

## Moderna, Inc. (MRNA)

**\$64.21** (As of 06/30/20)

Price Target (6-12 Months): **\$68.00**

Long Term: 6-12 Months

**Zacks Recommendation:**

**Neutral**

(Since: 05/21/20)

Prior Recommendation: Outperform

Short Term: 1-3 Months

**Zacks Rank: (1-5)**

**2-Buy**

Zacks Style Scores:

VGM:F

Value: D

Growth: D

Momentum: F

### Summary

Moderna is developing several promising mRNA-based pipeline candidates, targeting a wide range of indications. These candidates also attract partnerships with big pharma companies, thus generating funds through upfront and milestone payments, and reducing research and marketing costs. Moreover, progress with coronavirus vaccine candidate seems impressive and a phase II study will start soon. Early-stage pipeline candidates are also encouraging. Shares of the company have outperformed the industry so far this year. However, Moderna's sole dependence on partners for revenues is a concern. Moreover, early to mid-stage nature of its pipeline runs a high degree of risk. Any development setbacks would be a major disappointment for the company.

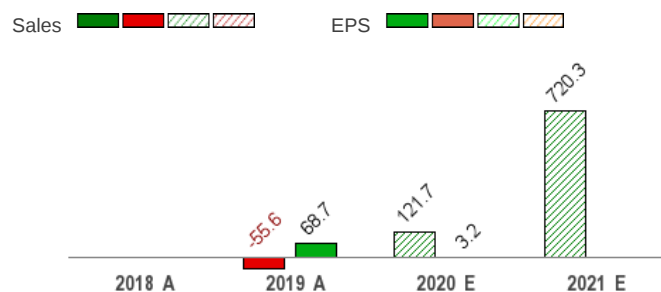
### Price, Consensus & Surprise



### Data Overview

|                            |                                                 |
|----------------------------|-------------------------------------------------|
| 52 Week High-Low           | <b>\$87.00 - \$11.54</b>                        |
| 20 Day Average Volume (sh) | <b>15,166,699</b>                               |
| Market Cap                 | <b>\$23.8 B</b>                                 |
| YTD Price Change           | <b>228.3%</b>                                   |
| Beta                       | <b>0.68</b>                                     |
| Dividend / Div Yld         | <b>\$0.00 / 0.0%</b>                            |
| Industry                   | <b><u>Medical - Biomedical and Genetics</u></b> |
| Zacks Industry Rank        | <b>Top 21% (54 out of 253)</b>                  |

### Sales and EPS Growth Rates (Y/Y %)



|                           |                   |
|---------------------------|-------------------|
| Last EPS Surprise         | <b>5.4%</b>       |
| Last Sales Surprise       | <b>-53.8%</b>     |
| EPS F1 Est- 4 week change | <b>1.2%</b>       |
| Expected Report Date      | <b>08/05/2020</b> |
| Earnings ESP              | <b>0.0%</b>       |
| P/E TTM                   | <b>NA</b>         |
| P/E F1                    | <b>NA</b>         |
| PEG F1                    | <b>NA</b>         |
| P/S TTM                   | <b>453.4</b>      |

### Sales Estimates (millions of \$)

|      | Q1   | Q2   | Q3   | Q4   | Annual* |
|------|------|------|------|------|---------|
| 2021 | 30 E | 30 E | 30 E | 30 E | 1,091 E |
| 2020 | 8 A  | 19 E | 21 E | 24 E | 133 E   |
| 2019 | 16 A | 13 A | 17 A | 14 A | 60 A    |

### EPS Estimates

|      | Q1        | Q2        | Q3        | Q4        | Annual*   |
|------|-----------|-----------|-----------|-----------|-----------|
| 2021 | -\$0.35 E | -\$0.39 E | -\$0.39 E | -\$0.43 E | \$0.05 E  |
| 2020 | -\$0.35 A | -\$0.41 E | -\$0.46 E | -\$0.41 E | -\$1.50 E |
| 2019 | -\$0.40 A | -\$0.41 A | -\$0.37 A | -\$0.37 A | -\$1.55 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 06/30/2020. The reports text is as of 07/01/2020.

## Overview

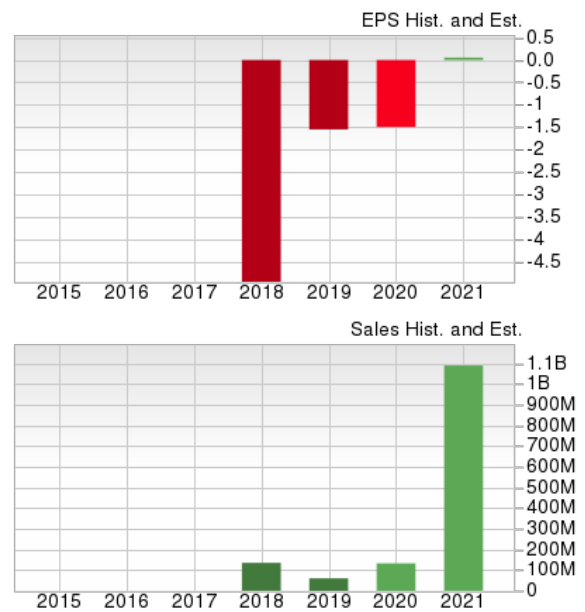
Cambridge, MA-based Moderna, Inc. is a clinical-stage pharmaceutical company, primarily focused on discovering and developing messenger RNA (mRNA) based therapies. The company has several early to mid-stage pipeline candidates targeting multiple indications including cancer and cardiovascular. It is also developing a few prophylactic vaccines and cancer vaccines.

The company has 23 mRNA investigational candidates with 13 candidates in clinical development stage. Its most advanced mRNA pipeline candidates include mRNA-1647, mRNA-4157 and AZD8601. These candidates are currently in mid-stage development. While mRNA-1647 and mRNA-4157 are being evaluated as vaccines for Cytomegalovirus and cancer, respectively, AZD8601 is a candidate for myocardial ischemia. The company is developing mRNA-1273 as a vaccine for coronavirus.

Moderna's mRNA technology has helped it to enter into several collaborations with large pharma/biotech companies namely Merck, AstraZeneca and Vertex Pharmaceuticals. It also has strategic alliances with some government-sponsored organizations and private foundations.

The company completed its IPO and started trading publicly since Dec 7, 2018.

Moderna derives revenues primarily from its collaboration partners. The company generated total revenues of \$60.2 million in 2019 compared with \$135.1 million in 2018.



---

## Reasons To Buy:

- ▲ **Share Price Performance:** Shares of Moderna have outperformed the industry so far this year. The stock has gained 228.3% compared with the industry's increase of 10.1%. The majority of this gain is driven by the company's progress with coronavirus vaccine development.
- ▲ **Promising Pipeline Candidates:** Moderna is developing several promising candidates as therapies and vaccines targeting oncology indications and rare diseases.

The company is developing an mRNA-based vaccine, mRNA-1273, in collaboration with National Institutes of Health (NIH) for treating coronavirus infection, COVID-19. A phase I study is being conducted by National Institute of Allergy and Infectious Diseases (NIAID), a part of NIH, under its own investigational new drug (IND) application. The vaccine had entered into phase I development stage in a very short span of time. In May, the company initiated a phase II study on mRNA-1273. The study will evaluate the safety, reactogenicity and immunogenicity of two vaccinations of mRNA-1273 (a 50 µg or a 100 µg dose) given 28 days apart in two age groups — 18-55 years and above 55 years. The company expects to start a phase III study in July. A successful development will significantly boost its short-term prospects.

The company has eight mRNA-based prophylactic and cancer vaccine candidates in clinical stage development. The most advanced vaccine candidates, mRNA-1647 and mRNA-4157, are being evaluated in phase II studies. While mRNA-1647 is being developed as a Cytomegalovirus (CMV) vaccine, mRNA-4157 is being developed in combination with Merck's PD-1 inhibitor, Keytruda, as a personalized cancer vaccine.

The company is also developing immuno-oncology candidates, which include OX40L (mRNA-2416) and a triplet — OX40L + IL23 + IL36γ (mRNA-2752) — which are directly injected into tumors to drive anti-cancer T cell responses. The company is planning to initiate a phase II study to evaluate mRNA-2416 in ovarian carcinoma. The company is also developing another pipeline candidate, AZD8601, in collaboration with AstraZeneca for Myocardial ischemia in a phase II study.

- ▲ **Encouraging Early-Stage Candidates:** Moderna is also developing several other mRNA candidates in early-stage clinical studies. It is developing a KRAS vaccine, mRNA-5671 for colorectal cancer (CRC), non-small cell lung cancer and pancreatic cancer (NSCLC) in phase I study. The company is also developing a RSV vaccine and a Zika vaccine in early-stage studies. An mRNA therapy is also being developed as an antibody against Chikungunya virus. The company is developing mRNA-2752 in solid tumors.
- ▲ **Positive on Deals:** Moderna has agreements with big healthcare companies namely AstraZeneca, Merck and Vertex Pharmaceuticals for development of some of its pipeline candidates. These deals provide the company with funds through upfront and milestone payments as well as enables sharing of research and marketing costs. These deals also bode well for Moderna given its strong expertise from these big pharma/biotech companies. Moreover, coronavirus vaccine development has attracted funds and partnerships from public/private organizations as well.
- ▲ **Favorable Debt Profile:** Moderna has a favorable debt profile. As of Mar 31, 2020, the company had no debt. The company also had significant cash, cash equivalents, and marketable securities totaling approximately \$1.22 billion at the end of March 2020, which reduces the risk of insolvency.

Moderna has several promising mRNA-based pipeline candidates in its portfolio. Moreover, coronavirus vaccine development is also encouraging.

---

## Reasons To Sell:

▼ **Overdependence on Collaborations Could Hamper Progress:** With no approved product in its portfolio, Moderna has no sales, marketing or distribution capabilities. The company depends on collaborations and grants for its revenues. Moreover, potential sales could suffer in case partnerships do not materialize and the company is unable to raise funds to build sales and marketing capabilities. Also, unsuccessful development of its candidates will not generate any milestone payments.

▼ **Lack of Late-stage Candidates:** Moderna's early/mid-stage nature of the pipeline runs its own risk. Although the company has several early/mid-stage candidates in its pipeline, it will be several years before any of these candidates are close to commercialization. Moreover, we note that clinical development involves a high degree of risk. Gaining approval for pipeline candidates has become more difficult given the tough regulatory environment. Development and regulatory setbacks for pipeline candidates would be a major disappointment for the company and have an adverse impact on shares.

Meanwhile, the company's focus on developing its coronavirus vaccine has hampered the development of certain other pipeline candidates. The company has paused enrollment and new site initiation for two early-stage studies evaluating mRNA-3704 and mRNA-3927 in methylmalonic acidemia and propionic acidemia, respectively. It also discontinued development of mRNA-3630 in Fabry disease.

▼ **Competition Will Be a Hurdle:** Although Moderna's mRNA technology gives it a competitive edge, the company's products will face competition from products of several large pharma and smaller biotech players in their targeted markets. Moreover, several companies are also developing mRNA-based therapies, which include Glaxo, BioNTech, CureVac and eTheRNA Immunotherapies, among others. Moreover, several companies are developing a vaccine/therapy for coronavirus including multiple big pharma companies, which may lead to stiff competition.

---

With no marketed product in its portfolio, Moderna's dependence on collaborations for revenues is a concern. Lack of late-stage candidates has its own risk as well.

## Last Earnings Report

### Moderna Q1 Earnings Beat Estimates, Revenues Miss

Moderna incurred loss of 35 cents per share in the first quarter of 2020, narrower than the Zacks Consensus Estimate of a loss of 37 cents and the year-ago loss of 40 cents.

Revenues in the quarter were \$8.4 million, which missed the Zacks Consensus Estimate of \$18.17 million. In the year-ago quarter, revenues were \$16 million.

#### Quarter in Details

Collaboration revenues were \$4.5 million, down 68.4% year over year. Grant revenues almost doubled year over year to \$3.8 million.

General and administrative expenses were down 11.5% to \$24.1 million. Research & development expenses decreased 11.7% to \$115.1 million due to a decline in clinical study costs and material costs.

The company ended the quarter with \$1.7 billion in cash and cash equivalents, compared with \$1.26 billion as of Dec 31, 2019. The company has up to \$700 million available in grants and awards.

**Quarter Ending** **03/2020**

|                  |                     |
|------------------|---------------------|
| Report Date      | <b>May 07, 2020</b> |
| Sales Surprise   | <b>-53.82%</b>      |
| EPS Surprise     | <b>5.41%</b>        |
| Quarterly EPS    | <b>-0.35</b>        |
| Annual EPS (TTM) | <b>-1.50</b>        |

---

## Recent News

### Partners With Catalent for Large-Scale Coronavirus Vaccine Production – Jun 25

Moderna announced that it has entered into a collaboration with Catalent for large-scale, commercial fill-finish manufacturing of mRNA-1273. Catalent will provide vial filling and packaging capacity per the agreement to support production of an initial 100 million doses of the vaccine candidate intended to supply the U.S. market starting in the third quarter of 2020.

### Finalizes Phase III study Protocol mRNA-1273 – Jun 11

Moderna announces that it has finalized the Phase 3 study protocol based on feedback from the FDA to evaluate its coronavirus vaccine, mRNA-1273. The company expects to initiate the study in July with 100 µg dose level.

### Initiates Phase II Study on mRNA-1273 – May 29

Moderna announced that it has dosed first patients in each age cohort in a phase II study which will evaluate mRNA-1273 as coronavirus vaccine. The study will evaluate a 50 µg or a 100 µg dose of mRNA-1273. The company has decided not to pursue the 250 µg dose level in the phase II study.

### Announces Coronavirus Vaccine Study Data – May 18

Moderna announced positive interim data from a phase I study evaluating mRNA-1273. Data demonstrated that COVID-19 patients vaccinated with mRNA-1273 achieved levels of antibodies similar or higher than those typically found in a patient who recovered from COVID-19 naturally.

Moreover, updated pre-clinical data has showed that mRNA-1273 prevented viral replication in the lungs in a mouse challenge model.

Across all doses, all patients were seroconverted (developed specific antibodies against COVID-19 and the antibodies became detectable in the blood) by day 15 after a single dose. Meanwhile, patients after receiving two 25 µg doses of mRNA-1273 achieved levels of binding antibodies seen in convalescent sera (level of antibodies seen in blood sample of patients naturally recovered from COVID-19) at day 43. The patients who received two 100 µg doses achieved levels of binding antibodies significantly exceeding the levels seen in convalescent sera. Moreover, both 25 µg and 100 µg doses achieved levels of neutralizing antibodies at or above levels generally seen in convalescent sera.

### FDA Grants Fast Track Designation to mRNA-1273 – May 12

Moderna announced that the FDA has granted Fast Track designation to mRNA-1273 as mRNA vaccine against SARS-CoV-2.

### Collaboration to Manufacture mRNA-1273 – May 1

Moderna announced that it has entered into a 10-year strategic collaboration agreement with Lonza Ltd. For the manufacturing of mRNA-1273. The agreement will help Moderna to enable larger scale, material equivalent to up to 1 billion doses, manufacture of the mRNA-based vaccine for coronavirus, assuming the currently expected dose of 50 µg.

### Submission of IND for mRNA-1273 – Apr 27

Moderna announced that it has submitted an investigational new drug (IND) application to the FDA for mRNA-1273 for the initiation of a phase II study. The company expects to start the study by this quarter.

### BARDA Commits Up To \$483 Million for Coronavirus Vaccine Development – Apr 16

Moderna announced that it has signed an agreement with the Biomedical Advanced Research and Development Authority ("BARDA") under which the agency has committed to pay up to \$483 million to accelerate the development of its mRNA-based coronavirus vaccine candidate, mRNA-1273. The award will fund the development of the candidate through to FDA licensure.

The award from BARDA will support the next-stage of development as well as manufacturing process scale-up in 2020 to support large-scale production for pandemic response.

### Initiates Dosing in Phase I Study on mRNA-1273 – Mar 16

Moderna announced that it has dosed the first patient in a phase I study, evaluating mRNA-1273 against the novel coronavirus (SARS-CoV-2). This is the first study evaluating any of the company's mRNA-based vaccine against the coronavirus disease, COVID-19. Please note that the study is being conducted by the National Institutes of Health.

The company stated that it succeeded in starting a clinical study for COVID-19 vaccine in just over nine weeks from sequence selection for the SARS-CoV-2 vaccine.

### Completes Enrollment in Phase II Study on mRNA-1647 – Mar 3

Moderna announced that it has reached the enrollment target across all three cohorts of the phase II study evaluating mRNA-1647 as CMV vaccine. The company expects to announce data from the first interim analysis at three months in the third quarter of 2020. It will also provide information on selected dose of mRNA-1647 for phase III study. It is actively preparing to initiate a phase III study on the candidate in 2021.

---

## Valuation

Moderna's shares are up 228.3% in the year-to-date period and 345.9% over the trailing 12-month period. Stocks in the Zacks sub-industry are up 10.1% and stocks in the Zacks sector are down 3.2% in the year-to-date period. Over the past year, stocks in the sub-industry and the sector are up 12.5% and 0.4%, respectively.

---

The S&P 500 Index is down 5.2% in the year-to-date period but up 3.3% in the past year.

The stock is currently trading at 12.87X trailing 12-month book value per share which compares to 4.47X for the Zacks sub-industry, 4.21X for the Zacks sector and 4.18X for the S&P 500 Index.

Over the past five years, the stock has traded as high as 16.04X and as low as 3.01X, with a 5-year median of 4.93X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$68.00 price target reflects 13.63X trailing 12-month book value per share.

The table below shows summary valuation data for MRNA.

| Valuation Multiples - MRNA |               |        |              |        |         |
|----------------------------|---------------|--------|--------------|--------|---------|
|                            |               | Stock  | Sub-Industry | Sector | S&P 500 |
| P/B TTM                    | Current       | 12.87  | 4.47         | 4.21   | 4.18    |
|                            | 5-Year High   | 16.04  | 5.43         | 5.06   | 4.56    |
|                            | 5-Year Low    | 3.01   | 2.46         | 2.93   | 2.83    |
|                            | 5-Year Median | 4.93   | 3.34         | 4.27   | 3.69    |
| P/S TTM                    | Current       | 431.26 | 3.54         | 2.99   | 3.29    |
|                            | 5-Year High   | 537.32 | 4.35         | 4.08   | 3.68    |
|                            | 5-Year Low    | 36.91  | 2.16         | 2.28   | 2.44    |
|                            | 5-Year Median | 74.77  | 2.68         | 3.2    | 3.21    |

As of 06/30/2020

---

## Industry Analysis Zacks Industry Rank: Top 21% (54 out of 253)



## Top Peers

| Company (Ticker)                     | Rec        | Rank |
|--------------------------------------|------------|------|
| Translate Bio, Inc. (TBIO)           | Outperform | 2    |
| Alnylam Pharmaceuticals, Inc. (ALNY) | Neutral    | 3    |
| Alcobra Ltd. (ARCT)                  | Neutral    | 3    |
| BioNTech SE Sponsored ADR (BNTX)     | Neutral    | 2    |
| GlaxoSmithKline plc (GSK)            | Neutral    | 3    |
| Novavax, Inc. (NVAX)                 | Neutral    | 3    |
| Novartis AG (NVS)                    | Neutral    | 3    |
| Vir Biotechnology, Inc. (VIR)        | Neutral    | 3    |

| Industry Comparison Industry: Medical - Biomedical And Genetics |            |            |           | Industry Peers |           |            |
|-----------------------------------------------------------------|------------|------------|-----------|----------------|-----------|------------|
|                                                                 | MRNA       | X Industry | S&P 500   | ARCT           | BNTX      | TBIO       |
| Zacks Recommendation (Long Term)                                | Neutral    | -          | -         | Neutral        | Neutral   | Outperform |
| Zacks Rank (Short Term)                                         | 2          | -          | -         | 3              | 2         | 2          |
| VGM Score                                                       | F          | -          | -         | D              | F         | F          |
| Market Cap                                                      | 23.84 B    | 239.72 M   | 21.75 B   | 929.77 M       | 15.10 B   | 1.13 B     |
| # of Analysts                                                   | 6          | 3          | 14        | 5              | 3         | 5          |
| Dividend Yield                                                  | 0.00%      | 0.00%      | 1.93%     | 0.00%          | 0.00%     | 0.00%      |
| Value Score                                                     | D          | -          | -         | F              | D         | F          |
| Cash/Price                                                      | 0.05       | 0.22       | 0.07      | NA             | 0.04      | 0.13       |
| EV/EBITDA                                                       | -46.40     | -3.87      | 12.71     | NA             | -90.85    | -9.02      |
| PEG Ratio                                                       | NA         | 2.02       | 2.86      | NA             | NA        | NA         |
| Price/Book (P/B)                                                | 12.87      | 4.22       | 2.97      | 79.16          | 30.55     | 7.61       |
| Price/Cash Flow (P/CF)                                          | NA         | 16.07      | 11.71     | NA             | NA        | NA         |
| P/E (F1)                                                        | NA         | 30.23      | 21.23     | NA             | NA        | NA         |
| Price/Sales (P/S)                                               | 453.39     | 18.28      | 2.30      | 48.72          | NA        | 102.63     |
| Earnings Yield                                                  | -2.34%     | -12.51%    | 4.48%     | -5.80%         | -1.63%    | -8.20%     |
| Debt/Equity                                                     | 0.00       | 0.02       | 0.76      | NA             | 0.00      | 0.08       |
| Cash Flow (\$/share)                                            | -1.45      | -1.07      | 7.01      | -1.97          | -0.72     | -1.50      |
| Growth Score                                                    | D          | -          | -         | B              | F         | F          |
| Hist. EPS Growth (3-5 yrs)                                      | NA%        | 16.29%     | 10.93%    | NA             | NA        | NA         |
| Proj. EPS Growth (F1/F0)                                        | 3.44%      | 8.82%      | -9.77%    | -26.14%        | -15.08%   | 19.89%     |
| Curr. Cash Flow Growth                                          | 34.56%     | 14.86%     | 5.51%     | 102.09%        | 423.95%   | -4.81%     |
| Hist. Cash Flow Growth (3-5 yrs)                                | NA%        | 7.73%      | 8.62%     | NA             | NA        | NA         |
| Current Ratio                                                   | 9.29       | 5.25       | 1.30      | NA             | 3.47      | 4.12       |
| Debt/Capital                                                    | 0.00%      | 4.33%      | 44.41%    | NA             | 0.00%     | 7.72%      |
| Net Margin                                                      | -963.84%   | -203.29%   | 10.62%    | -151.34%       | NA        | -859.22%   |
| Return on Equity                                                | -37.49%    | -61.45%    | 15.75%    | -409.05%       | NA        | -63.61%    |
| Sales/Assets                                                    | 0.03       | 0.19       | 0.55      | 0.47           | NA        | 0.03       |
| Proj. Sales Growth (F1/F0)                                      | 120.40%    | 0.00%      | -2.43%    | -17.89%        | 15.09%    | 105.74%    |
| Momentum Score                                                  | F          | -          | -         | F              | F         | A          |
| Daily Price Chg                                                 | 3.43%      | 0.00%      | 1.41%     | -0.51%         | 1.43%     | -4.68%     |
| 1 Week Price Chg                                                | -7.64%     | -1.51%     | -3.90%    | 7.20%          | 20.97%    | 27.32%     |
| 4 Week Price Chg                                                | 7.25%      | 0.00%      | -1.62%    | 16.33%         | 27.42%    | -9.72%     |
| 12 Week Price Chg                                               | 100.53%    | 36.38%     | 15.67%    | 241.67%        | 46.36%    | 74.32%     |
| 52 Week Price Chg                                               | 345.90%    | -0.16%     | -8.07%    | 396.71%        | NA        | 54.62%     |
| 20 Day Average Volume                                           | 15,166,699 | 418,880    | 2,699,706 | 911,931        | 1,475,550 | 3,033,278  |
| (F1) EPS Est 1 week change                                      | 0.00%      | 0.00%      | 0.00%     | 0.00%          | 0.83%     | 6.11%      |
| (F1) EPS Est 4 week change                                      | 1.16%      | 0.00%      | 0.00%     | 0.00%          | 0.83%     | 13.42%     |
| (F1) EPS Est 12 week change                                     | 0.88%      | 0.59%      | -10.28%   | 0.59%          | -1.23%    | 19.45%     |
| (Q1) EPS Est Mthly Chg                                          | -2.10%     | 0.00%      | 0.00%     | 0.00%          | -2.10%    | 3.72%      |

---

## 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    | D |
| Growth Score   | D |
| Momentum Score | F |
| VGM Score      | F |

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.