

Phibro Animal Health (PAHC)

\$23.66 (As of 05/06/20)

Price Target (6-12 Months): **\$25.00**

Long Term: 6-12 Months

Zacks Recommendation:
Neutral

(Since: 05/04/20)

Prior Recommendation: Outperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

3-Hold

Zacks Style Scores:

VGM:A

Value: B

Growth: B

Momentum: A

Summary

Phibro's revenue growth in Animal Health segment was robust. Strong international volume growth in domestic dairy products and the Osprey Biotechnics acquisition drove Nutritional specialty product sales. It continued benefiting from the launch of Rejensa, a supplemental chew for canine joint health. Growth of Phibro's diversified portfolio also buoys optimism. Phibro's second-quarter fiscal 2020 performance was impressive as it registered better-than-expected earnings. Phibro shares have outperformed the industry in the past six months. However, revenue decline in two of its core segments and contraction in operating margin are concerning. A lowered fiscal 2020 guidance is concerning. A weak solvency and heavy payout load, coronavirus-led economic doldrums and foreign exchange fluctuations are other headwinds trailing the company.

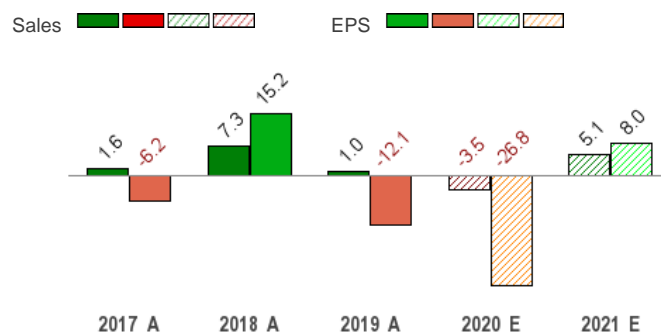
Price, Consensus & Surprise



Data Overview

52 Week High-Low	\$33.97 - \$16.87
20 Day Average Volume (sh)	176,597
Market Cap	\$957.1 M
YTD Price Change	-4.7%
Beta	0.47
Dividend / Div Yld	\$0.48 / 2.0%
Industry	Medical - Products
Zacks Industry Rank	Top 14% (36 out of 253)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	21.4%
Last Sales Surprise	NA
EPS F1 Est- 4 week change	0.0%
Expected Report Date	05/07/2020
Earnings ESP	4.4%
P/E TTM	18.9
P/E F1	21.1
PEG F1	4.8
P/S TTM	1.2

Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021					840 E
2020	190 A	214 A			799 E
2019	200 A	218 A	206 A	204 A	828 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021					\$1.21 E
2020	\$0.19 A	\$0.34 A	\$0.35 E	\$0.28 E	\$1.12 E
2019	\$0.39 A	\$0.41 A	\$0.39 A	\$0.33 A	\$1.53 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 05/06/2020. The reports text is as of 05/07/2020.

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.

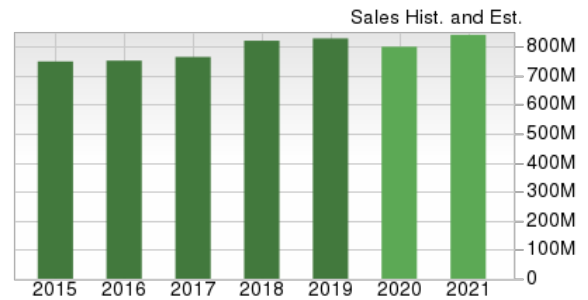
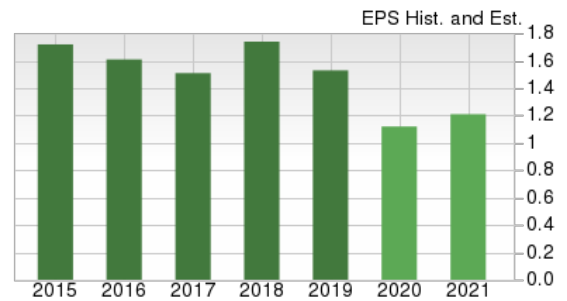
Currently, Phibro focuses on regions where the majority of livestock production is consolidated in large commercial farms such as the U.S., Brazil, China, Russia, Mexico, Australia, Turkey, Israel, Canada and Europe.

Business Segments

Animal Health (64.3% of total revenue in FY19) develops, manufactures and markets more than 550 product presentations including antibacterials, anticommodials, nutritional specialty products and vaccines.

Mineral Nutrition (28.2% of total revenue in FY19) 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 (6.4% of total revenue in FY19) 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:** Phibro has outperformed its industry for the past six months. The stock has gained 2.2% against the industry's 5.3% loss. Phibro witnessed revenue growth in its Animal Health segment. Strong international volume growth in domestic dairy products and the Osprey Biotechnics acquisition drove Nutritional specialty product sales. The company is upbeat about its long-term prospects within its Animal Health segment. The company continued benefiting from the launch of Rejensa, a supplemental chew for canine joint health. Growth of Phibro's diversified portfolio also buoys optimism. Phibro's second-quarter fiscal 2020 performance was impressive as it registered better-than-expected earnings.

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.

▲ **Animal Health Market Growth Continues:** Phibro Health is well positioned in the fastest growing food animal species segment of the animal health market with significant presence in poultry and swine, which are projected by Vetnosis (a research and consulting firm specializing in global animal health and veterinary medicine) to grow globally at compound annual rates of 5.9% and 5%, respectively, between 2014 and 2019. With such optimistic trends prevailing in the market, Phibro's animal health business is doing well.

During the second quarter of fiscal 2020, Animal Health net sales grew 3% year over year. Within Animal Health, Nutritional specialty product sales rose 12% on increased volume in domestic poultry and dairy products. The recently-completed acquisition of Osprey Biotechnics also aided sales at the segment. Apart from this, net vaccine sales increased 10% year over year, driven by robust international demand and enhanced market penetration.

We are encouraged to note that, Phibro as a leading provider of Medicated Feed Additives (MFA) products, has the potential to best capture the huge and growing animal health market worldwide. Data by Vetnosis also supports our view with their projected CAGR (compound annual growth rate) of approximately 4% (from 2015–2020) for MFA products.

At the end of the second quarter of fiscal 2020, the company projected full-year animal Health sales in the range of \$537 million to \$557 million for fiscal 2020, suggesting a growth of 1-3% from year-ago reported figure.

▲ **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 and is regarded as one of the leading MFA products for livestock. 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. Management believes the diversity of species and product categories enhances the company's sales mix and lowers sales concentration risk.

Currently, the company is focused on expanding its footprint in the poultry, swine and cattle industries in both domestic and international markets. The complementary nature of its animal health and mineral nutrition portfolio provides Phibro with unique cross-selling opportunities that can help reach out to new customers or strengthen relationships with existing ones. We believe such a diverse portfolio will allow the company to comfortably address the distinct growing conditions of livestock in different regions of the world.

▲ **Potential in Emerging Markets:** Phibro's existing operations and established sales, marketing and distribution network in over 65 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.

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

Earlier, the company purchased MJ Biologic's swine vaccines in the United States. Further, Phibro had become the exclusive distributor of MJ Biologicals that works on research and development of animal health products. Both the firms are working on the joint development of certain animal vaccines. So far, the collaboration has helped expand Phibro's U.S. swine product offering to include specialized vaccines.

The company recently launched the pHi-Tech vaccination device. The initial trials have started delivering impressive results. The company has signed up its first customers for the trials and expects the product to contribute to its top line in the long term.

Reasons To Sell:

- ▼ **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. 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.
- ▼ **African Swine Fever in China:** Presently, Phibro's food animal business is facing a huge setback in China as this country is currently dealing with the growing incidence of African swine fever which raises around 400 million pigs. The fever has also started to spread in the neighboring countries, which is another concern for Phibro. Through fiscal 2020, the company apprehends significantly weak animal health sales in China as African swine fever continues to reduce demand.
- ▼ **Weak Solvency and Heavy Payout Load:** Phibro exited the second quarter of fiscal 2020 with cash and short-term investments of \$75 million compared with \$79 million at the end of the first quarter of fiscal 2020. Meanwhile, total debt came up to \$373 million for the period, compared to \$395 million in the sequentially last reported quarter. This figure is much higher than the quarter-end cash and short-term investments level, apparently indicating weak solvency. However, if we go by the company's current-year debt level of \$16 million, this comes pretty low compared to the cash in hand. This is good news in terms of solvency position of the company, at least during the year of economic downturn, implying that the company is holding sufficient cash for debt repayment.

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

Debt comparison with the industry is, however, favorable as industry's total debt of \$8.62 billion, stands much higher to the company's debt level.

The quarter's total debt-to-capital of 63.2% stands at a very high level, indicating a highly leveraged balance sheet. However, it represents a sequential decrease from 65.7% at the end of the first quarter. This compares unfavorably with the total debt-to-capital of the industry which stands at a moderately lower level of 35.5%. The overall data concludes that in terms of solvency level of the company, the picture is not very encouraging.

The times interest earned for the company stands at 4.9%, representing a sequential decrease from 5.2% at the end of the first quarter. This, however, compares favorably with the times interest earned for the industry which stands at a further low level (4.4%).

The current payout ratio stands at a moderately high level of 38.4%, representing a sequential increase from 36.4% from the end of the first quarter. 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. Moreover, this compares unfavorably with the payout rate of the industry which stands at a lower level (31.3%).

Last Earnings Report

Phibro Q2 Earnings Top Estimates, Revenues Fall Y/Y

Phibro Animal Health Corporation reported adjusted earnings per share of 34 cents in the second quarter of fiscal 2020, reflecting a 17.1% fall from the year-ago 41 cents. The figure, however, beat the Zacks Consensus Estimate by 21.4%.

Meanwhile, without adjustments, reported earnings was 29 cents, down 19.4% from the year-ago count.

Quarter Ending **12/2019**

Report Date	Feb 03, 2020
Sales Surprise	NA
EPS Surprise	21.43%
Quarterly EPS	0.34
Annual EPS (TTM)	1.25

Net Sales

In the quarter under review, net sales totaled \$214 million, down 1.9% year over year owing to substantially lower sales at two core segments — Mineral Nutrition and Performance Products.

Segmental Sales Break-Up

During the second quarter, **Animal Health** net sales grew 3% to \$143.7 million. Within this segment, the company registered \$92 million in sales of medicated feed additives (MFAs) and other, reflecting a 1% year-over-year decline. This was on account of lower demand owing to African swine fever outbreak in China.

Within Animal Health, Nutritional specialty product sales rose 12% to \$33.1 million on volume growth in domestic poultry and dairy products. The recently-completed acquisition of Osprey Biotechnics also aided sales at the segment.

Apart from this, net vaccine sales totaled \$18.7 million, showing an increase of 10% year over year, driven by robust international demand and enhanced market penetration.

Net sales at the **Mineral Nutrition** segment fell 11% year over year to \$55.7 million owing to lower average selling prices combined with lower overall unit volume.

Net sales at the **Performance Products** segment fell 10% to \$14.6 million owing to lower volume of copper-based products.

Margins

Phibro's second-quarter gross profit rose 1% year over year to \$69.1 million. Also, gross margin expanded 85 basis points (bps) to 32.3%.

Selling, general and administrative expenses in the reported quarter were \$49.5 million, up 15.4% from the year-ago quarter.

Operating profit declined 23.7% year over year to \$20 million and operating margin contracted 262 bps to 9.2% in the quarter under review.

Financial Update

The company ended the second quarter of fiscal 2020 with cash and short-term investments on hand of \$75 million compared with \$79 million at the end of first-quarter fiscal 2020.

Cumulative net cash provided by operating activities at the end of the second quarter was \$28.5 million compared with the year-ago figure of \$16.6 million. Cumulative capital expenditure amounted to \$16.1 million at the end of the second quarter, reflecting an increase from the year-ago \$12.1 million.

FY20 Outlook

The company has lowered its guidance for fiscal 2020. The company has lowered the revenue outlook to \$812-828 million from the earlier-issued \$833-863 million. The Zacks Consensus Estimate for fiscal 2020 revenues is pegged at \$833.6 million, which is above the guided range.

Adjusted earnings per share is pegged at 88-95 cents, lower than the earlier-provided range of \$1.08-\$1.15. The Zacks Consensus Estimate for adjusted earnings per share is pegged at \$1.11, above the guided range.

Valuation

Phibro shares are down 4.8% in the year-to-date period and down 23.4% in the trailing 12-month period. Stocks in the Zacks sub-industry and Zacks Medical sector are down 8.7% and down 4% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and sector are down 2.2% and up 0.8%, respectively.

The S&P 500 index is down 11.5% in the year-to-date period and down 1.3% in the past year.

The stock is currently trading at 19.5X Forward 12-months earnings, which compares to 27.9X for the Zacks sub-industry, 22.1X for the Zacks sector and 20.5X for the S&P 500 index.

Over the past five years, the stock has traded as high as 28.1X and as low as 10.1X, with a 5-year median 19.4X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$25 price target reflects 20.7X 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	19.46	27.97	22.06	20.52
	5-Year High	28.10	27.97	22.06	20.52
	5-Year Low	10.12	17.01	15.81	15.19
	5-Year Median	19.43	19.72	18.73	17.44
P/S F12M	Current	1.15	3.89	2.73	3.21
	5-Year High	2.53	3.99	3.84	3.44
	5-Year Low	0.85	2.88	2.25	2.54
	5-Year Median	1.51	3.22	2.96	3.01
P/B TTM	Current	4.40	3.08	3.72	3.78
	5-Year High	63.41	4.25	5.05	4.55
	5-Year Low	3.30	2.21	2.92	2.84
	5-Year Median	9.39	2.77	4.29	3.64

As of 05/06/2020

Industry Analysis Zacks Industry Rank: Top 14% (36 out of 253)



Top Peers

Company (Ticker)	Rec	Rank
Eli Lilly and Company (LLY)	Outperform	1
Cardiovascular Systems Inc (CSII)	Neutral	3
Elanco Animal Health Incorporated (ELAN)	Neutral	3
IDEXX Laboratories Inc (IDXX)	Neutral	3
MerckCo Inc (MRK)	Neutral	3
Neogen Corporation (NEOG)	Neutral	3
Patterson Companies Inc (PDCO)	Neutral	4
Zoetis Inc (ZTS)	Neutral	3

Industry Comparison Industry: Medical - Products				Industry Peers		
	PAHC	X Industry	S&P 500	LLY	MRK	ZTS
Zacks Recommendation (Long Term)	Neutral	-	-	Outperform	Neutral	Neutral
Zacks Rank (Short Term)	3	-	-	1	3	3
VGM Score	A	-	-	C	B	C
Market Cap	957.12 M	278.37 M	19.11 B	149.86 B	195.60 B	59.69 B
# of Analysts	2	3	14	6	7	11
Dividend Yield	2.03%	0.00%	2.2%	1.89%	3.16%	0.64%
Value Score	B	-	-	B	B	D
Cash/Price	0.08	0.10	0.06	0.02	0.05	0.03
EV/EBITDA	11.09	0.09	11.69	24.84	13.75	26.22
PEG Ratio	4.75	4.04	2.48	1.88	2.12	3.70
Price/Book (P/B)	4.40	3.31	2.58	46.87	7.55	22.11
Price/Cash Flow (P/CF)	10.58	17.47	10.40	22.12	11.53	27.63
P/E (F1)	20.99	31.99	18.81	23.01	14.40	34.37
Price/Sales (P/S)	1.18	4.83	1.97	6.49	4.07	9.42
Earnings Yield	4.73%	-0.38%	4.99%	4.35%	6.95%	2.91%
Debt/Equity	1.64	0.13	0.75	4.37	0.87	2.26
Cash Flow (\$/share)	2.24	-0.01	7.01	7.08	6.69	4.55
Growth Score	B	-	-	C	A	B
Hist. EPS Growth (3-5 yrs)	-1.92%	12.07%	10.87%	16.98%	9.00%	20.29%
Proj. EPS Growth (F1/F0)	-26.80%	2.78%	-9.86%	12.72%	3.19%	0.48%
Curr. Cash Flow Growth	-7.92%	4.32%	5.88%	-7.51%	5.54%	18.22%
Hist. Cash Flow Growth (3-5 yrs)	4.96%	7.71%	8.55%	9.27%	0.15%	16.87%
Current Ratio	3.03	2.80	1.25	1.11	1.24	2.63
Debt/Capital	62.18%	16.31%	44.23%	81.39%	46.65%	69.29%
Net Margin	4.67%	-23.63%	10.87%	23.97%	21.10%	25.41%
Return on Equity	23.94%	-10.52%	16.36%	194.18%	52.18%	68.72%
Sales/Assets	1.08	0.58	0.55	0.59	0.57	0.56
Proj. Sales Growth (F1/F0)	-3.46%	0.00%	-2.18%	7.23%	2.59%	3.06%
Momentum Score	A	-	-	F	C	C
Daily Price Chg	-6.07%	-0.01%	-1.27%	-0.77%	-1.14%	-4.27%
1 Week Price Chg	7.06%	0.00%	0.53%	-5.71%	-4.62%	1.29%
4 Week Price Chg	1.68%	6.47%	0.68%	7.15%	-5.51%	-1.23%
12 Week Price Chg	-12.65%	-10.81%	-22.30%	9.18%	-7.36%	-12.09%
52 Week Price Chg	-23.33%	-7.51%	-11.55%	34.78%	-1.36%	23.40%
20 Day Average Volume	176,597	190,028	2,470,143	3,255,072	10,640,482	2,341,627
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	-0.58%	-9.77%
(F1) EPS Est 4 week change	0.00%	-0.16%	-6.52%	0.52%	-6.92%	-13.01%
(F1) EPS Est 12 week change	-1.75%	-11.83%	-14.84%	0.76%	-7.48%	-16.86%
(Q1) EPS Est Mthly Chg	0.00%	0.00%	-12.48%	-4.10%	-22.49%	-3.70%

Zacks Stock Rating System

We offer two rating systems that take into account investors' holding horizons: Zacks Rank and Zacks Recommendation. Each provides valuable insights into the future profitability of the stock and can be used separately or in combination with each other depending on your investment style.

Zacks Recommendation

The Zacks Recommendation aims to predict performance over the next 6 to 12 months. The foundation for the quantitatively determined Zacks Recommendation is trends in the company's estimate revisions and earnings outlook. The Zacks Recommendation is broken down into 3 Levels; Outperform, Neutral and Underperform. Unlike many Wall Street firms, we have an excellent balance between the number of Outperform and Neutral recommendations. Our team of 70 analysts are fully versed in the benefits of earnings estimate revisions and how that is harnessed through the Zacks quantitative rating system. But we have given our analysts the ability to override the Zacks Recommendation for the 1200 stocks that they follow. The reason for the analyst over-rides is that there are often factors such as valuation, industry conditions and management effectiveness that a trained investment professional can spot better than a quantitative model.

Zacks Rank

The Zacks Rank is our short-term rating system that is most effective over the one- to three-month holding horizon. The underlying driver for the quantitatively-determined Zacks Rank is the same as the Zacks Recommendation, and reflects trends in earnings estimate revisions.

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	B
Momentum Score	A
VGM Score	A

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.