

Corning Incorporated (GLW)

\$40.03 (As of 03/24/21)

Price Target (6-12 Months): **\$43.00**

Long Term: 6-12 Months

Zacks Recommendation:
Neutral

(Since: 10/26/20)

Prior Recommendation: Outperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

2-Buy

Zacks Style Scores:

VGM: C

Value: B

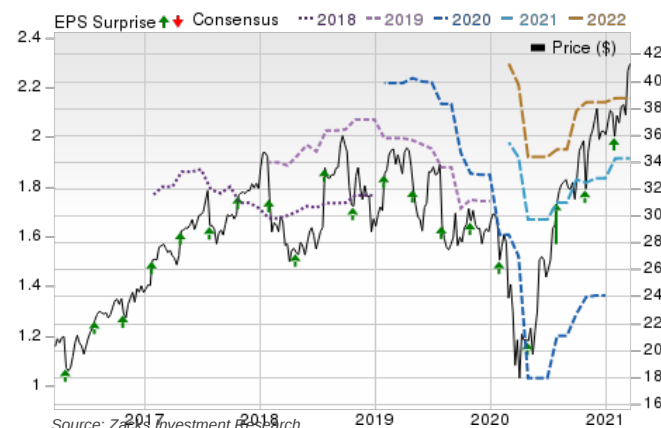
Growth: C

Momentum: F

Summary

Corning continues to focus on operational excellence, cash flow generation and capital allocation. The company expects healthy momentum across all businesses in 2021. It holds a leadership position in each of the markets addressed by its five Market-Access Platforms. It is benefiting from improved demand and commercialization of its innovations. The Specialty Materials segment is gaining from strong demand for premium cover materials, strength in the IT market and demand for semiconductor-related materials. Corning is utilizing its financial strength to enhance shareholder returns. However, macroeconomic challenges due to the pandemic persist. The Optical Communications segment is susceptible to weakness in carrier and enterprise businesses. For the TV market, the concentration of market share among a few large players is a concern.

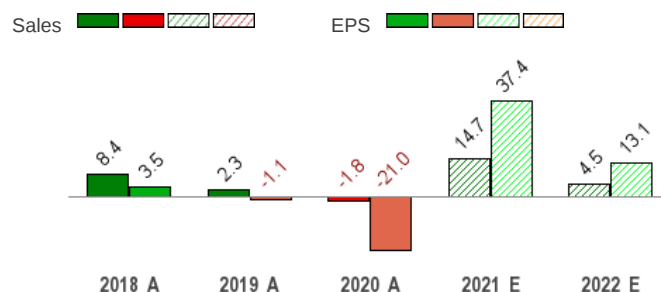
Price, Consensus & Surprise



Data Overview

52-Week High-Low	\$42.55 - \$17.82
20-Day Average Volume (Shares)	5,734,960
Market Cap	\$31.0 B
Year-To-Date Price Change	11.8%
Beta	1.20
Dividend / Dividend Yield	\$0.96 / 2.4%
Industry	Communication - Components
Zacks Industry Rank	Top 22% (56 out of 254)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	8.3%
Last Sales Surprise	3.5%
EPS F1 Estimate 4-Week Change	0.0%
Expected Report Date	04/27/2021
Earnings ESP	0.0%
P/E TTM	28.8
P/E F1	21.0
PEG F1	8.7
P/S TTM	2.7

Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2022	3,249 E	3,401 E	3,574 E	3,606 E	13,736 E
2021	3,117 E	3,213 E	3,420 E	3,487 E	13,140 E
2020	2,529 A	2,588 A	3,007 A	3,328 A	11,452 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2022	\$0.47 E	\$0.53 E	\$0.58 E	\$0.60 E	\$2.16 E
2021	\$0.42 E	\$0.47 E	\$0.52 E	\$0.53 E	\$1.91 E
2020	\$0.20 A	\$0.25 A	\$0.43 A	\$0.52 A	\$1.39 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 03/24/2021. The report's text and the analyst-provided price target are as of 03/25/2021.

Overview

New York-based Corning Incorporated started out as a glass business that was reincorporated in 1936. The company has since developed its glass technologies to produce advanced glass substrates that are used in a large number of applications across multiple markets. Currently, Corning reports results under five operating segments.

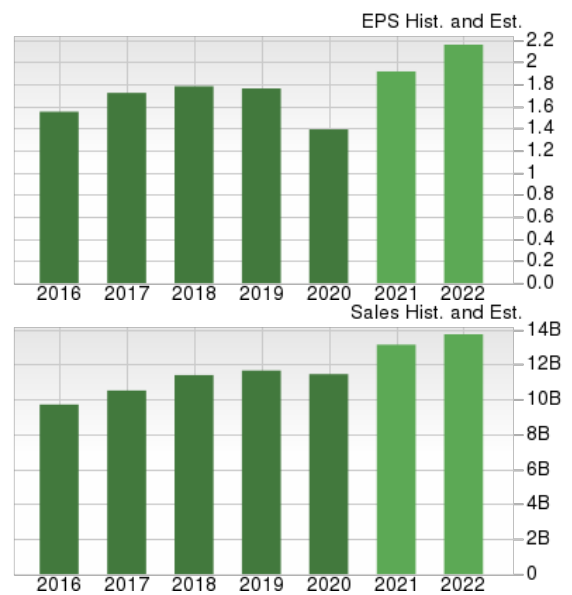
The **Display Technologies** segment (27.3% of total sales in fourth-quarter 2020) includes glass substrates that are commonly found in liquid crystal display (LCD) TVs, notebooks and flat-panel desktop personal computer (PC) monitors. The company's specialty, active-matrix substrates improve the brightness and sharpness of images.

The company's **Optical Communications** (31.7%) products may be categorized into two. The first category comprises cables. Products are typically sold to its own subsidiaries, which then distribute to end users. The second category is hardware and equipment, which comprises optical and copper connectivity products.

The **Environmental Technologies** (14.4%) segment makes ceramic substrates required for mobile and stationary pollution and emission control systems. The primary users of Corning's products are automotive and diesel engine manufacturers.

Specialty Materials (17.7%) include different formulations for glass, glass ceramics and fluoride crystals that render special properties to each separate substrate, making it suitable for specific industrial and commercial use.

Life Sciences (8.9%) segment products are sold under the Corning, Costar and Pyrex brands primarily for laboratory equipment, such as microplate products, coated slides, filter plates for genomics sample preparation, plastic cell culture dishes, flasks, cryogenic vials, roller bottles, mass cell culture products, liquid handling instruments, Pyrex glass beakers, serological pipettes, centrifuge tubes and laboratory filtration products.



Reasons To Buy:

- ▲ Corning delivered a trailing four-quarter earnings surprise of 41.6%, on average. The company continues to focus on operational excellence, cash flow generation and capital allocation. It expects healthy momentum across all businesses in 2021. Corning holds a leadership position in each of the markets addressed by its five Market-Access Platforms. The company reorganized its operating structure after extensive analysis and leadership review. Designed to unlock opportunities for valuable synergies, the structure aligns executive management and business teams around five Market-Access Platforms (MAPs) — Mobile Consumer Electronics, Optical Communications, Automotive, Life Sciences and Display. It holds a leadership position in each of the markets addressed by its five MAPs. Through 2023, the company expects to deliver 6-8% compound annual sales growth and 12-15% compound annual earnings per share growth while investing \$10 billion to \$12 billion in Research, Development and Engineering (RD&E), capital, and mergers and acquisitions. It plans to expand the operating margin and Return on Invested Capital (ROIC), and deliver \$8 billion to \$10 billion to shareholders, including annual dividend per share increase of at least 10%. To deliver its goals, the company expects to add an incremental \$3 billion to \$4 billion in annual sales and improve profitability by the end of 2023. The company extended performance under its 2020-2023 Strategy & Growth Framework. It is focused on its portfolio and utilizing its financial strength to enhance shareholder returns. The company's capabilities are becoming increasingly vital to diverse industries.
- ▲ Corning continues to focus on operational excellence, cash flow generation and capital allocation. It expects healthy momentum across all businesses in 2021.
- ▲ Corning is benefiting from improved demand and commercialization of its innovations. The company is utilizing its financial strength to enhance shareholder returns. Multiple factors should drive Corning's fiber optic solutions business over the next several years, primarily the increasing use of mobile devices that require efficient data transfer and efficient networking systems. Supporting this trend is the proliferation of clouds, which are resulting in increased storage and even computing on a virtual plane. Since both consumers and enterprises are using the network more, there is tremendous demand for quality networking. Also, data consumption patterns are changing. For instance, there is a growing propensity to consume video content thus creating the need for faster data transfer. Since optical networks are more efficient and most of the existing networks are copper-based, the demand for optical solutions is particularly strong. Corning has several products focused on the datacenter with a portfolio consisting of optical fiber, hardware, cable and connectors that helps it to create optical solutions to meet evolving customer needs.
- ▲ In the Specialty Materials segment, the performance is driven by strong demand for premium cover materials, strength in the IT market and demand for semiconductor-related materials. Corning is a leading innovator in the glass substrate industry. The company has been developing formulations that are not only suitable for imparting superior picture quality, but also taking care of their effects on the environment. Corning's generation 10 substrates use the proprietary EAGLE XG formulation, which serves both these purposes. Corning was the first glass substrate developer with the generation 10 capability. A higher generation substrate is a larger-sized substrate, which enables panel makers to reduce manufacturing costs since more panels can be built from each substrate. Corning's capability positions it to better serve the secular increase in demand for LCD panels. The company's fusion technology reduces glass thickness, enabling panel manufacturers to do away with thinning costs that are usually necessary for making slimmer, lighter and more power efficient consumer devices. Also, the company's Iris glass presents significant growth opportunity.
- ▲ To accelerate growth, Corning is leveraging the automotive market to disrupt the 6 billion square-foot auto glazing market based on annual consumption. Corning announced a joint venture (JV) with Saint-Goban Sekurit to develop, manufacture and sell lightweight automotive glazing solutions. Per this JV, the company will continue to produce and market Gorilla Glass and other glazers, retaining 100% ownership of the glass business. This venture allows the company to move forward in the value chain beyond glass to manufacture and sell glazing solutions with a leading producer. It also provides a low-cost path for Corning to scale Gorilla Glass glazing solutions worldwide.
- ▲ Corning has made significant headway in the Life Sciences segment as it secured government funding to substantially augment the domestic manufacturing capacity of glass vials for vaccines. The company will receive \$204 million from the Biomedical Advanced Research and Development Authority ("BARDA"), which forms part of the Office of the Assistant Secretary for Preparedness and Response at the U.S. Department of Health and Human Services. The investment will facilitate Corning to scale up its manufacturing capabilities at three U.S. facilities — Big Flats, NY; Durham, NC; and Vineland, NJ — to bridge the demand-supply gap for glass containers as pharma companies accelerate clinical trials to develop therapeutic and preventative options for coronavirus. In particular, Corning will speed up the production of indigenously-built Valor Glass, which is specifically designed for pharmaceutical use with superior chemical durability and minimal particulate contamination for faster and more reliable drug manufacturing and delivery. The federal funds are likely to help the company strengthen its position as a leading packaging provider in the healthcare segment.

Reasons To Sell:

- ▼ Corning faces price erosion at the rate of 1-2% per quarter in the Display Technologies segment. We expect prices to remain a drag on margins, despite an improving demand/supply situation. Although management believes that 1-2% erosion per quarter could be tackled through cost containment, we assume there would be a limit to cost control. The Optical Communications segment is susceptible to weakness in carrier and enterprise businesses. Also, macroeconomic challenges due to the pandemic persist.
- ▼ End market diversification is limited at present, with the display and optical segments accounting for almost 60% of total revenues. Since the Display Technologies and Specialty Materials segments are largely dependent on consumer spending, particularly on LCD TVs and mobile PCs, this further narrows down the market. Although the company is expected to benefit from massive growth in China, Chinese panel makers with whom Corning has limited relationship are entering the market. Building a significant position in China in the current situation is a big challenge. Also, while Gorilla Glass (GG) is being met with enthusiasm, its growing contribution to revenues will increase the dependence on display markets. Another concern with respect to the display market in general and the TV market in particular is the concentration of market share in the hands of a few large players. The loss of a single customer or its decision to cut orders could have significant impact on Corning's results.
- ▼ There is growing interest in sapphire substrates that could replace Corning's GG. Sapphire substrates are far more scratch-resistant than GG and therefore less likely to break. However, it is heavier and transmits less light, so its use is relatively limited (camera lens, thumb-print scanner, high end watch covers and in select smartphone screens). Current manufacturing technologies are also more expensive, but the situation could improve somewhat with volumes. Another competing technology that is a cause of concern is plastic Organic Light-Emitting Diode (OLED). Plastic brings with itself flexibility and practically removes all chances of breaking. However, manufacturing inefficiencies remain. Although Corning is working on glass improvements, these aren't likely to affect revenues soon while evolving technologies remain a constant threat.
- ▼ As of Dec 31, 2020, the company had \$2,672 million in cash and cash equivalents with \$7,816 million of long-term debt compared with the respective tallies of \$2,514 million and \$7,822 million at the end of the previous quarter. Corning has a debt-to-capital ratio of 0.37 compared with 0.65 of the industry. The times interest earned (TIE) ratio has declined over the past few quarters (except for the past two quarters) to 3.3 at present, compared with 1.9 of the industry. This indicates that the company is reeling under pressure to meet its debt obligations. Nevertheless, it has a dividend payout rate of 62.9%. The rate has increased over the past quarters, suggesting that the company is rewarding its shareholders. It is to be seen whether Corning reduces its dividend in the near future due to disruptions stemming from the pandemic.

Macroeconomic challenges due to the pandemic persist. The Optical Communications segment is susceptible to weakness in carrier and enterprise businesses.

Last Earnings Report

Corning Q4 Earnings & Revenues Beat, 2021 View Bullish

Corning reported solid fourth-quarter 2020 results, wherein the top and the bottom lines beat the respective Zacks Consensus Estimate.

Strong execution across the company's portfolio drove growth in all segments. Corning is focused on operational excellence, cash flow generation and capital allocation. It expects the momentum across all businesses to continue in 2021.

Quarter Ending 12/2020

Report Date	Jan 27, 2021
Sales Surprise	3.49%
EPS Surprise	8.33%
Quarterly EPS	0.52
Annual EPS (TTM)	1.40

Net Income

On a GAAP basis, net income in the quarter was \$252 million or 28 cents per share compared with \$32 million or 1 cent per share a year ago. The improvement was primarily driven by higher operating income.

In 2020, net income was \$512 million or 54 cents per share compared with \$960 million or \$1.07 per share in 2019.

Quarterly core net income came in at \$462 million or 52 cents per share compared with \$406 million or 46 cents per share in the prior-year quarter. The bottom line beat the Zacks Consensus Estimate by 4 cents, delivering a positive surprise of 8.3%.

Revenues

Quarterly GAAP net sales increased 18.9% year over year to \$3,350 million, as each of the company's businesses' sales grew. In 2020, net sales slipped 1.7% to \$11,303 million.

Quarterly core sales grew to \$3,328 million from \$2,851 million in the year-ago quarter. The top line surpassed the consensus estimate of \$3,216 million.

Quarterly Segment Results

Net sales in **Optical Communications** increased 8.1% year over year to \$976 million, driven by strength in carrier and enterprise businesses. The segment's net income was \$141 million compared with \$62 million in the prior-year quarter.

Net sales in **Display Technologies** were \$841 million compared with \$795 million in the prior-year quarter, supported by higher glass volume. The segment's net income was \$217 million compared with \$180 million in the year-ago quarter.

Specialty Materials' net sales were up 20.3% year over year to \$545 million. The upside was driven by strong demand for premium cover materials, strength in the IT market and demand for semiconductor-related materials. The segment's net income was \$136 million compared with \$94 million in the prior-year quarter.

Environmental Technologies' net sales grew 19% year over year to \$445 million. This was a result of improving markets and more Corning content. Notably, the greater adoption of gasoline particulate filters and diesel filters to meet regulations in China increased Corning's total addressable market. The segment's net income was \$93 million compared with \$64 million in the prior-year quarter.

Net sales in **Life Sciences** were up 7% year over year to \$274 million. This reflects strong demand for research consumables and bio-production products. The segment's net income improved to \$42 million from \$38 million reported a year ago.

Other Details

The quarterly cost of sales increased 8.9% year over year to \$2,137 million. Gross profit improved to \$1,213 million from \$854 million. Core gross profit was \$1,283 million compared with \$1,054 million recorded in the prior-year quarter, with respective margins of 38.6% and 37%. Operating income was \$476 million, up from \$147 million.

Cash Flow & Liquidity

In 2020, Corning generated \$2,180 million of net cash from operating activities compared with \$2,031 million in 2019.

As of Dec 31, 2020, the company had \$2,672 million in cash and cash equivalents with \$7,838 million of long-term debt compared with the respective tallies of \$2,434 million and \$7,729 million a year ago.

Q1 Outlook

Corning anticipates year-over-year growth to accelerate in the first quarter of 2021. It expects core sales in the range of \$3 billion to \$3.2 billion, which compares favorably with \$2.5 billion in the first quarter of the prior year. Earnings per share (EPS) are estimated between 40 cents and 44 cents, which is double last year's first-quarter EPS at the low end of the range.

Recent News

On Dec 24, 2020, Corning announced that it secured \$15 million contract from the U.S. Department of Defense in coordination with the Department of Health and Human Services. This investment is for the domestic production of robotic pipette tips that are used to support diagnostic testing for COVID-19. Corning is a leader in life sciences laboratory products, cell culture solutions, bioprocess vessels and specialty surfaces. It has been a trusted supplier to the healthcare and pharmaceutical industries since introducing PYREX glass in 1915. Funded by the Health Care Enhancement Act, the award will allow Corning Life Sciences to add incremental domestic production capacity. Robotic tips are used in drug discovery and screening, cell culture and polymerase chain reaction testing applications. Corning is focused on supporting the U.S. government in its effort to expand domestic manufacturing of diagnostic products.

On Dec 16, 2020, Corning and Nippon Paint China announced the commercial launch of the latter's first antiviral kid's paint in China. The paint is called Nippon Kid's Odour-Less All In One Interior Emulsion Paint-Anti Bacteria Plus (Nippon Kid's Paint). The product, which has been developed for use in spaces where children spend most of the time, contains Corning Guardian. Guardian — a breakthrough glass-ceramic technology — has the most bioactive form of copper encased in a special glass-ceramic powder that enables its controlled release for killing germs. Under test protocols approved by the U.S. Environmental Protection Agency, paint and coatings containing Guardian were shown to kill more than 99.9% of SARS-CoV-2, the virus that causes COVID-19. Surfaces coated with Nippon Kid's Paint also showed greater than 99.9% kill of the SARS-CoV-2 virus.

Valuation

Corning's shares are up 84.5% in the trailing 12-month period, and up 25.7% in the past six months. Stocks in the Zacks sub-industry are up 58.1% in the past year, and up 32.3% in the past six months. Stocks in the Zacks Computer and Technology sector are up 62.7% in the past year, and up 17.2% in the past six months.

The S&P 500 Index is up 50% in the past year, and up 16.8% in the past six months.

The stock is currently trading at 2.76X trailing 12-month book value, which compares to 3.91X for the Zacks sub-industry, 9.09X for the Zacks sector and 6.57X for the S&P 500 Index.

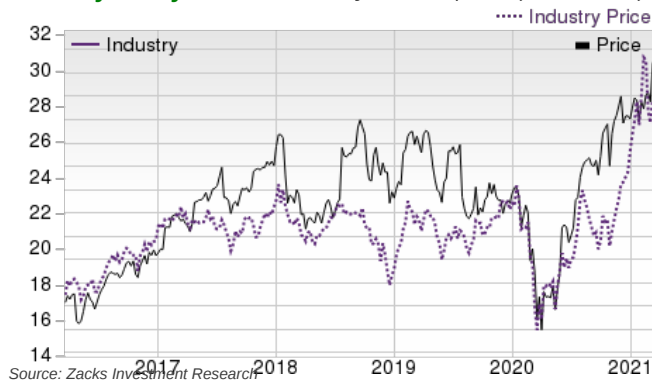
Over the past five years, the stock has traded as high as 2.85X and as low as 1.23X, with a 5-year median of 1.94X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$43 price target reflects 15.58X trailing 12-month book value.

The table below shows summary valuation data for GLW

Valuation Multiples - GLW					
		Stock	Sub-Industry	Sector	S&P 500
P/B TTM	Current	2.76	3.91	9.09	6.57
	5-Year High	2.85	4.07	9.95	6.71
	5-Year Low	1.23	1.11	4.41	3.83
	5-Year Median	1.94	2.68	5.77	4.97
P/E F12M	Current	20.44	22.79	26.41	22.02
	5-Year High	22.31	33.4	28.38	23.8
	5-Year Low	10.94	16.02	16.95	15.3
	5-Year Median	16.21	22.37	20.04	17.9
P/S F12M	Current	2.33	2.09	4.59	4.49
	5-Year High	2.88	2.91	4.67	4.49
	5-Year Low	1.18	1.46	2.78	3.21
	5-Year Median	2.21	2.04	3.49	3.69

As of 03/24/2021 Source: Zacks Investment Research

Industry Analysis Zacks Industry Rank: Top 22% (56 out of 254)



Top Peers

Company (Ticker)	Rec	Rank
Knowles Corporation (KN)	Outperform	1
Plantronics, Inc. (PLT)	Outperform	1
Arista Networks, Inc. (ANET)	Neutral	3
Altice USA, Inc. (ATUS)	Neutral	3
Ooma, Inc. (OOMA)	Neutral	2
Spirent Communications PLC (SPMY)	Neutral	3
TESSCO Technologies Incorporated (TESS)	Neutral	3
Viavi Solutions Inc. (VIAV)	Neutral	2

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

Industry Comparison Industry: Communication - Components				Industry Peers		
	GLW	X Industry	S&P 500	ANET	ATUS	PLT
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Outperform
Zacks Rank (Short Term)	2	-	-	3	3	1
VGM Score	C	-	-	D	A	C
Market Cap	30.96 B	220.60 M	28.51 B	21.71 B	16.09 B	1.59 B
# of Analysts	5	3	13	11	5	4
Dividend Yield	2.39%	0.00%	1.41%	0.00%	0.00%	0.00%
Value Score	B	-	-	C	A	C
Cash/Price	0.08	0.11	0.06	0.13	0.02	0.14
EV/EBITDA	15.88	13.75	15.86	23.73	10.05	30.70
PEG F1	8.73	1.76	2.30	2.40	NA	NA
P/B	2.76	3.24	3.82	6.48	NA	NA
P/CF	11.15	18.31	15.83	30.87	5.77	1.57
P/E F1	20.96	21.50	21.27	28.27	22.43	10.46
P/S TTM	2.74	2.21	3.23	9.37	1.63	0.96
Earnings Yield	4.75%	4.00%	4.64%	3.54%	4.47%	9.55%
Debt/Equity	0.70	0.00	0.67	0.00	-21.18	-13.95
Cash Flow (\$/share)	3.61	0.14	6.78	9.22	5.89	24.52
Growth Score	C	-	-	B	B	C
Historical EPS Growth (3-5 Years)	0.86%	0.76%	9.32%	36.82%	NA	-4.23%
Projected EPS Growth (F1/F0)	37.70%	30.82%	14.55%	11.31%	37.82%	17.41%
Current Cash Flow Growth	-10.52%	-66.95%	0.61%	-4.36%	3.99%	171.96%
Historical Cash Flow Growth (3-5 Years)	-2.10%	12.83%	7.32%	34.35%	NA	50.11%
Current Ratio	2.12	2.15	1.39	4.99	0.32	1.44
Debt/Capital	36.76%	2.02%	41.42%	0.00%	97.16%	NA
Net Margin	4.53%	-3.26%	10.59%	27.38%	4.41%	-44.19%
Return on Equity	11.92%	-1.55%	14.75%	20.18%	110.74%	-72.76%
Sales/Assets	0.39	0.67	0.51	0.53	0.29	0.74
Projected Sales Growth (F1/F0)	14.74%	8.41%	6.95%	15.16%	2.31%	0.84%
Momentum Score	F	-	-	F	D	D
Daily Price Change	0.95%	-2.16%	0.03%	-0.54%	-1.96%	-5.67%
1-Week Price Change	1.30%	0.00%	-0.30%	2.01%	-0.38%	0.50%
4-Week Price Change	4.19%	-6.33%	0.23%	-0.66%	0.62%	-11.14%
12-Week Price Change	11.90%	14.66%	7.22%	-1.56%	-9.60%	44.19%
52-Week Price Change	98.76%	64.25%	61.36%	51.04%	55.44%	227.15%
20-Day Average Volume (Shares)	5,734,960	120,367	2,433,322	570,409	3,877,583	586,547
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
EPS F1 Estimate 4-Week Change	0.00%	0.00%	0.00%	0.00%	2.43%	0.00%
EPS F1 Estimate 12-Week Change	4.36%	2.56%	2.13%	0.44%	0.49%	39.31%
EPS Q1 Estimate Monthly Change	0.00%	0.00%	0.00%	0.00%	2.38%	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 a the per share market value of a company divided by the value of its tangible assets (total assets – liabilities – preferred stocks – intangible assets) per share. Tangible book value is the same thing as book value except it excludes the value of intangible assets to get a step closer to the baseline value of the company.

P/CF Ratio: The price-to-cash flow ratio measures a company's per share market price relative to its trailing-12-month (TTM) operating cash flow per share. This metric is used to determine whether a company is undervalued or overvalued relative to another stock, industry or sector. And like the P/E ratio, a lower number is typically considered better from the value perspective.

One of the reasons why P/CF ratio is often preferred over P/E ratio is the fact that operating cash flow adds back non-cash expenses such as depreciation and amortization to net income. This feature helps valuing stocks that have positive cash flow but are not profitable because of large noncash charges.

P/FCF Ratio: The price-to-free cash flow ratio is an extension of P/CF ratio, which uses trailing-12-month (TTM) free cash flow per share instead of operating cash flow per share. This metric is considered a more exact measure than P/CF ratio, as free cash flow subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding activities that generate additional revenues.

Earnings Yield: The earnings yield is calculated as current fiscal year (F1) EPS estimate divided by the company's current share price. The ratio, which is the inverse of the P/E ratio, measures the anticipated yield (or return) from earnings for each dollar invested in a stock today.

For example, earnings yield for a stock, which is trading at \$35 and expected to earn \$3 per share in the current fiscal year (F1), would be 0.0857 ($3/35 = 0.0857$) or 8.57%. In other words, for \$1 invested in the stock today, the yield from earnings is anticipated to be 8.57 cents.

Investors most commonly compare the earnings yield of a stock to that of a broad market index (such as the S&P 500) and prevailing interest rates, such as the current 10-year Treasury yield. Since bonds and stocks compete for investors' dollars, stock investors typically demand a higher yield for the extra risk they assume compared to investors of U.S. Treasury-backed securities that offer virtually risk-free returns. This additional return is referred to as the risk premium.

Debt/Equity Ratio: The debt-to-equity ratio is calculated as a company's total liabilities divided by its shareholder equity. This metric is used to gauge a company's financial leverage. In other words, it is a measure of the degree to which a company is financing its operations through debt versus its own funds. The higher the ratio, the higher the risk for shareholders.

However, this ratio is difficult to compare across industry groups where ideal amounts of debt vary. Some businesses are more capital intensive than others and typically require higher debt to finance their operations. So, a company's debt-to-equity ratio should be compared with other companies in the same industry.

Cash Flow (\$/share): Cash flow per share is calculated as operating cash flow (after-tax earnings + depreciation + other non-cash charges) divided by common shares outstanding. It is used by many investors as a measure of a company's financial strength. Since cash flow per share takes into consideration a company's ability to generate cash by adding back non-cash expenses, it is regarded by some as a more accurate measure of a company's financial situation than earnings per share, which could be artificially deflated.

Current Ratio: The current ratio or liquidity ratio is a company's current assets divided by its current liabilities. It measures a company's ability to pay short-term obligations. A current ratio that is in line with the industry average or slightly higher is generally considered acceptable. A current ratio that is lower than the industry average would indicate a higher risk of distress or default. A higher number is usually better. However, a very high current ratio compared to the industry average could be an indication of inefficient use of assets by management.

Debt/Capital Ratio: Debt-to-capital ratio is a company's total debt (interest-bearing debt + both short- and long-term liabilities) divided its total capital (interest-bearing debt + shareholders' equity). It is a measure of a company's financial leverage. All else being equal, the higher the debt-to-capital ratio, the riskier the stock.

However, this ratio can vary widely from industry to industry, the ideal amount of required debt being different. Some businesses are more capital intensive than others and typically require higher debt to finance their operations. So, a company's debt-to-capital ratio should be compared with the same for its industry.

Net Margin: Net margin is calculated as net income divided by sales. It shows how much of each dollar in sales generated by a company translates into profit. For example, if a company's net margin is 15%, its net income is 15 cents for every \$1 of sales it makes.

A change in margin can reflect either a change in business conditions, or a company's cost controls, or both. If a company's expenses are growing faster than sales, its net margin will decline. However, different net margin rates are considered good for different industries, so it's better to compare net margin rates of companies in the same industry group.

Return on Equity: Return on equity (ROE) is calculated as trailing-12-month net income divided by trailing-12-month average shareholder equity (including reinvested earnings). This metric is considered a measure of how effectively management is using a company's assets to generate profits. For example, if a company's ROE is 10%, it creates 10 cents profits for every \$1 shareholder equity, which is basically the company's assets minus debt. A company's ROE deemed good or bad depends on what's normal for its peers or industry group.

Sales/Assets Ratio: The sales-to-assets ratio or asset utilization ratio or asset turnover ratio is calculated as a company's annual sales divided by average assets (average of assets at the beginning of the year and at the year's end). This metric helps investors understand how effectively a company is using its assets to generate sales. For example, a sales-to-assets ratio of 2.5 indicates that the company generated \$2.50 in sales for every \$1 of assets on its books.

The higher the sales-to-assets ratio, the better the company is performing. However, similar to many other ratios, the asset turnover ratio tends to be higher for companies in certain industries/sectors than in others. So, a company's sales-to-assets ratio should be compared with the same for its industry/sector.

Historical EPS Growth (3-5 Years): This is the average annual (trailing-12-month) EPS growth rate over the last 3-5 years. This metric helps investors see how a company's EPS has grown from a long-term perspective.

Note: There are many factors that can influence short-term numbers — a recession will reduce this number, while a recovery will inflate it. The longterm perspective helps smooth out short-term events.

Projected EPS Growth (F1/F0): This is the estimated EPS growth rate for the current financial year. It is calculated as the consensus estimate for the current fiscal year (F1) divided by the reported EPS for the last completed fiscal year (F0).

Current Cash Flow Growth: It measures the latest year-over-year change in operating cash flow. Cash flow growth tells an investor how quickly a company is generating inflows of cash from operations. A positive change in the cash flow is desired and shows that more 'cash' is coming in than going out.

Historical Cash Flow Growth (3-5 Years): This is the annualized change in cash flow over the last 3-5 years. The change in a longer period helps put the current reading into proper perspective. By looking at the rate, rather than the actual dollar value, the comparison across the industry and peers becomes easier.

Projected Sales Growth (F1/F0): This metric looks at the estimated sales growth for the current year. It is calculated as sales estimate for the current fiscal year (F1) divided by the reported sales for the last completed fiscal year (F0).

Like EPS growth, a higher rate is better for sales growth. A look at a company's projected sales growth instantly tells you what the outlook is for their products and services. However, different sales growth rates are considered good for different industries, so it's better to compare sales growth rates of companies in the same industry group.

EPS F1 Estimate 1-Week Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past week. The change in a company's consensus EPS estimate (or earnings estimate revision) has proven to be strongly correlated with the near-term price movement of its shares. It is an integral part of the Zacks Rank.

If a stock's consensus EPS estimate is \$1.10 now versus \$1.00 a week ago, that will be reflected as a 10% upward revision. If, on the other hand, it went from \$1.00 to 90 cents, that would be a 10% downward revision.

EPS F1 Estimate 4-Week Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past four weeks.

A stock's earnings estimate revision in a 1-week period is important. But it's more meaningful to look at the longer-term revision. And, of course, the 4-week change helps put the 1-week change into proper perspective.

EPS F1 Estimate 12-Week Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past 12 weeks.

This metric essentially shows how the consensus EPS estimate has changed over a period longer than 1 week or 4 weeks.

EPS Q1 Estimate Monthly Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal quarter over the past four weeks.

While the revision in consensus EPS estimate for the current fiscal year is strongly correlated with the near-term price movement of its shares, the estimate revision for the current fiscal quarter is an important metric as well, especially over the short term, and particularly as a stock approaches its earnings date. If a stock's Q1 EPS estimate decreases ahead of its earnings release, it's usually a negative sign, whereas an increase is a positive sign.