52-Week High-Low: The range of the highest and lowest prices at which a stock has traded during the past year. This range is determined based on the stock's daily closing price which may differ from the intra-day high or low. Many investors use it as a technical indicator to determine a stock's current value and future price movement. The idea here is that if price breaks out from the 52-week range, in either direction, the momentum may continue in the same direction.

20-Day Average Volume (Shares): The average number of shares of a company traded in a day over the last 20 days. It is a direct indication of a security's overall liquidity. The higher the average daily trading volume, the easier it is to enter or exit the stock at a desired price with more buyers and sellers being available.

Daily Price Change: This is the percentage difference between a trading day's closing price and the prior trading day's closing price. This item is updated at 9 p.m. EST each day.

1-Week Price Change: This is the percentage change in a stock's closing price over the last 5 trading days. This change reflects the collective buying and selling sentiment over the 1-week period.

A strong weekly price increase for the stock, especially when accompanied by increased volume, is an indication of it gaining momentum.

4-Week Price Change: This is the percentage change in a stock's closing price over the last 20 trading days or past 4 weeks. This is a medium-term price change metric and an indication of the stock gaining momentum.

12-Week Price Change: This is the percentage change of a stock's closing price over the last 60 trading days or past 12 weeks. Similar to 4-week price change, this is a medium-term price change metric. It shows whether a stock has been enjoying strong investor demand, or if it has been in consolidation, or distress over this period.

52-Week Price Change: This is the percentage change in a stock's closing price over the last 260 trading days or past 52 weeks. This long-term price change metric is a good reference point for investors. Some investors seek stocks with the best percentage price change over the last 52 weeks, expecting the momentum to continue.

Market Cap: The number of outstanding common shares of a company times its latest price per share. This figure represents a company's size, which indicates various characteristics, including price stability and risk, in which investors could be interested.

Year-To-Date Price Change: Change in a stock's daily closing price in the period of time beginning the first day of the current calendar year through to the previous trading day.

of Analysts: Number of EPS estimates used in calculating the current-quarter consensus. These estimates come from the brokerage analysts tracking this stock. However, the number of such analysts tracking this stock may not match the number of estimates, as all brokerage analysts may not come up with an estimate or provide it to us.

Beta: A measure of risk commonly used to compare the volatility of a stock to the overall market. The S&P 500 Index is the base for calculating beta and carries a value of 1. A stock with beta below 1 is less risky than the market as a whole. And a stock with beta above 1 is riskier.

Dividend: The portion of earnings a company is expected to distribute to its common shareholders in the next 12 months for each share they own. Dividends are usually paid quarterly. Dividend payments reflect positively on a company and help maintain investors' trust. Investors typically find dividend-paying stocks appealing because the dividend adds to any market price appreciation to result in higher return on investment (ROI). Moreover, a steady or increasing dividend payment provides investors a cushion in a down market.

Dividend Yield: The ratio of a company's annual dividend to its share price. The annual dividend used in the ratio is calculated based on the most recent dividend paid by the company. Dividend yield is an estimate of the dividend-only return from a stock in the next 12 months. Since dividend itself doesn't change frequently, dividend yield usually changes with a stock's price movement. As a result, often an unusually high dividend yield is a result of weak stock price.

S&P 500 Index: The Standard & Poor's 500 (S&P 500) Index is an unmanaged group of securities considered to be representative of the stock market in general. It is a market-capitalization-weighted index of stocks of the 500 largest U.S. companies. Each stock's weight in the index is

proportionate to its market value.

Industry: One of the 250+ groups that Zacks classifies all stocks into based on the nature of business. These groups are termed as expanded (aka "X") industries and map to their respective (economic) sectors; Zacks has 16 sectors.

Zacks Industry Rank: The Zacks Industry Rank is determined by calculating the average Zacks Rank for all stocks in the industry and then assigning an ordinal rank to it. For example, an industry with an average Zacks Rank of 1.6 is better than an industry with an average Zacks Rank of 2.3. So, the industry with the better average Zacks Rank would get a better Zacks Industry Rank. If an industry has the best average Zacks Rank, it would be considered the top industry (1 out of 250+), which would place it at the top 1% of Zacks-ranked industries. Studies have shown that roughly half of a stock's price movement can be attributed to the industry group it belongs to. In fact, the top 50% of Zacks-ranked industries outperforms the bottom 50% by a factor of more than 2 to 1.

Last EPS Surprise: The percentage deviation of a company's last reported earnings per share from the Zacks Consensus Estimate. Companies with a positive earnings surprise are more likely to surprise again in the future (or miss again if they recently missed).

Last Sales Surprise: The percentage deviation of a company's last reported sales from the Zacks Consensus Estimate.

Expected Report Date: This is an estimated date of a company's next earnings release. The information originated or gathered by Zacks Investment Research from its information providers or publicly available sources is the basis of this estimate.

Earnings ESP: The Zacks Earnings ESP compares the Most Accurate Estimate to the Zacks Consensus Estimate for the yet-to-be reported quarter. The Most Accurate Estimate is the most recent version of the Zacks Consensus EPS Estimate. The idea here is that analysts revising their estimates closer to an earnings release have the latest information, which could potentially be more accurate than what they and others contributing to the consensus had predicted earlier. Thus, a positive or negative Earnings ESP reading theoretically indicates the likely deviation of the actual earnings from the consensus estimate. However, the model's predictive power is significant for positive ESP readings only. A positive Earnings ESP is a strong predictor of an earnings beat, particularly when combined with a Zacks Rank #1 (Strong Buy), #2 (Buy) or #3 (Hold). Our research shows that stocks with this combination produce a positive surprise nearly 70% of the time.

Periods:

TTM: Trailing 12 months. Using TTM figures is an effective way of analyzing the most-recent financial data in an annualized format that helps neutralize the effects of seasonality and other quarter-to-quarter variation.

F1: Current fiscal year. This period is used to analyze the estimates for the ongoing full fiscal year.

F2: Next fiscal year. This period is used to analyze the estimates for the next full fiscal year.

F12M: Forward 12 months. Using F12M figures is an effective way of analyzing the near-term (the following four unreported quarters) estimates in an annualized manner. Instead of typically representing estimates for the full fiscal year, which may not represent the nitty-gritty of each quarter, F12M figures suggest an all-inclusive annualized estimate for the following four quarters. The annualization helps neutralize the potential effects of seasonality and other quarter-to-quarter variations.

P/E Ratio: The price-to-earnings ratio measures a company's current market price per share relative to its earnings per share (EPS). Usually, the trailing-12-month (TTM) EPS, current-fiscal-year (F1) EPS estimate, or forward-12-month (F12M) EPS estimate is used as the denominator. In essence, this ratio shows what the market is willing to pay today for each dollar of EPS. In other words, this ratio gives a sense of what the relative value of the company is at the already reported level of earnings or at a future level of earnings.

It is one of the most widely-used multiples for determining the value of a company and helps comparing its valuation with that of a competitor, the industry group or a benchmark.

PEG Ratio: The price/earnings to growth ratio is a stock's P/E ratio using current fiscal year (F1) EPS estimate divided by its expected EPS growth rate over the coming 3 to 5 years. This ratio essentially determines a stock's value by factoring in the company's expected earnings growth and is thus believed to provide a more complete picture than just the P/E ratio, particularly for faster-growing companies.

P/S Ratio: The price-to-sales ratio is calculated as a company's current price per share divided by trailing 12 months (TTM) sales or revenues per share. This ratio shows what the market is willing to pay today for each dollar of TTM sales per share. The P/S ratio is at times the only valuation metric when the company has yet to become profitable.

Cash/Price Ratio: The cash-to-price ratio or Cash Yield is calculated as cash and marketable securities per share divided by the company's current share price. Like the earnings yield, which shows the anticipated yield (or return) on a stock from earnings for each dollar invested, the cash yield does the same, with cash being the source of return instead of earnings. For example, a cash/price ratio of 0.08 suggests a return of 8% or 8 cents for every \$1 investment.

EV/EBITDA Ratio: The EV/EBITDA ratio, also known as Enterprise Multiple, is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by EBITDA (earnings before interest, taxes, depreciation and amortization). Usually, trailing-12-month (TTM) or forward-12-month (F12M) EBITDA is used as the denominator.

EV/Sales Ratio: The enterprise value-to-sales ratio is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by annual sales. It is an expansion of the P/S valuation, which uses market value instead of enterprise value. The EV/Sales ratio is perceived as more accurate than P/S, in part, because the market capitalization does not take a company's debt into account when valuing it.

EV/CF Ratio: The enterprise value-to-cash flow ratio is calculated as a company's enterprise value (market capitalization + value of total long-

term debt + book value of preferred shares - cash and marketable securities) divided by the trailing-12-month (TTM) operating cash flow. It's a measure of how long it would take to buy the entire business if you were able to use all the company's operating cash flow.

The EV/CF ratio is perceived as more accurate than the P/CF ratio, in part, because the market price does not take a company's debt into account when valuing it.

EV/FCF Ratio: The enterprise value-to-free cash flow metric compares a company's enterprise value to its trailing-12-month (TTM) free cash flow (FCF). This metric is very similar to the EV/CF ratio, but is considered a more exact measure owing to the fact that it uses free cash flow, which subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding growth activities and payments to shareholders.

P/EBITDA Ratio: The P/EBITDA ratio is calculated as a company's per share market value divided by EBITDA (earnings before interest, taxes, depreciation, and amortization). This metric is very similar to the EV/EBITDA ratio, but is considered a little less exact measure as it uses market price, which does not take a company's debt into account. However, since EBITDA is often considered a proxy for cash income, the metric is used as a measure of what the market is willing to pay today for each dollar of the company's cash profitability in the trailing 12 months (TTM) or forward 12 months (F12M).

P/B Ratio: The price-to-book ratio is calculated as a company's current price per share divided by its book value (total assets – liabilities – preferred stocks) per share. In short, the book value is how much a company is worth. In other words, it reflects the total value of a company's assets that its common shareholders would receive if it were to be liquidated. So, the P/B ratio indicates whether you're paying higher or lower than what would remain if the company went bankrupt immediately. Investors typically use this metric to determine how a company's stock price stacks up to its intrinsic value.

P/TB Ratio: The price-to-tangible-book value ratio is calculated as 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.