VGM:D



Barnes Group Inc. (B)

\$50.80 (As of 06/29/21)

Price Target (6-12 Months): **\$54.00**

Long Term: 6-12 Months | Zacks Recommendation: Neutral

(Since: 04/26/21)

Prior Recommendation: Underperform

Short Term: 1-3 Months Zacks Rank: (1-5) 2-Buy

Zacks Style Scores:

Value: C Growth: D Momentum: C

Summary

Barnes Group seems well positioned to benefit from strength across its Gimatic business, supported by its patented technologies and a solid market position. Its policy of rewarding shareholders handsomely works in its favor. For 2021, it anticipates adjusted earnings of \$1.78-\$1.98 per share, suggesting growth of 14.6% at the mid-point from the year-ago reported figure. However, the company has been witnessing softness in aerospace end market, mostly due to the COVID-related issues. Reduced aircraft utilization and lower spare parts demand are likely to hamper its prospects. Moreover, its highly leveraged balance sheet might put pressure on profitability. Given its extensive geographic presence, its business is susceptible to geopolitical issues and currency fluctuations. In the past three months, its shares have underperformed the industry.

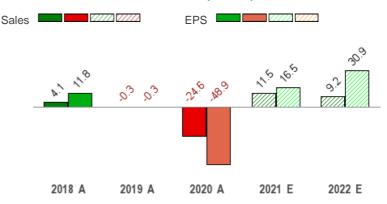
Price, Consensus & Surprise



Data Overview

\$57.64 - \$33.59
183,591
\$2.6 B
0.2%
1.27
\$0.64 / 1.3%
Manufacturing - General Industrial
Top 25% (64 out of 251)

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of \$)

Last EPS Surprise	22.6%		Q1	Q2	Q3	Q4	Annual*
Last Sales Surprise	11.2%	2022					1,368 E
EPS F1 Estimate 4-Week Change	0.0%	2021	302 A	300 E	321 E	330 E	1,253 E
Expected Report Date	07/30/2021	2020	331 A	236 A	269 A	289 A	1,124 A
Earnings ESP	0.0%	EPS E	stimates				
			Q1	Q2	Q3	Q4	Annual*
P/E TTM	38.8	2022					\$2.50 E
P/E F1	26.6	2021	\$0.38 A	\$0.44 E	\$0.52 E	\$0.56 E	\$1.91 E
PEG F1	3.8	2020	\$0.71 A	\$0.27 A	\$0.30 A	\$0.36 A	\$1.64 A
P/S TTM	2.4	*Quarterly	/ figures may no	t add up to ann	ual.		

The data in the charts and tables, including the Zacks Consensus EPS and sales estimates, is as of 06/29/2021. The report's text and the

analyst-provided price target are as of 06/30/2021.	
pet performance is no guarantee of future results. Please see important disclosures and definitions at the	and of this raport

Overview

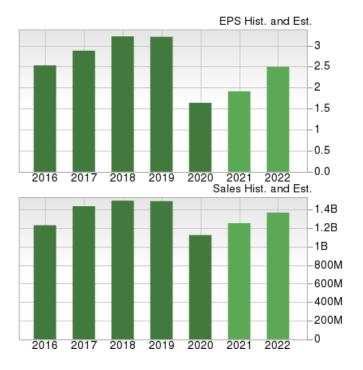
Headquartered in Bristol, CT, Barnes Group Inc. is a global diversified manufacturer and provider of highly engineered products, innovative solutions and differentiated industrial technologies. At fourth-quarter 2020 end, the company employed around 5,000 people globally.

The company's product and solution offerings include plastic injection molding technologies, robotic grippers, automation components, fine-blanked solutions, high-performance precision components and engineering solutions. It boasts a diverse range of market-leading brands like Associated Spring, Hänggi, Seeger Orbis and Associated Spring Raymond.

The above-mentioned products are mainly used in the aerospace, transportation, manufacturing, automation, healthcare and packaging markets.

Barnes Group currently has two reportable segments:

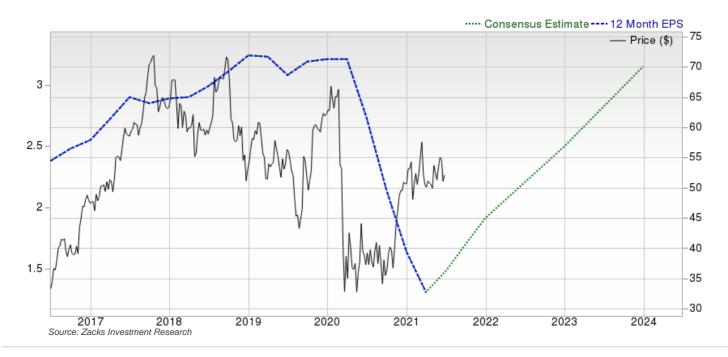
Industrial (72.9% revenues came from this segment in first-quarter 2021): This segment offers highly-engineered, high-quality precision components, products and systems for critical applications. The segment has a strong customer base in end-markets like industrial equipment, transportation, automation, electronics, as well as medical devices.



The segment's Molding Solutions business is engaged in designing and manufacturing customized hot runner systems and precision mold assemblies for several complex injection molding applications. Its Force & Motion Control business offers cost-effective force and motion control solutions, which serve various metal forming and other industrial markets. The Automation business develops robotic grippers, sensors and automation components.

Aerospace (27.1%): This segment is engaged in manufacturing precision-machined and fabricated components and assemblies for original equipment manufacturer (OEM) turbine engine, industrial gas turbine and airframe builders globally. The Aerospace segment offers component overhaul and repair (MRO) services for several leading turbine engine manufacturers and commercial airlines.

In addition, it provides aftermarket and support and repair services for a broad range of aerospace products, including commercial, military and general aviation aircraft. Its aftermarket facilities are primarily based in Connecticut, Ohio, Singapore and Malaysia.



Reasons To Buy:

▲ Barnes Group's earnings and sales surpassed estimates by 22.6% and 11.2%, respectively. The company's Industrial segment's sales increased 10.5% in the first quarter on a year-over-year basis driven by strong recovery in its end markets. For the quarters ahead, the segment is well poised to benefit from strength across its molding solutions, force & motion control, engineered components and automation businesses supported by strong orders across its automotive, medical, packaging and personal care end markets. For 2021, organic sales are expected to rise 10-12% on a year-over-year basis. Also, for the year, it anticipates adjusted earnings of \$1.78-\$1.98 per share, suggesting growth of 14.6% at the mid-point from the year-ago reported figure. In the past 60 days, the company's earnings estimates have increased 3.8% for 2021 and 3.7% for 2022.

Barnes Group's focus on lowering its debt level, shareholder-friendly policies and the Gimatics business are likely to be beneficial in the quarters ahead.

- ▲ Barnes Group's strength across its Gimatic business, supported by its patented technologies, intellectual property-based solutions and solid market position, is likely to act as a tailwind in the quarters ahead. Notably, the business' solid portfolio of robotic technology solutions has strengthened the company's competitiveness in the industrial automation end markets, including automotive, packaging, healthcare, and food and beverage. The business is poised to benefit in the long term from the rising adoption of robotic technologies in end markets. In 2020, the business contributed 7% to the company's Industrial segment's sales. In addition, the company's focus on investing in product innovation, along with its commercial and operational excellence initiatives, is likely to be beneficial over the long term.
- ▲ Barnes Group remains committed toward rewarding shareholders handsomely through dividend payouts and share buyback programs. In 2020, the company returned \$48 million of cash to shareholders through dividend payouts and share buybacks. Also, in first-quarter 2021, it paid out dividends worth \$8.1 million to shareholders and refrained from buying back any shares. In April 2019, its board of directors authorized the repurchase of up to 5 million shares of its common stock. Notably, the company expects to resume some share repurchase activity (which was earlier suspended, owing to uncertain economic environment caused by the pandemic) to offset equity compensation dilution. In addition, it intends to become more competent on the back of divestiture of non-core businesses. In February 2020, the company divested its Seeger-Orbis business to Kajo Neukirchen Group.

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Reasons To Sell:

▼ In the past three months, Barnes Group's shares have gained 2.5% compared with the industry's growth of 5.9%. The company is experiencing persistent softness in its Aerospace segment. Notably, the segment's sales declined 37.9% in the first quarter on a year-over-year basis due to weakness in end markets, on account of the coronavirus outbreak-related issues. It believes that reduced aircraft utilization and lower demand for its spare parts in the aerospace end market will have an adverse impact on the Aerospace segment's aftermarket and MRO businesses in the quarters ahead. The duration of the coronavirus pandemic and the impacts of the government-imposed travel restrictions in response to the crisis are likely to continue weighing on Barnes Group.

Softness across aerospace end market on account of the coronavirus outbreak, and high debt level are major concerns for Barnes Group.

- ▼ Barnes Group has a highly leveraged balance sheet. In the last five years (2016-2020), the company's long-term debt jumped 8.4% (CAGR). Although exiting first-quarter 2021, the company's long-term debt declined 5.1% on a sequential basis, its ability to meet its debt obligations based on its current income declined over the past quarter. Notably, exiting the first quarter, its times interest earned ratio was 6.5, lower than 7.4 recorded at the end of the previous quarter. We believe that further issuances of long-term debts will make the company more leveraged and can also inflate its financial obligations, hurting profitability.
- ▼ Barnes Group's extensive geographic presence exposes its business to geopolitical risks and headwinds arising from unfavorable movements in foreign currencies. For instance, a stronger U.S. dollar might depress the company's overseas business results in the quarters ahead.

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Last Earnings Report

Barnes Beats Q1 Earnings Estimates, Raises Projections

Barnes Group delivered impressive results for the first quarter of 2021. Its earnings surpassed estimates by 22.58%, whereas sales exceeded the same by 11.18%.

Its adjusted earnings in the reported quarter were 38 cents per share. It surpassed the Zacks Consensus Estimate of 31 cents. However, the bottom line decreased 46.5% from the year-ago quarter figure of 71 cents due to lower sales generation and weakness in margins.

Quarter Ending	03/2021
Report Date	Apr 30, 2021
Sales Surprise	11.18%
EPS Surprise	22.58%
Quarterly EPS	0.38
Annual EPS (TTM)	1.31

Top-Line Results

In the reported quarter, Barnes' net sales decreased 8.8% year over year to \$301.6 million. Organic sales in the first quarter declined 10% year over year due to the adverse impacts of the pandemic on aerospace end markets. Divestitures too lowered sales by 2%, while movements in foreign currencies had a positive impact of 3%.

It is worth noting here that first-quarter sales rose 4% from fourth-quarter 2020.

The company's revenues surpassed the Zacks Consensus Estimate of \$271 million.

Barnes reports revenues under two heads — Industrial and Aerospace. A brief snapshot of the segmental sales is provided below:

Revenues generated from Industrial amounted to \$220 million, increasing 10.5% year over year. The segment gained from strengthening end-market businesses. Organic sales were up 8% year over year and movements in foreign currencies had a positive impact of 5%, partially offset by an adverse divestiture impact of 3%.

Aerospace's sales were \$81.6 million in the first quarter, down 37.9% from the year-ago quarter. The reported quarter's performance was adversely impacted by weakness in aerospace end markets due to the pandemic. Aftermarket sales were down 48%, while that of original equipment manufacturing declined 32%.

Margin Profile

In the reported quarter, Barnes' cost of sales decreased 6.5% year over year to \$194.7 million. Notably, cost of sales represented 64.6% of net sales versus 63% in the year-ago quarter. Selling and administrative expenses increased 2% year over year to \$74.6 million, and represented 24.7% of net sales.

Adjusted operating income in the reported quarter decreased 37.5% year over year to \$32.4 million, whereas margin fell 490 basis points to 10.7%. Interest expenses totaled \$3.9 million in the reported quarter, down 8.8% year over year.

Balance Sheet & Cash Flow

Exiting the first quarter, Barnes' cash and cash equivalents were \$84.9 million, up 7.3% from \$79.2 million recorded in the last reported quarter. Long-term debt was \$664 million, reflecting a 5.1% decline from \$699.9 million in the last reported quarter.

In the reported quarter, the company repaid long-term debt of \$30.9 million. Also, it received \$15 million as proceeds from the issuance of long-term debts. Liquidity available in the quarter included cash of \$85 million and credit under revolving facilities of \$441 million.

In the quarter under review, the company generated net cash of \$35.6 million from operating activities, down 24.5% from the year-ago quarter. Capital expenditure totaled \$7.9 million, decreasing 34.1% year over year. Free cash flow was \$27.8 million versus \$35.3 million in the year-ago quarter.

In the first quarter, Barnes paid out dividends amounting to \$8.1 million, representing a 0.4% decrease from the prior-year quarter's disbursement. No shares were repurchased in the quarter.

Outlook

For 2021, Barnes anticipates earnings of \$1.78-\$1.98 per share, above the previously stated \$1.65-\$1.90. The revised projection suggests year-over-year growth of 9-21%. Movements in foreign currencies are expected to boost sales by 2%. Divestiture impact is expected to be adverse 1%.

Organic sales for the year are expected to rise 10-12% (on a year-over-year basis) versus 6-8% mentioned earlier. Operating margin is predicted to be 13% versus the previously stated 12-14%.

The company anticipates capital expenditure of \$50 million, down from the previously mentioned \$55 million. Cash conversion is expected to exceed 100% of net income. Effective tax rate for 2021 is expected to be 30%.

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Recent News

On Jun 10, 2021, Barnes Group paid out a quarterly cash dividend of 16 cents per share to shareholders on record as of May 27, 2021.

On **Apr 19, 2021**, Barnes Group's unit, Barnes Aerospace, received a multi-year contract from Northrop Grumman. The contract is anticipated to generate at least \$30 million in revenues and will require the company to produce metallic subassembly to be used in the B-2 Spirit Stealth Bomber Tailpipe Mid/Aft Assembly Full Fleet Replacement Program.

On Mar 23, 2021, Barnes Group's unit, Barnes Aerospace, announced that it has expanded its MRO facility located in West Chester, OH.

Valuation

Barnes Group shares are up 0.2% in the year to date period and increased 32.3% over the trailing 12-month period. Stocks in the Zacks sub-industry are up 11.9% in the year to date period, while that in the Zacks Industrial Products sector increased 12.9%. Over the past year, the Zacks sub-industry and the sector are up 48.9% and 52.2%, respectively.

The S&P 500 index has moved up 14.9% in the year to date period, while increased 39.7% in the past year.

The stock is currently trading at 23.06x forward 12-month earnings per share, which compares to 25.29x for the Zacks sub-industry, 21.31x for the Zacks sector and 21.85x for the S&P 500 index.

Over the past five years, the stock has traded as high as 30.27x and as low as 10.13x, with a 5-year median of 18.6x. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$54 price target reflects 24.51x forward 12-month earnings per share.

The table below shows summary valuation data for B.

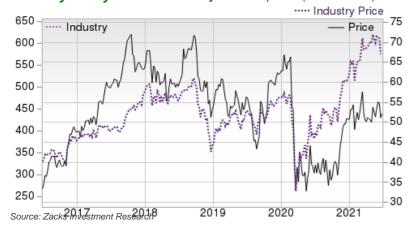
	Valuation	Multip	oles - B		
		Stock	Sub-Industry	Sector	S&P 500
	Current	23.06	25.29	21.31	21.85
P/E F12M	5-Year High	30.27	27.15	23.58	23.83
	5-Year Low	10.13	15.44	12.55	15.31
	5-Year Median	18.6	20.74	18.22	18.2
	Current	1.95	3.33	3.49	4.76
P/Sales F12M	5-Year High	2.67	3.38	3.58	4.76
	5-Year Low	1.14	1.48	1.6	3.21
	5-Year Median	1.99	1.94	2.1	3.72

As of 06/29/2021

Source: Zacks Investment Research

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Industry Analysis Zacks Industry Rank: Top 25% (64 out of 251)



Top Peers

Company (Ticker)	Rec	Rank
Tennant Company (TNC)	Outperform	1
Donaldson Company, Inc. (DCI)	Neutral	3
Danaher Corporation (DHR)	Neutral	3
Emerson Electric Co. (EMR)	Neutral	2
Eaton Corporation, PLC (ETN)	Neutral	2
Honeywell International Inc. (HON)	Neutral	3
ParkerHannifin Corporation (PH)	Neutral	3
Triumph Group, Inc. (TGI)	Neutral	3

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

Industry Comparison Industry: Manufacturing - General Industrial			Industry Peers			
	В	X Industry	S&P 500	DCI	DHR	PH
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	2	-	-	3	3	3
VGM Score	D	-	-	Α	В	В
Market Cap	2.57 B	2.28 B	30.34 B	7.92 B	193.21 B	39.06 B
# of Analysts	3	3	12	6	8	10
Dividend Yield	1.26%	0.00%	1.34%	1.40%	0.31%	1.36%
Value Score	С	-	-	В	С	В
Cash/Price	0.03	0.06	0.06	0.03	0.03	0.01
EV/EBITDA	15.37	16.86	17.30	18.54	30.05	19.12
PEG F1	3.80	2.24	2.11	2.59	1.69	1.73
P/B	1.90	2.89	4.05	6.87	5.20	5.27
P/CF	15.00	15.75	17.44	23.20	27.89	20.02
P/E F1	26.60	24.67	21.19	27.15	30.34	20.35
P/S TTM	2.35	2.27	3.42	2.94	7.79	2.88
Earnings Yield	3.76%	3.93%	4.64%	3.68%	3.30%	4.91%
Debt/Equity	0.49	0.43	0.66	0.39	0.55	0.89
Cash Flow (\$/share)	3.39	2.50	6.86	2.72	9.71	15.12
Growth Score	D	-	-	В	Α	В
Historical EPS Growth (3-5 Years)	-5.13%	5.93%	9.59%	7.20%	8.77%	14.66%
Projected EPS Growth (F1/F0)	16.66%	36.78%	21.89%	16.16%	41.46%	37.82%
Current Cash Flow Growth	-35.21%	-4.04%	1.02%	-6.61%	54.58%	-2.94%
Historical Cash Flow Growth (3-5 Years)	-4.87%	6.96%	7.34%	3.19%	11.93%	7.19%
Current Ratio	2.18	2.06	1.38	2.18	2.05	1.66
Debt/Capital	32.95%	30.61%	41.51%	28.27%	33.39%	47.01%
Net Margin	4.84%	3.93%	12.06%	9.88%	19.17%	11.34%
Return on Equity	5.04%	9.38%	16.59%	25.96%	16.34%	25.33%
Sales/Assets	0.42	0.70	0.51	1.18	0.34	0.68
Projected Sales Growth (F1/F0)	11.44%	2.76%	9.56%	9.79%	25.05%	4.14%
Momentum Score	С	-	-	Α	В	Α
Daily Price Change	-0.88%	0.00%	0.03%	0.25%	-0.30%	-0.39%
1-Week Price Change	2.04%	2.04%	1.07%	4.49%	3.73%	7.38%
4-Week Price Change	-5.77%	-2.06%	2.14%	1.03%	10.46%	-3.38%
12-Week Price Change	1.03%	-0.08%	5.35%	6.70%	19.30%	-4.58%
52-Week Price Change	28.41%	55.05%	38.43%	35.58%	53.18%	65.14%
20-Day Average Volume (Shares)	183,591	63,143	1,994,187	437,506	2,913,568	941,835
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%	4.52%	0.15%	0.10%
EPS F1 Estimate 12-Week Change	6.30%	6.60%	3.69%	4.45%	19.02%	5.76%

EPS Q1 Estimate Monthly Change 0.00% 0.00% 4.72% 0.21% 1.23%

Source: Zacks Investment Research

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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.

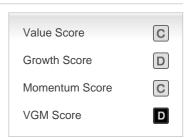
Zacks Rank

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.



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

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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.

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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 forwardlooking 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 mediumterm 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 mostrecent 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

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

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

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

ntensive than others and typically require higher debt to finance their operations. So, a company's debt-to-capital ratio should be compared with ne same for its industry.

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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.