

Vertex Pharmaceuticals (VRTX)

\$277.00 (As of 05/14/20)

Price Target (6-12 Months): **\$318.00**

Long Term: 6-12 Months

Zacks Recommendation:

Outperform

(Since: 04/26/20)

Prior Recommendation: Neutral

Short Term: 1-3 Months

Zacks Rank: (1-5)

1-Strong Buy

Zacks Style Scores:

VGM:A

Value: B

Growth: A

Momentum: B

Summary

Vertex beat estimates for Q1 earnings and sales. Despite COVID-19 related uncertainty, Vertex's sales in 2020 are being driven by rapid uptake of Trikafta and higher international revenues due to reimbursement arrangements in key ex-U.S. countries. Trikafta's early approval and launch was a significant milestone for Vertex. Trikafta is crucial for Vertex's long-term growth as it has the potential to treat up to 90% of CF patients. Meanwhile, Vertex's non-CF pipeline is progressing rapidly with data in multiple diseases expected in 2020. Business development is also a priority and Vertex has collaborations with several companies. However, competitive pressure is rising in the CF market. Also, Vertex's dependence on just the CF franchise for growth is a concern. The stock has outperformed the industry this year so far.

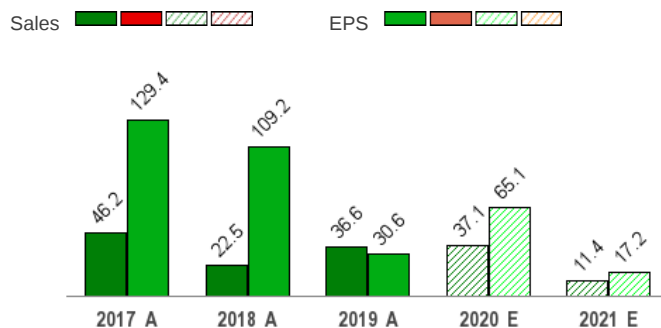
Price, Consensus & Surprise



Data Overview

52 Week High-Low	\$288.52 - \$164.96
20 Day Average Volume (sh)	1,987,183
Market Cap	\$71.8 B
YTD Price Change	26.5%
Beta	0.92
Dividend / Div Yld	\$0.00 / 0.0%
Industry	Medical - Biomedical and Genetics
Zacks Industry Rank	Top 4% (9 out of 253)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	39.9%
Last Sales Surprise	19.6%
EPS F1 Est- 4 week change	13.7%
Expected Report Date	07/29/2020
Earnings ESP	1.7%
P/E TTM	41.0
P/E F1	31.5
PEG F1	1.1
P/S TTM	14.9

Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	1,541 E	1,603 E	1,647 E	1,698 E	6,356 E
2020	1,515 A	1,401 E	1,403 E	1,426 E	5,706 E
2019	858 A	941 A	950 A	1,413 A	4,163 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$2.40 E	\$2.43 E	\$2.51 E	\$2.61 E	\$10.31 E
2020	\$2.56 A	\$2.09 E	\$2.12 E	\$2.16 E	\$8.80 E
2019	\$1.14 A	\$1.26 A	\$1.23 A	\$1.70 A	\$5.33 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 05/14/2020. The reports text is as of 05/15/2020.

Overview

Boston, MA-based Vertex Pharmaceuticals Incorporated is focused on the discovery, development, and commercialization of small molecule drugs targeting serious diseases. The company's main area of focus is cystic fibrosis (CF).

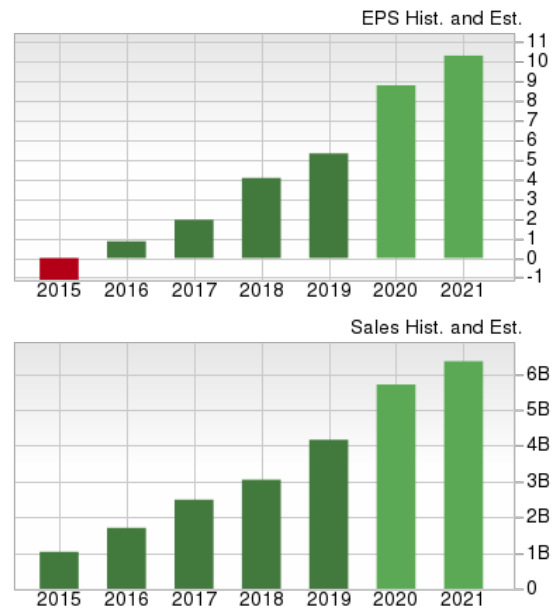
The company's lead marketed products are Trikafta (elexacaftor/tezacaftor/ivacaftor and ivacaftor), Symdeko/Symkevi (tezacaftor in combination with ivacaftor), Orkambi (lumacaftor in combination with ivacaftor) and Kalydeco (ivacaftor), which are collectively approved to treat around 60% of the 75,000 CF patients in North America, Europe and Australia. Trikafta, Vertex's triple combination regimen, was approved by the FDA in October 2019 for the treatment of CF in people aged 12 years and older who have at least one F508del mutation. It is under review in Europe and is also being evaluated in younger patients in the United States. With approval of Trikafta, Vertex can address a significantly larger CF patient population — almost 90% of patients with CF — in the future.

Symdeko was approved by the FDA in February 2018 to treat CF patients homozygous for the F508del mutation or with at least one mutation that is responsive to tezacaftor/ivacaftor. Symkevi (brand name of Symdeko in EU) was approved in the European Union in November 2018.

While CF remains the main area of focus, Vertex is also developing treatments for sickle cell disease, thalassemia and pain management.

Pimodivir/VX-787, for the treatment of influenza, was out-licensed to Janssen in 2014 while oncology candidates VX-970, VX-984 and VX-803 were divested to Merck KGaA in 2017.

The company recorded total revenues of \$4.16 billion in 2019, up 37%. Orkambi accounted for 29.4% of the company's total product revenues, Kalydeco accounted for 24.7%, Symdeko accounted for 35.4% and Trikafta comprised 10.5% of the same.



Reasons To Buy:

▲ **Shares Outperforming Industry:** This year so far, Vertex's shares have risen 26.6% against a increase of 5.9% for the industry.

▲ **Consistent Rise in CF Product Sales:** Consistent positive regulatory approvals have led to an increase in the eligible patient population for Vertex's approved medicines in the past 2-3 years. In 2019 alone, Vertex received nine new regulatory approvals or label expansions for its CF medicines globally. Also, in 2019, Vertex reached a number of key reimbursement agreements in important ex-U.S. countries like England and France, which expanded access to its CF medicines. With consistent expansion in patient population, Vertex's CF product revenues rose 29% in 2017, 40% in 2018 and 32% in 2019. With the approval of Trikafta, approximately 45,000 patients worldwide are now eligible to be treated with one of Vertex's four CF medicines. Vertex believes that revenue growth in 2020 will be primarily driven by the uptake of Trikafta as well as higher international revenues due to additional ex-U.S. reimbursement arrangements.

▲ **Strong CF Portfolio:** The CF market represents huge commercial potential. It is a rare, life-threatening disease estimated to affect about 75,000 people in North America, Europe and Australia. Vertex enjoys a strong position in this market, being the first company to successfully develop a drug (Kalydeco) that treats the underlying cause of CF.

Symdeko, in a very short time, became a primary driver of CF revenues and generated sales of \$1.4 billion in 2019. In June 2019, Vertex gained FDA approval for Symdeko in eligible patients as young as six years of age. This label expansion coupled with launch of Symkevi in additional European countries further boosted sales.

Trikafta's early approval and launch in the United States was the most significant milestone for Vertex. In the EU, a regulatory application for Trikafta is under review with approval expected in 2020. Meanwhile, phase III studies are also ongoing to evaluate Trikafta in children aged 6 through 11. A sNDA seeking approval for the pediatric patient population is expected to be filed in the second half of 2020. A potential approval of Trikafta in EU and for pediatric patients in the United States could bring additional Trikafta revenues in 2020/2021. Trikafta is crucial for Vertex's long-term growth as it has the potential to treat up to 90% of CF patients.

In 2017, Vertex bought Concert Pharmaceuticals' CF pipeline candidate, VX-561 (previously CTP-656). A phase II dose ranging study is ongoing to evaluate VX-561 to support potential phase III development of VX-561 in a once-daily triple combination regimen. Vertex has initiated another phase II study evaluating the next-generation corrector, VX-121, in triple combination with VX-561 and tezacaftor as a potential once-daily triple combination regimen.

▲ **Upside Potential from Non-CF Pipeline:** While Vertex's main focus is on the development and strengthening of its CF franchise, the company also has a rapidly advancing early-stage portfolio in five other specialty disease areas like pain, alpha-1 antitrypsin deficiency (AAT), sickle cell disease, beta-thalassemia and APOL1-mediated kidney diseases.

Vertex is co-developing a gene editing treatment, CTX001 in partnership with CRISPR Therapeutics in two devastating diseases — sickle cell disease and thalassemia. Phase I/II studies of CTX001 in adult transfusion-dependent b-thalassemia in Europe and sickle cell disease in the United States are ongoing. First safety and efficacy data from the studies were positive with additional data expected in 2020. In June 2019, Vertex announced expansion of its collaboration with CRISPR Therapeutics and acquisition of privately held Exonics Therapeutics to boost its gene editing capabilities to develop novel therapies for Duchenne muscular dystrophy ("DMD") and Myotonic dystrophy type 1 (DM1).

Also, Vertex's first oral small molecule corrector, VX-814, is being evaluated in a phase II study for the treatment of AAT while a second small molecule corrector for the AATD program, VX-864 has completed a phase I study with a phase II study expected to start in 2020. Both VX-814 and VX-864 have received Fast-Track Designation from the FDA. Vertex has initiated a phase II study on VX-147, its first oral small molecule medicine in APOL1-mediated focal segmental glomerulosclerosis (FSGS). In pain, Vertex demonstrated proof-of-concept across multiple phase II studies of Nav1.8 inhibitor, VX-150, in acute, neuropathic and musculoskeletal pain conditions.

Vertex is also looking for early stage companies and products or intellectual property acquisitions that could help it broaden its pipeline beyond CF.

▲ **Collaborations Broadening Pipeline:** Vertex's success in CF has given it the financial strength to invest in both internal and external innovation. Vertex has entered into multiple agreements in the past couple of years to provide it with access to new external scientific technologies, programs and expertise in multiple diseases to complement its internal pipeline. It has such collaborations with CRISPR Therapeutics, Arbor Biotechnologies, Moderna Therapeutics, Kymera Therapeutics, among others. Vertex also owns equity investments in CRISPR and Moderna. Vertex plans to pursue more business development transactions to bolster its pipeline for serious diseases with multiple modalities and technologies.

In October 2019, Vertex acquired Semma Therapeutics to develop a cellular therapy that both alone and in combination with an implantable device has the potential to cure type I diabetes. Clinical studies are expected to be initiated in late 2020 or early 2021. In 2019, Vertex invested approximately \$1.6 billion in cash in external innovation through new acquisitions and collaborations

▲ **Favorable Debt Profile:** As of Mar 31, 2020, Vertex had \$53 million in long-term debt on its balance sheet. Cash and cash equivalents totaled approximately \$4.19 billion. Its cash position is sound and the company is more than sufficient to pay the debt in case of insolvency. Its debt/capital ratio was 7.6 at the end of March 2020, lower than 8.1 at the end of December 2019. A lower ratio indicates lower financial risk. Meanwhile, its times interest earned ratio stands at 31, higher than 24.8 at the end of December 2019. A higher ratio indicates that the company is capable of meeting its interest obligations from operating earnings.

The rapid approval of Vertex's triple combo CF pill, Trikafta, was a big boost. Reimbursement approval in England for its CF drugs removed a key overhang.

Risks

- **Trikafta Launch Cannibalizing Sales of Other Drugs:** A large proportion of U.S. patients currently on Kalydeco, Orkambi or Symdeko are switching to Trikafta (where the indications are overlapping), which is eroding sales of the older drugs. We expect that once Trikafta is fully launched in the United States and EU and gains necessary reimbursement approvals in EU, there will be a rapid erosion of existing combinations.

Also, even if Trikafta is eventually approved in EU in 2020, Vertex would need to seek government reimbursement on a country-by-country basis, in most European markets, which is a time consuming process and may limit ex-U.S. revenues of the drug.

- **Competing Therapies in Development:** Several companies like AbbVie, Elox Pharmaceuticals, Translate Bio and Proteostasis Therapeutics are developing medicines to treat CF. Even though Vertex enjoys a strong position in this market, the entry of additional competition would cut into revenues.
- **Banking on CF Franchise:** Although we are positive on Vertex's decision to focus on the CF franchise, we remain concerned about the company's dependence on just this franchise for growth. While the company does have other pipeline candidates targeting other therapeutic areas, it is too early to get excited about them.
- **Pipeline/Regulatory Setbacks:** Vertex has several studies ongoing with its CF product candidates and any negative development on the pipeline/regulatory front will have an adverse impact on shares. In October 2017, Vertex announced that it will not file regulatory applications for VX-661 - ivacaftor combination in CF patients with one copy of the F508del mutation and one copy of a gating mutation, as a phase III study evaluating VX-661 — ivacaftor use in such patients failed to meet the primary endpoint.

In October 2018, Vertex discontinued development of VX-210 (acute cervical spinal cord injuries) due to futility.

Last Earnings Report

Vertex Q1 Earnings & Sales Beat

Vertex's first-quarter 2020 earnings per share of \$2.56 beat the Zacks Consensus Estimate of \$1.83. Moreover, earnings rose 125% year over year driven by higher product sales.

Revenues of \$1.52 billion also surpassed the Zacks Consensus Estimate of \$1.3 billion. Total revenues soared 77% year over year, driven by the rapid uptake of Trikafta, in the United States. Meanwhile, higher international revenues due to strong patient uptake of Orkambi and Symkevi following completion of reimbursement arrangements in key ex-U.S. countries like England and France in 2019 also boosted revenues.

Despite the COVID-19 pandemic, Vertex said its business continued to grow and thousands of patients initiated treatment with its medicines globally. Meanwhile, the coronavirus outbreak had no impact on its supply chain and it will be able to continue to supply its medicines.

CF Franchise Sales Strong

Vertex's first-quarter sales comprised only CF product revenues. The company did not record any collaborative and royalty revenues during the reported quarter.

Trikafta, in its first full quarter since launch, generated sales of \$895 million, gaining from rapid new patient adoption and patient switching from other medicines - Orkambi, Kalydeco and Symdeko/Symkevi. Regarding Trikafta's launch, the company said that majority of the approximately 18,000 eligible patients have now initiated treatment with the medicine.

First-quarter sales of Trikafta benefited from some early refills by patients and advanced purchasing by some ex-U.S. governments due to Covid-19 disruptions. This will reverse over the course of the year. Meanwhile, the pace of new patient initiations of Trikafta has slowed as a high percentage of currently eligible patients are already on Trikafta. These factors could result in slower growth of Trikafta for the rest of 2020.

Symdeko/ Symkevi registered sales of \$173 million in the first quarter, declining 45.9% year over year.

Kalydeco recorded sales of \$213 million in the quarter, down 12.7% year over year. Orkambi generated sales of \$234 million in the reported quarter, down 20.1% year over year. Sales of Kalydeco, Symdeko/ Symkevi and Orkambi may have been hurt by patient switching to Trikafta.

Costs Rise

Adjusted operating income rose 133% to \$877 million in the quarter driven by higher revenues and disciplined spending.

Adjusted research and development (R&D) expenses rose 23.4% to \$337 million in the first quarter due to expansion of CF and non-CF pipeline.

Adjusted selling, general and administrative (SG&A) expenses increased 22.8% to \$140 million in the reported quarter due to investments made to support CF patients' treatment, globally.

2020 Outlook

Based on Trikafta's strong performance in first-quarter 2020, Vertex raised its revenue guidance for the year.

The company now expects total revenues for CF products in the range of \$5.3-\$5.6 billion compared with the previous range of \$5.1-\$5.3 billion. The new guidance, at the midpoint, reflects approximately 36% growth over 2019.

Moreover, combined adjusted R&D and SG&A expense guidance for 2020 was maintained in the band of \$1.95-\$2 billion, which is higher than 2019 level due to Trikafta launch-related costs and the expansion of the R&D pipeline. Adjusted tax rate is expected in the range of 21%-22%.

Vertex has paused enrollment in a phase II study on VX-814 in AATD due to COVID-19.

Quarter Ending **03/2020**

Report Date	Apr 29, 2020
Sales Surprise	19.60%
EPS Surprise	39.89%
Quarterly EPS	2.21
Annual EPS (TTM)	6.75

Recent News

RMAT Designation for CTX001 – May 11

Vertex and partner CRISPR Therapeutics announced that the FDA granted Regenerative Medicine Advanced Therapy (RMAT) designation to CTX001 for the treatment of severe hemoglobinopathies.

CHMP Nod for Kalydeco Label Expansion – May 1

Vertex announced that the European Medicines Agency's (EMA) Committee for Medicinal Products for Human Use (CHMP) has granted a positive recommendation for expanding Kalydeco's label to treat the underlying cause of CF in patients aged 6 months and older with the R117H mutation. In Europe, Kalydeco is already approved for the treatment of people with CF aged 18 years and older with the R117H mutation.

New Gene Therapy Collaboration – April 27

Vertex Pharmaceuticals entered into a strategic multi-year collaboration with Affinia Therapeutics to discover and develop novel AAV capsids for in vivo delivery of genetic therapies in a number of disease areas. Under the deal, Affinia Therapeutics' proprietary AAV vector technology will be leveraged to accelerate the development of genetic therapies for treating Duchenne muscular dystrophy (DMD), myotonic dystrophy type 1 (DM1) and cystic fibrosis (CF).

Gets Switzerland Reimbursement for Orkambi and Symdeko – Apr 21

Vertex announced an agreement with the the Swiss Federal Office of Public Health (FOPH) and the Swiss Federal Social Insurance Office (FSIO) for national reimbursement of Orkambi and Symdeko for eligible patients in Switzerland.

Valuation

Vertex's shares are up 26.6% in the year-to-date period and 62.7% over the trailing 12-month period. Stocks in the Zacks sub-industry are up 5.9% while those in the sector are down 4.6% in the year-to-date period. Over the past year, the Zacks sub-industry and sector are up 10.1% and 0.7%, respectively.

The S&P 500 Index is down 12.4% in the year-to-date period and 2.3% in the past year.

The stock is currently trading at 15.15X trailing 12-month sales per share, which compares to 3.37X for the Zacks sub-industry, 2.97X for the Zacks sector and 3.08X for the S&P 500 Index.

Over the past five years, the stock has traded as high as 52.8X and as low as 10.86X, with a 5-year median of 15.92X. Our Outperform recommendation indicates that the stock will perform better than the market. Our \$318.0 price target reflects 17.4X trailing 12-month sales per share.

The table below shows summary valuation data for VRTX

Valuation Multiples - VRTX					
		Stock	Sub-Industry	Sector	S&P 500
P/S TTM	Current	15.15	3.37	2.97	3.08
	5-Year High	52.8	4.62	4.15	3.65
	5-Year Low	10.86	2.19	2.39	2.5
	5-Year Median	15.92	2.67	3.25	3.17
P/B TTM	Current	11.12	4.13	3.69	3.7
	5-Year High	32.77	5.41	5.04	4.54
	5-Year Low	8.45	2.48	3.03	2.9
	5-Year Median	18.06	3.34	4.28	3.65

As of 5/14/2020

Industry Analysis Zacks Industry Rank: Top 4% (9 out of 253)



Top Peers

Company (Ticker)	Rec	Rank
ProQR Therapeutics N.V. (PRQR)	Outperform	1
AbbVie Inc. (ABBV)	Neutral	3
Senesco Technologies Inc. (ELOX)	Neutral	3
MerckCo., Inc. (MRK)	Neutral	3
Novartis AG (NVS)	Neutral	3
Pfizer Inc. (PFE)	Neutral	3
Proteostasis Therapeutics, Inc. (PTI)	Neutral	2
Translate Bio, Inc. (TBIO)	Neutral	2

Industry Comparison Industry: Medical - Biomedical And Genetics				Industry Peers		
	VRTX	X Industry	S&P 500	ABBV	PRQR	PTI
Zacks Recommendation (Long Term)	Outperform	-	-	Neutral	Outperform	Neutral
Zacks Rank (Short Term)	1	-	-	3	1	2
VGM Score	A	-	-	A	D	D
Market Cap	71.83 B	198.88 M	18.76 B	131.24 B	253.70 M	90.21 M
# of Analysts	9	3	14	5	2	3
Dividend Yield	0.00%	0.00%	2.23%	5.31%	0.00%	0.00%
Value Score	B	-	-	B	F	F
Cash/Price	0.06	0.23	0.06	0.32	0.43	0.85
EV/EBITDA	43.69	-3.54	11.39	12.93	-2.62	-0.56
PEG Ratio	1.09	1.77	2.54	1.90	NA	NA
Price/Book (P/B)	11.12	3.86	2.56	NA	2.83	1.42
Price/Cash Flow (P/CF)	58.13	15.94	10.04	8.60	NA	NA
P/E (F1)	31.48	33.58	18.48	8.56	NA	NA
Price/Sales (P/S)	14.90	14.92	1.91	3.85	NA	NA
Earnings Yield	3.18%	-15.56%	5.09%	11.68%	-27.25%	-60.12%
Debt/Equity	0.08	0.02	0.75	-8.53	0.16	0.19
Cash Flow (\$/share)	4.77	-1.03	7.01	10.33	-1.23	-1.15
Growth Score	A	-	-	B	C	C
Hist. EPS Growth (3-5 yrs)	197.31%	16.29%	10.82%	21.62%	NA	NA
Proj. EPS Growth (F1/F0)	65.12%	7.40%	-10.51%	16.07%	10.32%	10.63%
Curr. Cash Flow Growth	52.02%	13.90%	5.83%	8.78%	43.79%	-3.01%
Hist. Cash Flow Growth (3-5 yrs)	31.70%	7.77%	8.52%	19.92%	NA	NA
Current Ratio	3.54	4.98	1.27	3.14	11.04	6.88
Debt/Capital	7.62%	4.37%	44.25%	NA	13.90%	16.18%
Net Margin	31.35%	-213.04%	10.59%	24.77%	NA	NA
Return on Equity	25.69%	-64.55%	16.36%	-169.80%	-76.30%	-74.97%
Sales/Assets	0.61	0.20	0.54	0.46	NA	NA
Proj. Sales Growth (F1/F0)	37.08%	2.06%	-2.55%	33.40%	-57.45%	10.00%
Momentum Score	B	-	-	A	A	C
Daily Price Chg	0.20%	-2.52%	-2.85%	-1.76%	-8.11%	-4.42%
1 Week Price Chg	6.56%	6.36%	3.23%	1.35%	4.50%	2.61%
4 Week Price Chg	8.54%	9.89%	-0.28%	8.62%	2.62%	16.11%
12 Week Price Chg	11.81%	-11.60%	-23.80%	-5.60%	-41.18%	0.58%
52 Week Price Chg	66.01%	-17.77%	-13.31%	12.81%	-54.01%	51.75%
20 Day Average Volume	1,987,183	254,647	2,552,088	12,436,145	159,521	906,335
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	2.74%	13.13%	0.00%
(F1) EPS Est 4 week change	13.69%	0.00%	-6.15%	1.57%	13.13%	0.00%
(F1) EPS Est 12 week change	13.22%	0.00%	-16.21%	-0.22%	13.31%	19.22%
(Q1) EPS Est Mthly Chg	11.74%	0.00%	-12.28%	-10.60%	22.22%	0.00%

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	A
Momentum Score	B
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.