

## Align Technology (ALGN)

**\$617.39** (As of 06/24/21)

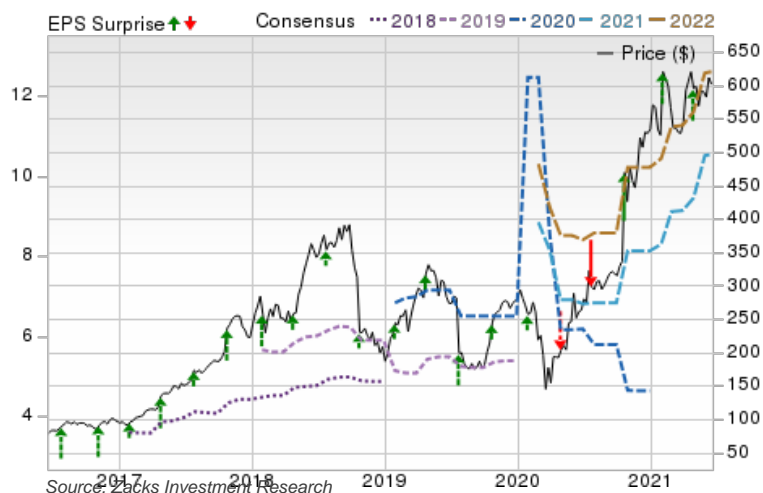
Price Target (6-12 Months): **\$648.00**

Long Term: 6-12 Months	<b>Zacks Recommendation:</b>	<b>Neutral</b>
	(Since: 04/05/21)	
	Prior Recommendation: Outperform	
Short Term: 1-3 Months	<b>Zacks Rank: (1-5)</b>	<b>2-Buy</b>
	Zacks Style Scores:	VGM:D
	Value: F	Growth: C
		Momentum: B

### Summary

Over the past six months, Align Technology has outperformed its industry. The company's Invisalign Clear Aligners and iTero scanners sales were impressive in the last-reported first-quarter 2021. Impressive international performance across geographies and increased shipment volumes buoy optimism. Robust segmental results and margin expansions bode well. Wider availability of the My Invisalign app instills our confidence. The company's focus on expanding its global operations, and rising orthodontic adoption and utilization of Invisalign Treatment raise optimism. Notably, Align Technology reported better-than-expected results in the first-quarter of 2021. Yet, pandemic-led continued choppy market conditions remain a concern. Foreign exchange impacts, overdependence on Invisalign and tough competition persist.

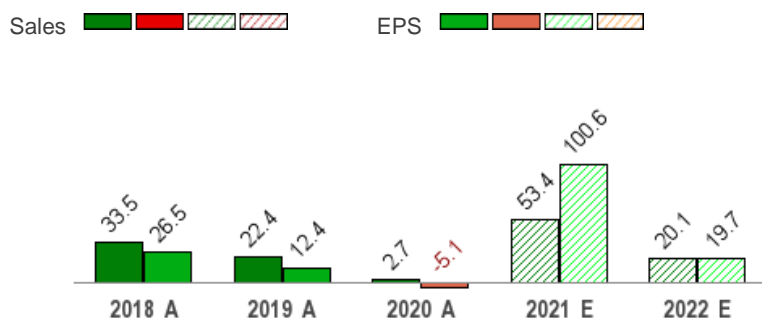
### Price, Consensus & Surprise



### Data Overview

52-Week High-Low	<b>\$647.20 - \$251.11</b>
20-Day Average Volume (Shares)	<b>493,206</b>
Market Cap	<b>\$48.9 B</b>
Year-To-Date Price Change	<b>15.5%</b>
Beta	<b>1.69</b>
Dividend / Dividend Yield	<b>\$0.00 / 0.0%</b>
Industry	<b>Medical - Dental Supplies</b>
Zacks Industry Rank	<b>Top 40% (100 out of 252)</b>

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



Last EPS Surprise	<b>25.1%</b>
Last Sales Surprise	<b>8.5%</b>
EPS F1 Estimate 4-Week Change	<b>0.4%</b>
Expected Report Date	<b>07/28/2021</b>
Earnings ESP	<b>-7.4%</b>

### Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2022	1,076 E	1,129 E	1,147 E	1,202 E	4,556 E
2021	895 A	938 E	949 E	1,011 E	3,792 E
2020	551 A	352 A	734 A	835 A	2,472 A

### EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2022	\$2.88 E	\$2.95 E	\$3.09 E	\$3.25 E	\$12.60 E
2021	\$2.49 A	\$2.56 E	\$2.56 E	\$2.80 E	\$10.53 E
2020	\$0.73 A	-\$0.35 A	\$2.25 A	\$2.61 A	\$5.25 A

\*Quarterly figures may not add up to annual.

P/E TTM	<b>88.2</b>
P/E F1	<b>58.6</b>
PEG F1	<b>2.5</b>
P/S TTM	<b>17.4</b>

The data in the charts and tables, including the Zacks Consensus EPS and sales estimates, is as of 06/24/2021. The report's text and the

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analyst-provided price target are as of 06/25/2021.

## Overview

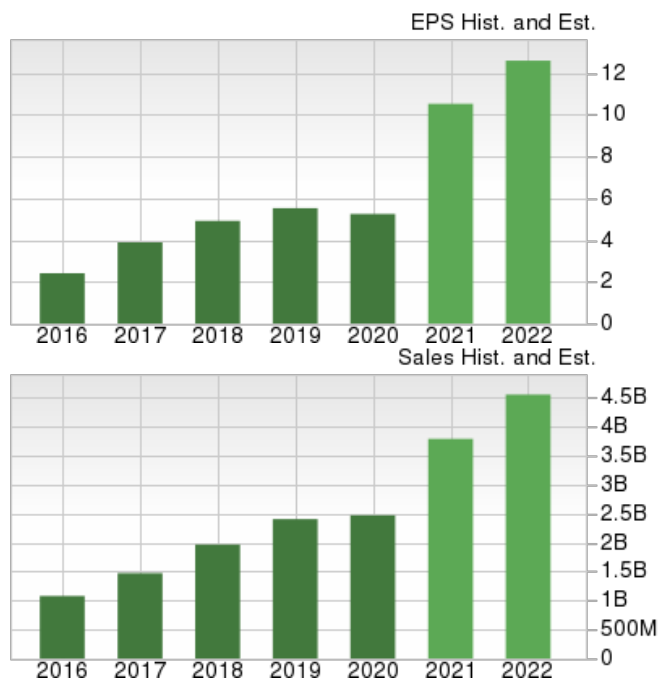
Align Technology, based in California, manufactures and markets a system of clear aligner therapy, intra-oral scanners and CAD/CAM (computer-aided design and computer-aided manufacturing) digital services used in dentistry, orthodontics, and dental records storage. The clear aligner system corrects malocclusion using nearly invisible and removable appliances that gently move the tooth to a desired final position.

Align presently has 2 operating segments, Clear Aligner (85.01% of total revenues in 2020), known as the Invisalign system and the CAD/CAM Services (14.98% of total revenues in 2020) which is known as the iTero intra-oral scanners and OrthoCAD services (which we earlier referred to as Scanner and CAD/CAM Services). In 2020, the Clear Aligner segment registered revenue growth of 3.7 % from 2019, while the latter registered revenue decline of 2.8% from 2019.

### Product portfolio:

**Invisalign System** – An exclusive method to treat malocclusion based on a series of doctor-prescribed, custom manufactured, clear plastic removable orthodontic aligners. The Invisalign system offers a range of treatment options, specialized services, and proprietary software for treatment visualization and comprises several phases.

The Clear Aligner products are Invisalign Full, Teen and Assist (Full Products), Express/Lite (Express Products), Vivera retainers, along with training and ancillary products for treating malocclusion.



## Reasons To Buy:

▲ **Share Price Performance:** Align Technology has been outperforming its industry over the past six months. The stock has gained 18.5% compared with the industry's 8.8% rise. Align Technology exited the first quarter of 2021 with better-than-expected results despite the challenging business environment. The company saw significantly higher sales of Invisalign Clear Aligners and iTero scanners amid the pandemic. Impressive international performance across geographies and increased shipment volumes buoy optimism on the stock. Robust segmental performances and margin expansions look encouraging. Continued adoption of the company's digital platform has also been looking impressive. The company's Consumer and Patient app, My Invisalign, is currently available in 58 markets, thus instilling confidence on the stock.

Align Technology's robust product line, balanced growth across all channels and consistent focus on international markets to drive growth bolster our confidence in the stock.

Additionally, the company's focus on expanding its global operations, both in existing and emerging international markets, and increasing orthodontic adoption and utilization of Invisalign Treatment, especially with teens, raises our optimism.

▲ **Invisalign Holds Potential:** Align Technology's Invisalign Clear Aligner has been receiving positive feedback and holds huge long-term market potential. The global Clear Aligners market size was valued at \$2.31 billion in 2019 and is projected to reach \$5.58 billion by 2027, at a CAGR of 18.7% (a Fortune Business Insight report).

In the teen segment, Align Technology recorded an increase in Invisalign volumes during the first quarter, which were driven by increased Invisalign utilization and case submissions from Invisalign doctors.

During the first quarter, Align Technology registered an increase in Dental Support Organization (DSO) utilization, which not only continues to be a strong growth driver, but has also outpaced non-DSO practices.

Invisalign First for Invisalign treatment in young patients continued its momentum.

The general practitioner dentist (GP) channels recorded increased utilization with Invisalign Go and the adoption of Moderate. The company's growth programs in the EMEA region include Professional 360 Ortho and Advance 360 Ortho programs, where more than 2,000 orthodontists had enrolled. Another program, GP Move 360, recorded an increase in GP cohorts of more than 117% compared with the year-ago period.

▲ **Invisalign Portfolio Expansion:** Align Technology's Invisalign portfolio offers orthodontic treatment to straighten teeth without metal braces.

During the first-quarter earnings call in April, Align Technology confirmed that the Invisalign adoption from adults surged 5.8% sequentially and 68.5% year over year. Adoption by teens or younger patients increased 2.7% sequentially and 58.9% year-over-year.

The company, in February this year, announced the commercial availability of Invisalign G8 with SmartForce Aligner Activation.

The company, in October 2020, announced the global availability of its next generation proprietary treatment-planning software, ClinCheck Pro 6.0. Further, Align Technology has rolled out My Invisalign app and Virtual Care to various countries to enhance its digital footprint.

Other notable products by the company include the Steraligner aligner cleaning system (available both on the Invisalign Doctor Site web store and InvisalignAccessories.com) and the Invisalign Stickables (innovative sticker accessories designed exclusively for use with the SmartTrack material in Invisalign Clear Aligners).

Align Technology continues to witness robust adoption of the Invisalign Go product among GPs. During the first quarter earnings call in April, the company confirmed witnessing strong performance from both the orthodontic and GP channels. Further, strong utilization in shipments from Invisalign Go led to the momentum in the GP channels with adults.

Other notable offerings from Align Technology include the Invisalign Moderate package and SmileView. The company also confirmed registering strong adoption of the Invisalign Moderate product for non-comprehensive treatment in the GP channel.

▲ **Strategic Alliances:** Align Technology's slew of strategic alliances look impressive. The company, in March, announced a partnership with U.S. Ski & Snowboard, thus making the Invisalign brand the Official Smile of U.S. Ski & Snowboard. In February, the company announced a partnership with the Golden State Warriors, making the Invisalign brand the Official Smile Partner of the Golden State Warriors along with its G League affiliate team Santa Cruz Warriors and its esports affiliate the Golden Guardians.

Other notable agreements and partnerships of Align Technology include the one with the National Football League and a multi-year partnership deal with the New Orleans Saints (both signed in August 2020).

▲ **iTero in Focus:** Align Technology has been focusing on expanding work flow options of its leading iTero scanners. Cumulatively, 20.5 million orthodontic scans and 4.7 million restorative scans have been performed with iTero scanners by 2019-end. According to the company, use of the iTero scanners for Invisalign case submissions continues to grow and remains a positive catalyst for Invisalign utilization.

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Align Technology, in April, announced the extension of its relationship with DECA Dental Group, having signed a new multi-year agreement for the Invisalign system through early 2025. Additionally, DECA Dental Group is extending utilization of the iTero Element 5D imaging system across its affiliated practices in the United States.

The company, in February, announced the launch of the iTero Element Plus Series of next generation of intraoral scanners and imaging systems. This expands the company's portfolio of iTero Element scanners and imaging systems to include new solutions that can serve a broader dental market.

During the first quarter, the company continued to witness robust performance by its iTero scanners on the back of continued strong adoption of the iTero Element 5D Imaging System, with strength in all regions with significant Element Flex sales in APAC.

Further, the company's China manufacturing facility in Ziyang has been running well and enhancing Align Technology's capacity to manufacture Invisalign aligners and iTero imaging systems in China.

Notably, Align Technology continues to benefit from exocad CAD/CAM products and services revenues during the first quarter. During the first quarter, the company successfully rolled out the new release of exocad's DentalCAD3.0 Galway worldwide, which has received favorable customer feedback. Additionally, the new MyiTero Connector (which creates an easy and integrated way to receive intra-oral scan cases from iTero doctors worldwide) was launched directly to exocad labs during the first quarter.

The company had launched two of the largest software releases till date — DentalCAD and exoplan — in the fourth quarter of 2020. Further, exocad had also added two new large implant manufacturers as OEMs for exoplan in Brazil during the sequentially last-reported quarter.

▲ **International Focus to Drive Growth:** Align Technology has undertaken several strategies to improve adoption of Invisalign Technology that includes product/technology development, extending clinical effectiveness, extension of the Invisalign Technology brand and driving international growth.

For the international business, the Invisalign shipments were up 0.9% and 83.2%, on a sequential and year-over-year basis, respectively. In EMEA, the Invisalign case volumes were up 3.7% sequentially and up 74.9% year over year, with strong broad-based growth across all markets. This growth was led by the United Kingdom, France and Italy, along with continued growth in the company's expansion markets, led by Turkey, Russia and Benelux, among others.

Further, Align Technology registered 75.1% year-over-year growth of digital scans used for Invisalign case submissions for its international business. For the Americas, the same was up 85.5% from the year-ago number.

Invisalign volume in the APAC region was up 101.3% year over year, reflecting continued strong growth across the region, led by China, Japan and ANZ.

▲ **Strong Solvency Position:** Align Technology exited the first quarter of 2021 with cash and cash equivalents of \$1.13 billion, compared with \$961 million at the end of 2020. Meanwhile, the company has no debt in the reported quarter. This is good news in terms of solvency position of the company, at least during the year of economic downturn, implying that the company is holding sufficient cash.

Debt comparison with the industry is, favorable as, the industry's total debt is \$4.79 billion.

Net cash provided by operating activities was \$227.2 million at the end of the first quarter of 2021, compared with \$9.8 million in the year-ago period. When the company is suffering from coronavirus-led procedural deferrals, this is particularly good news for the investors.

The company currently has approximately \$100 million left under its May 2018 repurchase program.

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## Reasons To Sell:

▼ **Product Offerings:** Align Technology's success depends on its ability to develop, successfully introduce and achieve market acceptance of new products or product offerings along with obtaining regulatory approval or clearance of new products and improvements to existing products. However, there is no assurance that this can always be done successfully. In case of failure to accurately predict customer needs and preferences or fail to produce viable technologies, the company may invest heavily in research and development of products that do not lead to significant revenues.

Additionally, even if new products are successfully introduced, it may be difficult to gain market share and acceptance, particularly if doctors require education to understand the benefits of the new products or measure their success only after extended periods of time required to treat patients. Consequently, doctors may be unwilling to rapidly adopt the new products until they successfully complete at least one case or until more historical clinical results are available. Any failure in the company's ability to successfully develop and introduce or achieve market acceptance of its new products or enhanced versions of existing products could have a material adverse effect on its operating results and could cause its net revenues to decline.

We remain concerned about the current economic uncertainty which continues to cast a negative impact on Align Technology's dental procedures. The competitive landscape also remains an overhang.

▼ **Competitive Landscape:** Align Technology faces significant competition from traditional orthodontic appliance (or wires and brackets) players such as 3M's Unitek, Danaher Corporation's Sybron Dental Specialties and Dentsply International. The company also competes with products similar to Invisalign Technology, such as the products fromOrmco Orthodontics, a division of Sybron Dental Specialties. Align Technology has witnessed a continuous decline in average selling price (ASP) primarily resulting from advantage rebate, promotional activity and product mix.

▼ **Economic Uncertainty:** The general slowdown in the United States and certain international economies is having a negative impact on consumer spending and affecting Align Technology's business fundamentals. Align Technology attributed the waning earnings to the macro economic crisis that affected the overall dental market and led to continued soft dental sales for Align Technology. Dental procedures are primarily elective in nature and are deferred when unemployment levels rise.

Continued weakness in the global economy results in a challenging environment for dental technology sales; dentists may postpone investments in capital equipment, such as intra-oral scanners. Although we expect a gradual pickup in patient traffic, any hiccup in the recovery process will aggravate the situation. Further, the recent coronavirus outbreak has been causing a very unstable economic condition for the company.

▼ **Currency Headwinds:** The significant challenges arising from unfavorable foreign currency translation have been affecting Align Technology's financials over the past few quarters. Per management, significant currency fluctuations could have a material impact on revenues, cost of sales and operational results.

▼ **Overdependence on Invisalign Technology System:** A vast majority of Align Technology's total net revenues largely depends on the sale of its Invisalign Technology System, primarily Invisalign Technology Full and Invisalign Technology Teen, and the same trend is expected to continue at least in the near future. Thereby, continued and widespread market acceptance of Invisalign Technology by orthodontists, GPs and consumers is critical to Align Technology's future success.

Management fears that if orthodontists and GPs somehow experience a reduction in consumer demand for orthodontic services, or consumers become reluctant to adopt Invisalign Technology as rapidly as management expects that might hurt the company's business heavily. Also, if consumers start to prefer a competitive product over Invisalign Technology or if the ASP of Align Technology product declines, the company's operating results will suffer a severe setback.

## Last Earnings Report

### Align Technology Q1 Earnings Beat Estimates, Margins Up

Align Technology's first-quarter 2021 earnings per share were \$2.49, up from the year-ago earnings per share of 73 cents, reflecting a surge of 241.1%. The quarter's earnings per share surpassed the Zacks Consensus Estimate by 25.1%.

GAAP earnings per share for the quarter was \$2.51, down from the year-ago earnings per share of \$19.21, reflecting a plunge of 86.9%.

Quarter Ending 03/2021

Report Date	Apr 28, 2021
Sales Surprise	8.54%
EPS Surprise	25.13%
Quarterly EPS	2.49
Annual EPS (TTM)	7.00

### Revenues

Revenues surged 62.4% year over year to \$894.8 million in the quarter, beating the Zacks Consensus Estimate by 8.5%.

Strength in Invisalign Clear Aligners and iTero scanners sales volumes during the first quarter despite the COVID-19 pandemic drove the top line.

### Segments in Detail

In the first quarter, revenues at the Clear Aligner segment rose 56.4% year over year to \$753.3 million due to strength in both adult and teen market segments, as well as across products and customer channels, especially in North America and the EMEA region, led by the United Kingdom, Germany and France. Within the segment, Invisalign case shipments amounted to 595.8 thousand, up 65.8% year over year.

During the quarter, Clear Aligner volumes were up 53.8% and 83.2% year over year in the Americas and International regions, respectively. The international business was driven by EMEA and APAC.

Clear Aligner volume for teenage patients was 165.3 thousand cases, up 58.9% year over year. In terms of products performance, the company recorded strong growth across the Invisalign portfolio for both comprehensive and non-comprehensive products, including Invisalign Go and Invisalign Moderate. Continued robust adoption of Invisalign Go, as well as the Invisalign Moderate product for non-comprehensive treatment in the general practitioner dentist channel, drove the top line.

Revenues from Imaging Systems & CAD/CAM Services surged 103.9% to \$141.5 million in the quarter due to product mix, and increased services revenues from the company's larger installed base and exocad's CAD/CAM services. Sequentially, the company's revenues recorded an uptick of 5.8%. The company also recorded continued momentum with the iTero Element 5D Imaging System, which is seeing strength in all regions, with significant Element Flex sales in APAC.

### Margins

Gross profit in the first quarter was \$677.1 million, reflecting an improvement of 71.7% year over year. Gross margin in the quarter under review expanded 410 basis points (bps) year over year to 75.7% despite a 38.9% uptick in cost of net revenues.

During the quarter, Align Technology witnessed a 40.4% year-over-year increase in selling, general and administrative expenses to \$397.1 million and a 31.3% rise in research and development expenses to \$54.5 million.

Operating income in the quarter under review was \$225.4 million compared with operating profit of \$69.9 million year over year, indicating an uptick of 222.4%. The operating margin expanded 1251 bps to 25.2%.

### Financial Details

Align Technology exited the first quarter of 2021 with cash, cash equivalents of \$1.13 billion compared with \$960.8 million recorded at the end of 2020.

Net cash provided by operating activities at the end of the first quarter of 2021 was \$227.2 million compared with \$9.8 million a year ago.

The company currently has approximately \$100 million left under its May 2018 repurchase program.

### 2021 Guidance

Align Technology, on the back of its impressive performance, has issued its financial outlook for the year 2021.

The company expects its revenue for the year to lie within the range of \$3.7 billion-\$3.9 billion, indicating a surge of 50-58% from 2020. The Zacks Consensus Estimate for the same is currently pegged at \$3.52 billion.



## Recent News

### Align Technology Introduces iTero Workflow 2.0 Software: Jun 3, 2021

Align Technology introduces the new iTero Workflow 2.0 software with advanced features that offer improved intraoral image sharpness for clearer hard and soft tissue details to help increase practice efficiency and support better clinical diagnosis.

### Align Technology Extends Multi-Year Agreement With DECA Dental Group: Apr 28, 2021

Align Technology extended its relationship with DECA Dental Group with the signing of a new multi-year agreement for the Invisalign system through early 2025. Additionally, DECA Dental Group is extending utilization of the iTero Element 5D imaging system across its affiliated practices in the United States.

### Align Technology Expands Global Operations via New Manufacturing Facility in Poland: Apr 22, 2021

Align Technology announced its plans to open a new manufacturing facility in Wroclaw, Poland to tap into the large and underpenetrated market in the EMEA region.

## Valuation

Align Technology shares are up 15.5% in the year-to-date period and up 134.6% in the trailing 12-month periods. Stocks in the Zacks sub-industry and Zacks Medical sector are up 8.1% and up 1.4% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and sector are up 31.4% and up 6.7%, respectively.

The S&P 500 index is up 13.7% in the year-to-date period and up 43.3% in the past year.

The stock is currently trading at 53.6X Forward 12-months earnings, which compares to 18.9X for the Zacks sub-industry, 23.6X for the Zacks sector and 21.7X for the S&P 500 index.

Over the past five years, the stock has traded as high as 91.3X and as low as 21.7X, with a 5-year median of 47.4X.

Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$648 price target reflects 56.3X forward 12-months earnings.

The table below shows summary valuation data for ALGN

Valuation Multiples - ALGN					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	53.57	18.92	23.56	21.66
	5-Year High	91.30	19.77	23.56	23.83
	5-Year Low	21.72	13.63	15.82	15.31
	5-Year Median	47.42	16.98	19.33	18.05
P/S F12M	Current	11.85	0.42	2.70	4.71
	5-Year High	14.71	0.43	3.17	4.74
	5-Year Low	3.71	0.23	2.27	3.21
	5-Year Median	8.55	0.29	2.78	3.72
P/B TTM	Current	14.40	5.75	4.49	7.06
	5-Year High	26.31	5.88	5.05	7.08
	5-Year Low	4.20	2.54	3.03	3.84
	5-Year Median	13.31	3.45	4.35	5.02

As of 06/24/2021

Source: Zacks Investment Research



## Industry Analysis Zacks Industry Rank: Top 40% (100 out of 252)



## Top Peers

Company (Ticker)	Rec	Rank
Henry Schein, Inc. (HSIC)	Outperform	1
CONMED Corporation (CNMD)	Neutral	2
Danaher Corporation (DHR)	Neutral	3
Laboratory Corporation of America Holdings (LH)	Neutral	3
3M Company (MMM)	Neutral	3
Merit Medical Systems, Inc. (MMSI)	Neutral	3
Patterson Companies, Inc. (PDCO)	Neutral	3
DENTSPLY SIRONA Inc. (XRAY)	Neutral	2

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

Industry Comparison Industry: Medical - Dental Supplies				Industry Peers		
	ALGN	X Industry	S&P 500	HSIC	PDCO	XRAY
Zacks Recommendation (Long Term)	Neutral	-	-	Outperform	Neutral	Neutral
Zacks Rank (Short Term)	2	-	-	1	3	2
VGM Score	D	-	-	A	D	C
Market Cap	48.86 B	3.83 B	29.99 B	10.57 B	3.03 B	13.92 B
# of Analysts	7	5.5	12	8	8	9
Dividend Yield	0.00%	0.00%	1.35%	0.00%	3.32%	0.69%
Value Score	F	-	-	B	B	C
Cash/Price	0.02	0.07	0.06	0.01	0.05	0.02
EV/EBITDA	101.01	14.63	17.12	15.04	15.45	32.08
PEG F1	2.51	1.81	2.06	1.66	1.25	1.04
P/B	14.40	4.59	4.11	2.65	3.13	2.82
P/CF	26.04	17.25	17.50	17.56	11.45	15.66
P/E F1	58.63	22.42	21.14	18.66	14.94	22.42
P/S TTM	17.35	3.68	3.40	1.00	0.51	3.98
Earnings Yield	1.71%	3.05%	4.66%	5.36%	6.68%	4.45%
Debt/Equity	0.00	0.26	0.66	0.13	0.51	0.39
Cash Flow (\$/share)	23.71	2.23	6.86	4.28	2.73	4.07
Growth Score	C	-	-	B	F	D
Historical EPS Growth (3-5 Years)	54.76%	7.78%	9.59%	-1.30%	-10.52%	-8.81%
Projected EPS Growth (F1/F0)	100.57%	35.95%	21.79%	35.57%	9.62%	58.91%
Current Cash Flow Growth	292.88%	-2.46%	1.02%	-13.79%	-71.12%	1.61%
Historical Cash Flow Growth (3-5 Years)	63.09%	12.28%	7.28%	-1.55%	27.55%	11.90%
Current Ratio	1.52	1.85	1.39	1.68	1.48	1.40
Debt/Capital	0.00%	19.36%	41.51%	19.36%	33.57%	28.06%
Net Margin	16.27%	2.64%	12.06%	4.14%	2.64%	4.99%
Return on Equity	14.65%	12.94%	16.59%	12.18%	20.29%	9.45%
Sales/Assets	0.61	0.87	0.51	1.38	2.14	0.39
Projected Sales Growth (F1/F0)	50.38%	6.84%	9.56%	15.95%	4.30%	26.22%
Momentum Score	B	-	-	A	D	D
Daily Price Change	1.91%	0.04%	0.58%	0.90%	1.00%	-0.47%
1-Week Price Change	-1.62%	-2.48%	1.06%	-4.92%	-5.68%	-3.64%
4-Week Price Change	2.94%	1.41%	1.56%	-1.64%	-5.90%	-4.08%
12-Week Price Change	13.27%	0.14%	6.14%	9.42%	-2.43%	0.52%
52-Week Price Change	139.83%	46.18%	38.35%	33.23%	43.22%	48.93%
20-Day Average Volume (Shares)	493,206	294,527	1,811,241	751,163	1,223,520	1,074,862
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	0.91%	-4.43%	0.00%
EPS F1 Estimate 4-Week Change	0.42%	0.00%	0.01%	0.78%	-3.92%	0.00%
EPS F1 Estimate 12-Week Change	13.79%	2.81%	3.54%	9.44%	-3.92%	5.33%

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

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EPS Q1 Estimate Monthly Change	0.92%	0.00%	0.00%	1.71%	-6.65%	0.00%
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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.

Value Score	<b>F</b>
Growth Score	<b>C</b>
Momentum Score	<b>B</b>
VGM Score	<b>D</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

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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.

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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-

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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 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

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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.

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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.