

Bruker Corporation (BRKR)

\$39.69 (As of 09/04/20)

Price Target (6-12 Months): **\$42.00**

Long Term: 6-12 Months

Zacks Recommendation:
Neutral

(Since: 06/02/20)

Prior Recommendation: Underperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

3-Hold

Zacks Style Scores:

VGM:D

Value: D

Growth: D

Momentum: C

Summary

Bruker's Avance system's successful installation and customer acceptance in the second quarter of 2020 bode well. MALDI-2 PI source's launch instills optimism in the stock. Potential of the Nano Group, PCI and the MALDI Biotyper is also encouraging. Rising demand for MALDI Biotyper in applied markets and a strong solvency but leveraged balance sheet bode well. Bruker's second quarter earnings were better-than-expected. Yet, year-over-year fall in revenues in all reporting segments and major geographies due to business disruptions is concerning. Contraction of both margins and Bruker's inability to provide any financial guidance raise apprehensions. Foreign exchange fluctuations, stiff competition and macroeconomic woes pose challenges to Bruker. Over the past six months, Bruker has underperformed its industry.

Data Overview

52-Week High-Low	\$54.49 - \$30.78
20-Day Average Volume (Shares)	320,232
Market Cap	\$6.1 B
Year-To-Date Price Change	-22.1%
Beta	1.27
Dividend / Dividend Yield	\$0.16 / 0.4%
Industry	Instruments - Scientific
Zacks Industry Rank	Top 32% (80 out of 251)

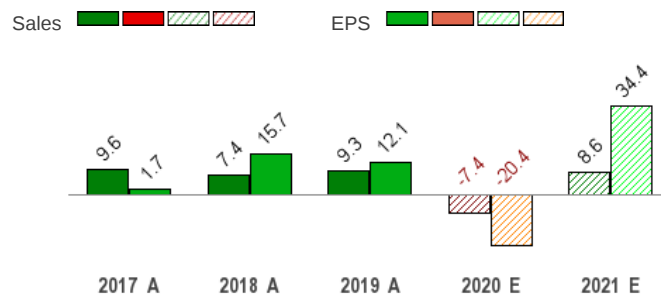
Last EPS Surprise	320.0%
Last Sales Surprise	0.5%
EPS F1 Estimate 4-Week Change	1.5%
Expected Report Date	10/29/2020
Earnings ESP	12.1%

P/E TTM	30.3
P/E F1	31.8
PEG F1	2.6
P/S TTM	3.1

Price, Consensus & Surprise



Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	454 E	503 E	529 E	615 E	2,085 E
2020	424 A	425 A	486 E	586 E	1,920 E
2019	461 A	490 A	521 A	600 A	2,073 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$0.31 E	\$0.38 E	\$0.44 E	\$0.52 E	\$1.68 E
2020	\$0.14 A	\$0.21 A	\$0.33 E	\$0.54 E	\$1.25 E
2019	\$0.28 A	\$0.33 A	\$0.43 A	\$0.53 A	\$1.57 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 09/04/2020. The reports text is as of 09/07/2020.

Overview

Billerica, MA-headquartered Bruker Corporation designs and manufactures proprietary life science and materials research systems and associated products that serve multiple customers in life science research, pharmaceuticals, applied markets, nanotechnology, cell biology, clinical research, microbiology and in-vitro diagnostics. Currently, Bruker employs 6,000 individuals who work at 90 locations across the globe. It has direct sales forces employed through North America, Europe, Japan, Asia Pacific and Australia.

Business Segments:

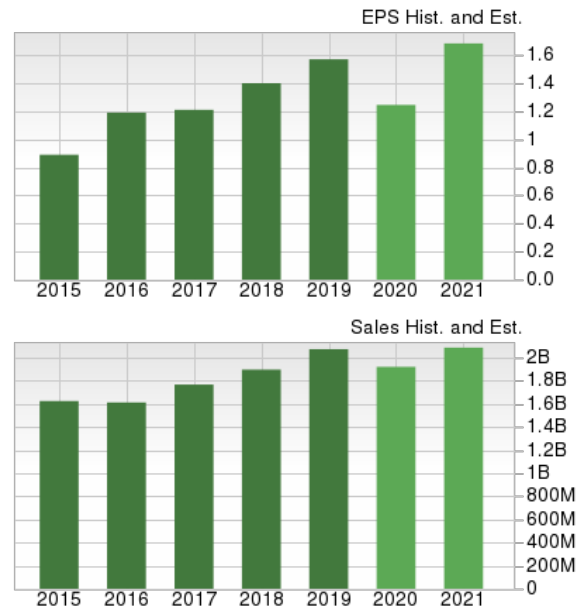
Bruker Scientific Instruments (BSI) Life Science: Within the segment, Bruker reports under two groups: Bruker BioSpin Group (comprising 29.9% of revenues in 2019, up 5.1% from 2018) and Bruker CALID Group (30.1%, up 13.8%).

The **Bruker BioSpin** comprises the Bruker Magnetic Resonance and Preclinical Imaging divisions, which designs, manufactures and distributes enabling life science tools based on the magnetic resonance technology.

The **Bruker CALID** comprises the Bruker Daltonics and primarily designs, manufactures and distributes life-science mass spectrometry instruments that can be integrated with other sample preparation or chromatography instruments.

BSI Nano (30.5%, up 11.4%): The Bruker Nano combines the Bruker AXS, Bruker Nano Surfaces, Bruker Nano Analytics and Bruker Elemental divisions, and designs, manufactures and distributes advanced X-ray instruments to determine the characteristics of matter and the three-dimensional structure of molecules.

Bruker Energy & Supercon Technologies (BEST) (10.1%, up 7.8%): This segment designs, manufactures and distributes superconducting materials, primarily metallic low temperature superconductors, for use in magnetic resonance imaging, nuclear magnetic resonance, fusion energy research and other applications.



Source: Zacks Investment Research

Reasons To Buy:

- ▲ **BSI Nano Group Prospects Bright:** Bruker's Nano Group has been a solid performer till the pandemic hit the market. Despite its disappointing performance in the second quarter due to temporary factory closures being one of the reasons, the segment holds the potential of a rebound. The stores have started reopening since May-end. Semiconductor metrology revenues have been steady year over year, with order rates improving as semi metrology equipment markets are on a rebound.

Bruker's acquisitions of Anasys (in April 2018), JPK (in July), RAVE (April 2019) and Alicona are also progressing well.

The company has several Bruker NANO products that are being assembled and tested in Malaysia and by 2022, management expects more than \$50 million of revenues to be generated from Penang.

Overall, the Nano Group holds strong long-term potential on higher demand from industrial markets, semiconductors and growing academic markets.

- ▲ **High Potential of MALDI Biotyper:** Bacteria analysis and the identification of microorganisms to the species level and beyond is a key task in microbiology. Although current sequencing technologies provide more precise insights in biochemical analysis, they are still far too slow and expensive. Keeping this in mind, Bruker developed the MALDI Biotyper – a revolutionary approach for the analysis of microorganisms. The company expanded its MALDI Biotyper workflow's menu to include selected high-value resistance testing for clinical microbiology research.

We are also encouraged to note that demand for the MALDI Biotyper is increasing in applied markets, specifically for food, feed and beverage. Based on the recent developments witnessed in this product portfolio, management believes Bruker is poised to double its microbiology business over the next four to five years. Given an increase in the aging population, a higher number of individuals are likely to fall prey to illnesses, especially those caused by microorganisms. We believe MALDI Biotyper is thus positioned well to contribute significantly to the company's top line over time.

In May, Bruker launched the world's first commercial MALDI-2 post-ionization (PI) source, which is now available as an option on the timsTOF flex ESI/MALDI mass spectrometer. It also launched additional unique TIMS/PASEF-enabled 4D proteomics methods.

- ▲ **Strong Prospects in NMR Industry:** Nuclear Magnetic Resonance (NMR) spectroscopy is an analytical technique used in quality control and research to identify the content and purity of a sample as well as its molecular structure. Bruker BioSpin's products, which have specific application in structural proteomics, drug discovery, research and food and materials science fields, provide customers with the ability to ascertain the structure, dynamics, and function of specific molecules, such as proteins, as well as characterize and determine the composition of mixtures. A vast majority of Bruker BioSpin's customers include academic and government customers as well as pharmaceutical and biotechnology companies.

Although BioSpin Group revenues declined in the reported quarter due to delay in certain deliveries and installations due to the pandemic-led customer loss and installation delays along with the temporary closure of one of BioSpin's manufacturing sites, it holds long-term potential. The company continues to invest in operational excellence like the multi-year Project 2020 which consolidates two major BioSpin sites in Germany into a single, modern, lean and customer-oriented site. The project is likely to be completed in 2021.

In May, Bruker announced the successful installation and customer acceptance of the world's first Avance NEO1.2 GHz NMR system in Italy. In July, the same was announced in Switzerland.

- ▲ **Initiatives to Combat the Coronavirus Crisis:** Bruker has been making notable efforts to combat the coronavirus crisis. In Bremen, the company's Germany campus, Bruker is currently offering a pilot COVID-19 at work testing program for its factory workforce. The program, implemented in April, offers weekly company-paid voluntary COVID-19 PCR tests to employees in the factory.

Further, the company is providing critical technologies and solutions to help fight the crisis. The microbiology and infectious disease diagnostics portfolio has added a SARS-CoV-2 PCR test and the NMR and mass spec systems, which are used in critical disease, therapeutic and vaccine research.

Bruker entered into a distribution agreement with Primer Design from UK, a subsidiary of Novacyt SA, in March. Per the agreement, Bruker-Hain Diagnostics will distribute the CE-IVD-labeled genesig real-time PCR coronavirus (COVID-2019) assay, effective immediately. In this respect, Bruker has been ramping up the Bruker-Hain deliveries of nucleic acid extraction kits and of COVID-19 PCR test kits to customers in Europe and Africa.

Bruker, in July, launched its FluoroType SARS-CoV-2 plus next-generation 6-plex PCR assay for higher specific detection of the SARS-CoV-2 virus, which causes COVID-19. Notably, the assay has already received the CE Mark and is available on the Bruker Hain FluoroCycler XT real-time PCR system as well as on other commonly available thermocyclers.

- ▲ **Potential of Preclinical Imaging Market:** Preclinical imaging (PCI) can dramatically increase the efficiency and pace of drug discovery and development. Bruker offers advanced PCI solutions for a broad spectrum of application fields, such as cancer research, functional and anatomical neuroimaging, orthopedics, cardiac imaging and stroke models. Moreover, this division is experiencing increasing customer demand for higher-strength pre-clinical magnetic resonance imaging (MRI) system.

Bruker's recent acquisition of Hain Diagnostics expands its MALDI Biotyper solution product line. The company's collaboration with Champalimaud Foundation in the field of Preclinical Imaging seems strategic.

The MRI system market, which is expected to see a CAGR of 5.9% between 2020 and 2027 from \$5.19 billion in 2019 (as per research firm Grand View Research), is encouraging. We believe this translates into a golden opportunity for Bruker to expand its foothold in the PCI market and earn higher profits from this division, going ahead. Currently, the company is investing vigorously in the PCI division to capture a larger share in this fast-growing market space.

▲ **Strong Solvency but Leveraged Balance Sheet:** Bruker exited the second quarter of 2020 with cash, cash equivalents and short-term investments of \$797 million compared with \$852 million at the end of the first quarter of 2020. Meanwhile, total debt came up to \$1.07 billion in the period, compared with \$1.06 billion in the sequentially last-reported quarter. However, if we go by the company's current-year debt level of \$101 million, it is pretty low compared to the cash in hand. This is good news in terms of the solvency position of the company, at least during a year of economic downturn, implying that the company has sufficient cash for debt repayment.

Debt comparison with the industry is, favorable as, the industry's total debt of \$1.36 billion is much higher than the company's debt level.

The quarter's total debt-to-capital ratio of 0.54 represented an increase from 0.53 at the end of the first quarter of 2020. It indicates a moderately leveraged balance sheet. This compares unfavorably with the total debt-to-capital ratio of the industry which stands at a lower level of 0.53.

In the second quarter of 2020, the company paid out \$6.1 million as dividends to common stockholders and also approved a quarterly cash dividend of 4 cents per share on the company's common stock. The current payout ratio stands at a very low level of 12.2%. Although, it represents a sequential increase from 11.2% from the end of the first quarter of 2020, this ratio itself indicates sustainability in terms of dividend payment amid the ongoing economic crisis. However, this compares unfavorably with the payout rate of the industry which stands at a further low level (4%).

Reasons To Sell:

▼ **Share Price Movement:** Over the past six months, Bruker has underperformed the industry it belongs to. The stock has lost 1.7% against the industry's 24.5% rise. Despite Bruker ending the second quarter with better-than-expected earnings, the year-over-year decline in revenues across all reporting segments as well as major geographies due to business disruptions is concerning. Contraction of both margins is discouraging as well. The company's inability to provide any financial guidance also raises apprehensions. Further, the expectation of a negative year-over-year impact of the pandemic on third-quarter results is deterring.

The company's exposure to the foreign exchange fluctuations is a cause of concern as it conducts majority of its business in international markets. Further, a competitive landscape and macroeconomic woes, stemming from the coronavirus pandemic, pose persistent challenges to the company.

▼ **Exposed to Currency Movement:** Bruker conducts 80% of its business in international markets. As a result, currency fluctuations continue to result in foreign currency transaction losses at the company. In the second quarter of 2020, changes in foreign currency had 1.1% negative impact on the company's revenues. In addition, currency fluctuations could cause the price of Bruker's products to be less competitive than its principal competitors' offerings.

▼ **Coronavirus Dampeners:** The coronavirus pandemic has been wreaking havoc on the economy and Bruker has also been affected. The company's second-quarter 2020 results reflected decline in both reported and organic revenues, primarily due to COVID-19-related disruptions. This led to year-over-year fall in the company's GAAP and non-GAAP operating income, operating margins and diluted earnings per share. Segmental performance was dismal primarily due to pandemic-led business disruptions.

This time, too, the company refrained from providing any financial guidance for the year.

▼ **Macroeconomic Factors:** Many of the countries in which Bruker operates, including the U.S., Russia, and certain European nations, have experienced and continue to face uncertain economic conditions. Any company conducting business in these nations tend to be impacted by unfavorable changes in economic or political conditions herein, including adverse changes in interest rates or tax rates, volatile financial and commodity markets, contraction in the availability of credit in the marketplace, and changes in capital spending patterns.

Moreover, continued volatility and disruption of global financial markets might limit Bruker's customers' ability to obtain adequate financing to maintain operations and proceed with planned or new capital spending initiatives. This could lead to a drop in sales volume that could materially and adversely affect the company's operational results and cashflow. Management further anticipates that the persistence of an economic downturn may entail increased pricing pressure for Bruker's products and services, thus weighing on its operating margins and profitability.

▼ **Competitive Landscape:** Bruker faces substantial competition in a consolidating industry and expects competition in all of its markets to increase further. Bruker BioSpin competes with companies that offer magnetic resonance spectrometers, mainly JEOL and Oxford Instruments. In the field of preclinical imaging, Bruker BioSpin faces competitive threat from Perkin Elmer, Mediso, Trifolio, MR Solutions, RS2D, Visualsonics (Fuji Film) and others.

Bruker CALID's competitors in the life science markets and chemical and applied markets include Danaher, Agilent, GE-Healthcare, Waters, Thermo Fisher Scientific, Shimadzu, Hitachi and JEOL. BEST competes with Oxford Instruments and Luvata in low temperature superconducting materials. Unfortunately, a number of Bruker's peers have expanded their market share in recent years through business combinations. Other companies may also choose to enter Bruker's fields of operation in the near future.

Currency fluctuations remain a drag on Bruker's top as well as bottom-line. Moreover, headwinds such as unfavorable economic conditions and competitive threats continue to pose concern.

Last Earnings Report

Bruker's Q2 Earnings Surpass Estimates, Margins Fall

Bruker delivered adjusted earnings per share of 21 cents in the second quarter of 2020, down 36.4% year over year. However, the figure surpassed the Zacks Consensus Estimate of 5 cents.

The adjustments include expenses related to purchased intangible amortization and restructuring costs.

GAAP earnings per share for the quarter was 16 cents a share, marking a 30.4% decline from the year-earlier figure.

Quarter Ending **06/2020**

Report Date	Aug 03, 2020
Sales Surprise	0.50%
EPS Surprise	320.00%
Quarterly EPS	0.21
Annual EPS (TTM)	1.31

Revenues in Detail

Bruker registered revenues of \$424.6 million in the second quarter, down 13.4% year over year.

Excluding a positive impact of 0.4% from acquisitions and a 1.1% negative impact from changes in foreign currency rates, the company recorded organic revenue decline of 12.7% and a 14.5% drop at CER year over year.

The fall in reported and organic revenues resulted from business disruptions across the globe and softer global instrumentation demand arising from the pandemic.

Geographically, the United States witnessed an 18.7% decline in revenues in the reported quarter. Also, revenues in the Asia Pacific fell 11.5% and the Other category's revenues declined 28.2%. Further, Europe revenues fell 7.2% year over year.

Segments in Details

Bruker reports results under three segments — BSI Life Science (comprising BioSpin and CALID), BSI NANO and BEST.

In the second quarter, BioSpin Group revenues fell 17.1% from the year-ago quarter to \$125.1 million due to the pandemic-led customer loss and installation delays along with the temporary closure of one of BioSpin's manufacturing sites.

CALID revenues were down 5.6% year over year to \$132.7 million, primarily resulting from fall in molecular spectroscopy revenues. However, the decline was partially offset by continued growth in Daltonics Life Science mass spectrometry, microbiology and infectious disease diagnostics business. CALID's microbiology and infectious disease consumables, which include the MALDI Biotyper Consumables and Bruker Hain nucleic acid extraction and COVID-19 Polymerase Chain Reaction assays, recorded significant growth year over year.

Total **BSI Life Science** revenues were \$291.4 million, down 11.5% year over year.

Revenues in the **Nano** group fell 16.9% to \$125.5 million due to global academic customer closures due to the pandemic, weaker industrial markets demand and temporary factory closures at some of Nano's businesses.

Organic revenues and revenues at CER of the BSI segment (including BSI Life Science and BSI Nano Segments) declined 12.7% and 13.4% year over year, respectively.

In the second quarter, the company's **BEST** segment's revenues were \$44.8 million, indicating a fall of 13.7% year over year resulting from lower demand for superconductor toward the quarter-end.

However, organically, the BEST segment revenues declined 12.5% year over year, net of intercompany eliminations. At CER, the segment fell 13.6%.

Margin Trend

In the quarter under review, Bruker's gross profit fell 19.2% to \$186.2 million. Gross margin contracted 315 basis points (bps) to 43.9%.

Meanwhile, selling, general & administrative expenses fell 17.8% to \$102.4 million. Research and development expenses went down 9.1% year over year to \$44.1 million. Adjusted operating expenses of \$146.5 million declined 15.3% year over year.

Adjusted operating profit totaled \$39.7 million, reflecting a 30.8% decline from the prior-year quarter. Further, adjusted operating margin in the second quarter contracted 236 bps to 9.3%.

Financial Position

Bruker exited the second quarter with cash and cash equivalents, and short-term investments of \$796.8 million compared with \$851.7 million at the end of the first quarter. Long-term debt at the end of the second quarter was \$924.2 million compared with \$914.8 million at the end of the first quarter of 2020.

Cumulative net cash flow from operating activities at the end of the second quarter was \$46.8 million compared with \$24.8 million in the year-ago period.

The company incurred expenses of \$12.3 million as payment of dividends to common stockholders and repurchased \$50 million worth of stocks for the first six months of 2020. As of Jun 30, Bruker had \$107.7 million remaining under its share repurchase authorization.

2020 Guidance

Bruker's 2020 financial guidance remains suspended due to challenging business conditions created by the pandemic. However, the company expects to witness a sequential improvement in financial results in the third quarter of 2020 despite the expectation of a continued negative year-over-year impact of the pandemic on the third quarter results.

Recent News

Bruker, Utrecht University to Collaborate for Advanced Study: Aug 07, 2020

Bruker entered into a collaboration with Utrecht University to advance the study of the 3-D structures and interactions of proteins by mass spectrometry.

Bruker Launches Enhanced AFM System: Jul 30, 2020

Bruker launched the high-speed NanoRacerhigh-speed atomic force microscopy (AFM) system, which sets a new milestone in high-speed scanning capabilities to enable true real-time visualization of dynamic biological processes using AFM.

Bruker Launches Next-Generation PCR Assay: Jul 27, 2020

Bruker launched its FluoroType SARS-CoV-2 plus next-generation 6-plex polymerase chain reaction (PCR) assay for higher specific detection of the SARS-CoV-2, the COVID-19 causing virus.

Bruker Successfully Completes Installation at ETH Zürich: Jul 22, 2020

Bruker announced the successful installation and customer acceptance of the Avance NEO 1.2 GHz NMR system at the Department of Chemistry and Applied Biosciences of the Eidgenössische Technische Hochschule (ETH) Zürich in Switzerland.

Valuation

Bruker shares are down 22.1% in the year-to date period and down 6% in the trailing 12-month periods. Stocks in the Zacks sub-industry are up 1.4% while the Zacks Medical sector rose 24.3% in the year-to-date period. Over the past year, the Zacks sub-industry is up 13.2% and sector is up 37.7%.

The S&P 500 index is up 6.6% in the year-to-date period and up 15.7% in the past year.

The stock is currently trading at 25.7X Forward 12-months earnings, which compares to 23.7X for the Zacks sub-industry, 26.8X for the Zacks sector and 22.9X for the S&P 500 index.

Over the past five years, the stock has traded as high as 32.7X and as low as 17X, with a 5-year median 23.8X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$42 price target reflects 27.2X forward 12-months earnings.

The table below shows summary valuation data for BRKR

Valuation Multiples - BRKR					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	25.69	23.72	26.76	22.85
	5-Year High	32.74	26.74	27.93	23.44
	5-Year Low	17.00	18.41	16.75	15.26
	5-Year Median	23.82	22.64	19.93	17.63
P/S F12M	Current	2.99	4.85	4.33	4.19
	5-Year High	3.86	5.92	4.49	4.29
	5-Year Low	1.66	3.63	2.70	3.11
	5-Year Median	2.65	4.91	3.42	3.66
P/B TTM	Current	6.75	10.94	7.67	5.90
	5-Year High	9.32	12.24	8.23	6.17
	5-Year Low	3.57	5.27	4.10	3.75
	5-Year Median	6.19	7.76	5.55	4.83

As of 09/04/2020

Industry Analysis Zacks Industry Rank: Top 32% (80 out of 251)



Source: Zacks Investment Research

Top Peers

Company (Ticker)	Rec	Rank
Danaher Corporation (DHR)	Outperform	2
PerkinElmer, Inc. (PKI)	Outperform	1
Thermo Fisher Scientific Inc. (TMO)	Outperform	2
Agilent Technologies, Inc. (A)	Neutral	3
MettlerToledo International, Inc. (MTD)	Neutral	3
Waters Corporation (WAT)	Neutral	3
General Electric Company (GE)	Underperform	4
Hitachi Ltd. (HTHIY)	Underperform	4

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

Industry Comparison Industry: Instruments - Scientific				Industry Peers		
	BRKR	X Industry	S&P 500	MTD	PKI	WAT
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Outperform	Neutral
Zacks Rank (Short Term)	3	-	-	3	1	3
VGM Score	D	-	-	C	D	C
Market Cap	6.08 B	211.12 M	23.38 B	22.69 B	12.78 B	12.76 B
# of Analysts	6	5.5	14	5	6	7
Dividend Yield	0.40%	0.00%	1.62%	0.00%	0.24%	0.00%
Value Score	D	-	-	D	D	D
Cash/Price	0.12	0.09	0.07	0.01	0.02	0.03
EV/EBITDA	17.54	16.76	13.13	29.37	23.59	16.76
PEG F1	2.59	4.62	2.96	4.21	1.24	6.81
P/B	6.70	3.15	3.22	50.42	4.31	NA
P/CF	19.02	15.71	12.65	35.17	18.22	18.50
P/E F1	31.75	31.88	21.59	40.96	21.45	25.65
P/S TTM	3.08	2.61	2.44	7.73	4.29	5.60
Earnings Yield	3.15%	3.15%	4.42%	2.44%	4.66%	3.90%
Debt/Equity	1.07	0.64	0.70	2.55	0.55	-8.06
Cash Flow (\$/share)	2.09	0.71	6.93	26.99	6.27	11.14
Growth Score	D	-	-	A	C	A
Historical EPS Growth (3-5 Years)	11.98%	11.00%	10.41%	14.75%	12.49%	10.01%
Projected EPS Growth (F1/F0)	-20.70%	-8.82%	-4.75%	1.79%	29.96%	-10.65%
Current Cash Flow Growth	12.63%	7.99%	5.22%	7.99%	15.05%	-4.57%
Historical Cash Flow Growth (3-5 Years)	11.39%	9.94%	8.49%	9.94%	12.03%	5.07%
Current Ratio	2.61	1.95	1.35	1.41	1.32	1.82
Debt/Capital	51.60%	37.23%	42.95%	71.81%	35.38%	NA
Net Margin	8.35%	1.61%	10.25%	18.61%	9.87%	22.61%
Return on Equity	22.70%	-1.20%	14.59%	138.77%	18.40%	-349.31%
Sales/Assets	0.71	0.71	0.50	1.07	0.46	0.87
Projected Sales Growth (F1/F0)	-7.38%	0.00%	-1.42%	-1.71%	10.26%	-7.50%
Momentum Score	C	-	-	D	F	F
Daily Price Change	-2.31%	-1.41%	-0.30%	-1.43%	-1.50%	-1.40%
1-Week Price Change	-0.45%	0.62%	2.59%	0.69%	0.01%	0.55%
4-Week Price Change	-8.76%	-7.67%	2.00%	1.17%	-3.99%	-2.17%
12-Week Price Change	0.74%	12.31%	10.57%	24.65%	18.43%	13.51%
52-Week Price Change	-7.95%	3.87%	1.69%	38.42%	36.54%	-5.52%
20-Day Average Volume (Shares)	320,232	64,099	1,827,096	90,797	802,979	426,191
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	0.00%	0.00%	-1.70%
EPS F1 Estimate 4-Week Change	1.49%	0.00%	0.00%	0.00%	0.00%	-2.65%
EPS F1 Estimate 12-Week Change	8.73%	9.51%	3.89%	10.29%	40.80%	0.32%
EPS Q1 Estimate Monthly Change	2.48%	0.00%	0.00%	0.00%	0.00%	-5.67%

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	D
Growth Score	D
Momentum Score	C
VGM Score	D

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.

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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.