

Texas Instruments (TXN)

\$155.56 (As of 11/05/20)

Price Target (6-12 Months): **\$163.00**

Long Term: 6-12 Months

Zacks Recommendation:

Neutral

(Since: 09/21/20)

Prior Recommendation: Outperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

2-Buy

Zacks Style Scores:

VGM:F

Value: D

Growth: D

Momentum: D

Summary

Texas Instruments reported third quarter results wherein both earnings and revenues have topped the estimates. Growth in the personal electronics market owing to current work-from-home trend drove the top-line growth. Further, rebound in the automotive market was a positive. Additionally, strong performance of Analog segment contributed well. Notably, solid investments in new growth avenues and competitive advantages remain tailwinds. Further, the company's portfolio of long-lived products and efficient manufacturing strategies are other positives. Also, continuous returns to shareholders are likely to help the stock rebound in the near term. However, coronavirus related uncertainties remain major headwinds. Sluggish industrial and communication equipment markets are concerns. The stock has underperformed its industry on a year-to-date basis.

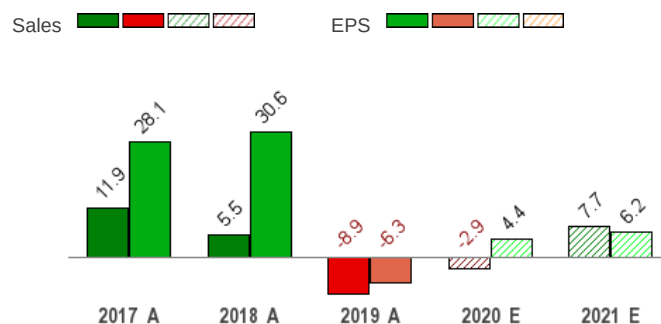
Price, Consensus & Surprise



Data Overview

52-Week High-Low	\$156.30 - \$93.09
20-Day Average Volume (Shares)	4,452,085
Market Cap	\$142.8 B
Year-To-Date Price Change	21.3%
Beta	1.09
Dividend / Dividend Yield	\$4.08 / 2.6%
Industry	Semiconductor - General
Zacks Industry Rank	Bottom 16% (211 out of 250)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	14.2%
Last Sales Surprise	11.3%
EPS F1 Estimate 4-Week Change	6.7%
Expected Report Date	01/27/2021
Earnings ESP	0.0%
P/E TTM	29.4
P/E F1	28.4
PEG F1	2.8
P/S TTM	10.4

Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	3,545 E	3,734 E	4,032 E	3,769 E	15,034 E
2020	3,329 A	3,239 A	3,817 A	3,581 E	13,963 E
2019	3,594 A	3,668 A	3,771 A	3,350 A	14,383 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$1.30 E	\$1.42 E	\$1.61 E	\$1.47 E	\$5.81 E
2020	\$1.24 A	\$1.48 A	\$1.45 A	\$1.32 E	\$5.47 E
2019	\$1.22 A	\$1.29 A	\$1.49 A	\$1.12 A	\$5.24 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 11/05/2020. The reports text is as of 11/06/2020.

Overview

Headquartered in Dallas, Texas, Texas Instruments, Inc. is an original equipment manufacturer of analog, mixed signal and digital signal processing (DSP) integrated circuits.

TI has manufacturing and design facilities, including wafer fabrication and assembly/test operations in North America, Asia and Europe.

Management's strategy has been to build assets that would be fully utilized through their lifetimes and outsource any excess demand in peak situations to outside foundries.

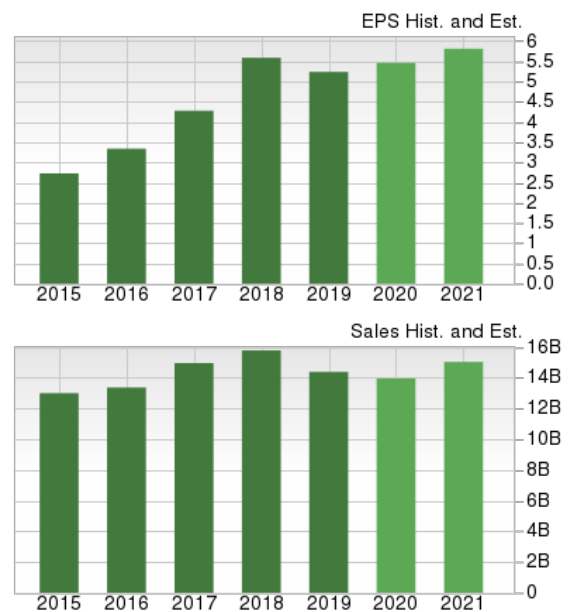
The company's Analog segment generated 71% of revenue in 2019 (up from 68% in 2018). Analog products have been categorized into three—high performance analog, high volume analog and logic, and power management.

The Embedded Processing segment generated 20.5% of revenue (down from 22% in 2018). This segment includes TI's OMAP, connectivity solutions, non-wireless DSPs and microprocessors.

The Other segment generated the remaining 8.5%. The segment includes smaller semiconductor product lines, such as DLP products, RISC microprocessors and ASICs, calculators and other schoolroom tools, and royalties.

Products are sold in industrial, personal electronics, automotive, communications, enterprise and other markets, which accounted for 36%, 23%, 21%, 11%, 6%, and 3%, respectively, of 2019 sales.

TI has manufacturing and design facilities, including wafer fabrication and assembly/test operations in North America, Asia and Europe.



Source: Zacks Investment Research

Reasons To Buy:

- ▲ TI serves **diverse end markets** that balance individual ups and downs in multiple ways. For instance, the seasonality in the personal electronics business is balanced out by the industrial, communications and automotive segments. The company serves individuals and corporations (personal communications, calculators), industrial customers (industrial, which includes a large number of customers across many markets and automotive manufacturers) and also infrastructure providers (communications segment). Further, the emergence of 5G technology is aiding the performance of the company's analog products in the communication equipment market. All these are making its revenue stream relatively steady despite the dynamism in each of the markets served. This is very important for a company like TI because it has huge facilities of its own that come along with high fixed costs.
- ▲ TI is one of the largest suppliers of analog and digital signal processing integrated circuits. The company's compelling product line-up, efficient manufacturing strategies and low-cost 300mm capacity are anticipated to drive long-term earnings. Further, its focus on innovation of the product portfolio across both the Analog and Embedded Processing segments remain major positive.
- ▲ The company is seeing particular success in certain fast-growing segments of the **automotive market**. Texas Instruments focuses on infotainment, safety and ADAS, body electronics (including lighting), hybrid electric vehicle and powertrain segments of the automotive market. The company has made significant progress on the ADAS side, shipping millions of chips into this market. The strength is expected to continue as the electronic content in cars continues to increase at a nice pace.
- ▲ Texas Instruments is focused on the **Internet of Things (IoT)**. Much of the recent growth in the embedded business comes from microcontrollers, which are some of the enabling products. The scope of IoT is tremendous for semiconductor companies, since it connects every conceivable electronic device. Further, the company's partner program based on its IoT Cloud ecosystem remains encouraging. Notably, the IoT ecosystem is backed by Texas Instrument's partnership with companies like 2lemetry, ARM, Arrayent, Exosite, IBM, LogMeIn, Spark, and Thingsquare which helps it to provide software, hardware or cloud-based services to power platforms based on TI technology.

Demand remains strong, particularly in high-margin auto and industrial verticals, analog and embedded processing products, and 300mm manufacturing strategy strengthening margins.

Reasons To Sell:

- ▼ Texas Instruments operates in an **intensely competitive industry**. First, there are many competitors of all sizes, such as Broadcom, NXP, Analog Devices and Intel. Second, the fragmented nature of the industry allows firms to find niches where they can concentrate their efforts. Third, the pace of technological change is rapid; therefore, product life cycles in some target markets are shorter than in most industries. So as one of the largest semiconductor firms in the world, TI faces the challenge of maintaining enough flexibility to respond swiftly to new market opportunities and at the same time protecting the existing customer base. TI is reducing focus on some of the very short life cycle products, which we think is the correct strategy.
- ▼ Texas Instruments also has a leveraged balance sheet. As of Sep 30, 2020, the company's net debt was \$1.3 billion compared with \$1.8 billion as of Jun 30, 2020. Further, debt-to-capital ratio of the company was 44.9% as of Sep 30, 2020, which is down from 47.1% as of Jun 30, 2020. Although declining net debt balance and debt-to-capital ratio remain encouraging, the presence of current debt remains a concern. Moreover, accumulating high debt levels might restrict sufficient cash flow generation which is needed to meet future debt obligations. This may keep the company away from accessing the debt market and refinancing at suitable rates. Additionally, it does have a relatively high goodwill (24% of total assets), which could increase further if the company makes some acquisitions. Since goodwill is not a real asset, it is something to keep an eye on, especially since TI maintains relatively low cash balances.
- ▼ Texas Instruments' business segments experience **seasonality**. They experience stronger demand in the second and third quarters and weaker demand in the first and fourth quarters. The seasonality causes considerable fluctuations in revenues and profits and makes forecasting difficult.
- ▼ Moreover, the company is trading at premium in terms of Price/Earnings (P/E). Texas Instruments currently has a trailing 12-month P/E ratio of 27.42. This level compares unfavorably with what the industry witnessed in the last year. Additionally, the ratio is closer to the high end of the valuation range in this period. Consequently, the valuation looks slightly stretched from P/E perspective.

We remain concerned about risks associated with competition in the auto chip space. Also, sluggishness in the embedded processing unit, uncertain macro environment and high debt level remain concerns.

Last Earnings Report

Texas Instruments Beats on Q3 Earnings

Texas Instruments reported third-quarter 2020 earnings of \$1.45 per share, which surpassed the Zacks Consensus Estimate by 14.2%. The bottom line was also higher than management's guidance of \$1.14-\$1.34 per share.

However, the figure decreased 2.7% year over year and 2% sequentially.

The company reported revenues of \$3.82 billion, which beat the Zacks Consensus Estimate by 11.3%. The top line also exceeded the management's guidance of \$3.26 billion to \$3.54 billion.

Further, the figure improved 1.2% from the year-ago quarter and 17.8% from the prior quarter.

Top-line growth was driven by improving end-market conditions. Solid demand in the personal electronics market and rebound in the automotive market remained major tailwinds.

Further, the strong performance delivered by the Analog segment contributed well. Although the Embedded Processing segment declined year over year, it grew 19% sequentially, which was noteworthy.

Notably, the company's near-term outlook improved, which remains a tailwind.

However, uncertainties related to the ongoing pandemic remain major concerns.

Nevertheless, the uptrend in personal electronics, owing to the rising demand for electronic gadgets for remote working and entertainment during this pandemic situation is likely to benefit the company in the days ahead.

Further, its strong investments in new growth avenues and competitive advantages are the positives.

Moreover, Texas Instruments' portfolio of long-lived products and efficient manufacturing strategies are tailwinds. Additionally, continuous returns to shareholders are likely to help the stock rebound in the near term.

End-Market in Detail

Solid rebound in the automotive market, owing to North America and Europe automotive plants that resumed operations, led to a 75% surge in Texas Instruments' revenues generated from this market sequentially. Further, revenues were almost flat on a year-over-year basis.

Further, revenues in the communications equipment space decreased by mid-single digits from the prior quarter. Nevertheless, the top line in the same market was up by mid-single digits from the year-ago quarter.

Meanwhile, the company witnessed more than 20% sequential growth and 15% year-over-year growth in the personal electronics market during the reported quarter.

Further, revenues in the industrial market remained flat year over year. However, the top line in the market declined in low-single digits from the previous quarter.

Texas Instruments witnessed softness in the enterprise systems space, which was down both sequentially and on a year-over-year basis.

Segments in Detail

Analog: The company generated \$2.9 billion from this segment (75% of total revenues), which increased 7% from the year-ago quarter and 18% from the previous quarter. This can be attributed to the strong performance of signal chain and power product lines during the reported quarter.

Embedded Processing: This segment generated \$651 million revenues (17% of total revenues), up 19% sequentially. However, the figure was down 10% year over year primarily due to the weak performance of processors and connected microcontrollers.

Other: Revenues in this segment were \$301 million (8% of total revenues). The figure was up 16.2% from the prior quarter but down 19% from the year-ago quarter.

Operating Details

Texas Instruments' gross margin of 35.7% expanded 60 basis points (bps) from the year-ago quarter.

As a percentage of revenues, selling, general and administrative (SG&A) expenses expanded 10 bps year over year to \$407 million in the reported quarter. Further, research and development (R&D) expenses of \$386 million remained flat from the year-ago quarter as a percentage of revenues.

In absolute terms, both SG&A and R&D expenses were up 2% and 1.8% year over year, respectively.

Operating margin was 42.2%, which expanded 10 bps from the prior-year quarter.

Balance Sheet & Cash Flow

Quarter Ending	09/2020
Report Date	Oct 20, 2020
Sales Surprise	11.26%
EPS Surprise	14.17%
Quarterly EPS	1.45
Annual EPS (TTM)	5.29

As of Sep 30, 2020, the cash and short-term investment balance was \$5.5 billion, which increased from \$4.9 billion as of Jun 30, 2020.

At the end of the reported quarter, the company had long-term debt of \$6.25 billion, up from \$6.24 billion in the prior quarter.

Current debt stood at \$550 million as of Sep 30, 2020, compared with \$551 million as of Jun 30, 2020.

The company generated \$1.4 billion of cash from operations, down from \$1.7 billion in the previous quarter.

Capex was \$146 million in the third quarter. Further, free cash flow stood at \$1.3 billion.

Additionally, Texas Instruments paid out dividends worth \$825 million during the reported quarter. Further, it repurchased shares worth \$15 million.

Guidance

For fourth-quarter 2020, Texas Instruments expects revenues between \$3.41 billion and \$3.69 billion.

Earnings are expected to be \$1.20 to \$1.40 per share.

Recent News

On **Sep 17, 2020**, Texas Instruments revealed about a 13% hike in its quarterly dividend. The company has raised the dividend figure from 90 cents to \$1.02 per share which will be paid to the shareholders of the record as of Oct 30, 2020 on Nov 16, 2020.

On **Jun 30, 2020**, Texas Instruments unveiled buck-boost battery charger integrated circuits (ICs), namely BQ25790 and BQ25792. The new battery chargers offer maximum power density, reduced solution size, 97% efficiency and 10 times lower quiescent current through USB Type-C and USB Power Delivery.

On **Apr 23, 2020**, Texas Instrument's Board of Directors approved a quarter dividend of 90 cents per share for the shareholders of the record as of May 4, 2020, payable on May 18, 2020.

On **Mar 19, 2020**, Texas Instruments unveiled a 40-A SWIFT™ DC/DC buck converter namely TPS546D24A PMBus which enables engineers to reduce power loss by 1.5 W in high-performance data center and enterprise computing, medical, wireless infrastructure, and wired networking applications.

Valuation

Texas Instruments' shares are up 21.2% in the year-to-date period and 29.7% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 34.2% and 28.2% in the year-to-date period. Over the past year, the Zacks sub-industry and sector are up 55.6% and 39.5%, respectively.

The S&P 500 index is up 7.5% in the year-to-date period and 12.3% in the past year.

The stock is currently trading at 27.6X forward 12-month earnings, which compares to 22.62X for the Zacks sub-industry, 27.08X for the Zacks sector and 22.17X for the S&P 500 index.

Over the past five years, the stock has traded as high as 30.6X and as low as 15.44X, with a 5-year median of 20.81X. Our Neutral recommendation indicates that the stock will perform inline with the market. Our \$163 price target reflects 28.89X forward 12-month earnings.

The table below shows summary valuation data for TXN

Valuation Multiples - TXN					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	27.6	22.62	27.08	22.17
	5-Year High	30.6	22.7	28	23.47
	5-Year Low	15.44	12.86	16.95	15.27
	5-Year Median	20.81	16.43	19.94	17.68
P/S F12M	Current	9.48	6.19	4.25	4.11
	5-Year High	10.08	6.19	4.48	4.31
	5-Year Low	3.65	2.42	2.77	3.18
	5-Year Median	6.29	4.09	3.44	3.67
EV/EBITDA TTM	Current	21.05	12.79	15.09	15.06
	5-Year High	22.31	13.26	15.78	15.68
	5-Year Low	9.25	5.93	8.24	9.55
	5-Year Median	13.78	9.47	11.85	13.11

As of 11/05/2020

Source: Zacks Investment Research

Industry Analysis Zacks Industry Rank: Bottom 16% (211 out of 250)



Source: Zacks Investment Research

Top Peers

Company (Ticker)	Rec	Rank
Cirrus Logic, Inc. (CRUS)	Outperform	1
Infineon Technologies AG (IFNNY)	Outperform	2
Maxim Integrated Products, Inc. (MXIM)	Outperform	1
NXP Semiconductors N.V. (NXPI)	Outperform	1
STMicroelectronics N.V. (STM)	Outperform	2
Analog Devices, Inc. (ADI)	Neutral	4
Amtech Systems, Inc. (ASYS)	Neutral	3
QUALCOMM Incorporated (QCOM)	Neutral	3

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

Industry Comparison Industry: Semiconductor - General				Industry Peers		
	TXN	X Industry	S&P 500	CRUS	MXIM	NXPI
Zacks Recommendation (Long Term)	Neutral	-	-	Outperform	Outperform	Outperform
Zacks Rank (Short Term)	2	-	-	1	1	1
VGM Score	F	-	-	F	F	F
Market Cap	142.80 B	17.79 B	24.11 B	4.17 B	20.82 B	40.39 B
# of Analysts	12	3	13	6	9	12
Dividend Yield	2.62%	0.43%	1.57%	0.00%	2.46%	1.04%
Value Score	D	-	-	F	F	F
Cash/Price	0.04	0.13	0.07	0.08	0.09	0.09
EV/EBITDA	20.66	8.66	13.73	15.38	25.68	19.00
PEG F1	2.81	3.07	2.75	2.30	2.76	2.39
P/B	17.15	1.98	3.35	3.17	12.17	4.45
P/CF	23.97	13.39	13.19	18.51	28.68	9.28
P/E F1	28.44	23.57	21.16	16.43	27.63	23.93
P/S TTM	10.40	2.05	2.64	3.35	9.14	4.80
Earnings Yield	3.52%	3.34%	4.53%	6.09%	3.62%	4.18%
Debt/Equity	0.75	0.30	0.70	0.00	0.58	0.84
Cash Flow (\$/share)	6.49	4.00	6.92	3.88	2.72	15.55
Growth Score	D	-	-	F	D	D
Historical EPS Growth (3-5 Years)	17.33%	29.42%	10.07%	1.88%	9.32%	12.10%
Projected EPS Growth (F1/F0)	4.29%	8.35%	0.26%	15.23%	24.73%	-32.95%
Current Cash Flow Growth	-4.66%	-17.53%	5.29%	10.42%	-8.10%	10.37%
Historical Cash Flow Growth (3-5 Years)	8.82%	12.14%	8.38%	3.55%	-0.43%	24.47%
Current Ratio	4.24	3.22	1.38	3.98	5.28	1.64
Debt/Capital	42.87%	22.93%	41.97%	0.00%	36.76%	45.61%
Net Margin	36.24%	9.35%	10.44%	12.57%	30.03%	-1.70%
Return on Equity	61.05%	10.34%	14.96%	14.92%	39.85%	17.16%
Sales/Assets	0.77	0.63	0.50	0.76	0.63	0.41
Projected Sales Growth (F1/F0)	-2.92%	1.34%	0.00%	5.94%	13.31%	-3.60%
Momentum Score	D	-	-	A	B	B
Daily Price Change	2.32%	1.21%	1.91%	1.52%	4.27%	3.59%
1-Week Price Change	-3.58%	-6.19%	-5.63%	1.79%	-4.42%	-1.50%
4-Week Price Change	5.07%	1.97%	0.43%	2.22%	9.03%	7.08%
12-Week Price Change	13.42%	11.92%	3.34%	17.54%	12.23%	17.63%
52-Week Price Change	29.72%	-1.46%	1.98%	4.61%	30.69%	22.98%
20-Day Average Volume (Shares)	4,452,085	1,348,475	1,955,785	513,672	2,321,648	2,246,774
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	43.92%	1.24%	0.00%
EPS F1 Estimate 4-Week Change	6.70%	0.26%	1.27%	43.92%	13.53%	33.11%
EPS F1 Estimate 12-Week Change	8.16%	-4.36%	3.13%	43.92%	13.53%	34.64%
EPS Q1 Estimate Monthly Change	15.16%	2.17%	0.51%	76.56%	11.52%	59.29%

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	D
VGM Score	F

As an investor, you want to buy stocks with the highest probability of success. That means buying stocks with a Zacks Recommendation of Outperform, which also has a Style Score of an A or a B.

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Returns quoted represent past performance which is no guarantee of future results. Investment returns and principal value will fluctuate so that when shares are redeemed, they may be worth more or less than their original cost. Current performance may be higher or lower than the performance shown.

Investing involves risk; principal loss is possible. There is no guarantee that companies that can issue dividends will declare, continue to pay or increase dividends.

Glossary of Terms and Definitions

52-Week High-Low: The range of the highest and lowest prices at which a stock has traded during the past year. This range is determined based on the stock's daily closing price which may differ from the intra-day high or low. Many investors use it as a technical indicator to determine a stock's current value and future price movement. The idea here is that if price breaks out from the 52-week range, in either direction, the momentum may continue in the same direction.

20-Day Average Volume (Shares): The average number of shares of a company traded in a day over the last 20 days. It is a direct indication of a security's overall liquidity. The higher the average daily trading volume, the easier it is to enter or exit the stock at a desired price with more buyers and sellers being available.

Daily Price Change: This is the percentage difference between a trading day's closing price and the prior trading day's closing price. This item is updated at 9 p.m. EST each day.

1-Week Price Change: This is the percentage change in a stock's closing price over the last 5 trading days. This change reflects the collective buying and selling sentiment over the 1-week period.

A strong weekly price increase for the stock, especially when accompanied by increased volume, is an indication of it gaining momentum.

4-Week Price Change: This is the percentage change in a stock's closing price over the last 20 trading days or past 4 weeks. This is a medium-term price change metric and an indication of the stock gaining momentum.

12-Week Price Change: This is the percentage change of a stock's closing price over the last 60 trading days or past 12 weeks. Similar to 4-week price change, this is a medium-term price change metric. It shows whether a stock has been enjoying strong investor demand, or if it has been in consolidation, or distress over this period.

52-Week Price Change: This is the percentage change in a stock's closing price over the last 260 trading days or past 52 weeks. This long-term price change metric is a good reference point for investors. Some investors seek stocks with the best percentage price change over the last 52 weeks, expecting the momentum to continue.

Market Cap: The number of outstanding common shares of a company times its latest price per share. This figure represents a company's size, which indicates various characteristics, including price stability and risk, in which investors could be interested.

Year-To-Date Price Change: Change in a stock's daily closing price in the period of time beginning the first day of the current calendar year through to the previous trading day.

of Analysts: Number of EPS estimates used in calculating the current-quarter consensus. These estimates come from the brokerage analysts tracking this stock. However, the number of such analysts tracking this stock may not match the number of estimates, as all brokerage analysts may not come up with an estimate or provide it to us.

Beta: A measure of risk commonly used to compare the volatility of a stock to the overall market. The S&P 500 Index is the base for calculating beta and carries a value of 1. A stock with beta below 1 is less risky than the market as a whole. And a stock with beta above 1 is riskier.

Dividend: The portion of earnings a company is expected to distribute to its common shareholders in the next 12 months for each share they own. Dividends are usually paid quarterly. Dividend payments reflect positively on a company and help maintain investors' trust. Investors typically find dividend-paying stocks appealing because the dividend adds to any market price appreciation to result in higher return on investment (ROI). Moreover, a steady or increasing dividend payment provides investors a cushion in a down market.

Dividend Yield: The ratio of a company's annual dividend to its share price. The annual dividend used in the ratio is calculated based on the most recent dividend paid by the company. Dividend yield is an estimate of the dividend-only return from a stock in the next 12 months. Since dividend itself doesn't change frequently, dividend yield usually changes with a stock's price movement. As a result, often an unusually high dividend yield is a result of weak stock price.

S&P 500 Index: The Standard & Poor's 500 (S&P 500) Index is an unmanaged group of securities considered to be representative of the stock market in general. It is a market-capitalization-weighted index of stocks of the 500 largest U.S. companies. Each stock's weight in the index is proportionate to its market value.

Industry: One of the 250+ groups that Zacks classifies all stocks into based on the nature of business. These groups are termed as expanded (aka "X") industries and map to their respective (economic) sectors; Zacks has 16 sectors.

Zacks Industry Rank: The Zacks Industry Rank is determined by calculating the average Zacks Rank for all stocks in the industry and then assigning an ordinal rank to it. For example, an industry with an average Zacks Rank of 1.6 is better than an industry with an average Zacks Rank of 2.3. So, the industry with the better average Zacks Rank would get a better Zacks Industry Rank. If an industry has the best average Zacks Rank, it would be considered the top industry (1 out of 250+), which would place it at the top 1% of Zacks-ranked industries. Studies have shown that roughly half of a stock's price movement can be attributed to the industry group it belongs to. In fact, the top 50% of Zacks-ranked industries outperforms the bottom 50% by a factor of more than 2 to 1.

Last EPS Surprise: The percentage deviation of a company's last reported earnings per share from the Zacks Consensus Estimate. Companies with a positive earnings surprise are more likely to surprise again in the future (or miss again if they recently missed).

Last Sales Surprise: The percentage deviation of a company's last reported sales from the Zacks Consensus Estimate.

Expected Report Date: This is an estimated date of a company's next earnings release. The information originated or gathered by Zacks Investment Research from its information providers or publicly available sources is the basis of this estimate.

Earnings ESP: The Zacks Earnings ESP compares the Most Accurate Estimate to the Zacks Consensus Estimate for the yet-to-be reported quarter. The Most Accurate Estimate is the most recent version of the Zacks Consensus EPS Estimate. The idea here is that analysts revising their estimates closer to an earnings release have the latest information, which could potentially be more accurate than what they and others contributing to the consensus had predicted earlier. Thus, a positive or negative Earnings ESP reading theoretically indicates the likely deviation of the actual earnings from the consensus estimate. However, the model's predictive power is significant for positive ESP readings only. A positive Earnings ESP is a strong predictor of an earnings beat, particularly when combined with a Zacks Rank #1 (Strong Buy), #2 (Buy) or #3 (Hold). Our research shows that stocks with this combination produce a positive surprise nearly 70% of the time.

Periods:

TTM: Trailing 12 months. Using TTM figures is an effective way of analyzing the most-recent financial data in an annualized format that helps neutralize the effects of seasonality and other quarter-to-quarter variation.

F1: Current fiscal year. This period is used to analyze the estimates for the ongoing full fiscal year.

F2: Next fiscal year. This period is used to analyze the estimates for the next full fiscal year.

F12M: Forward 12 months. Using F12M figures is an effective way of analyzing the near-term (the following four unreported quarters) estimates in an annualized manner. Instead of typically representing estimates for the full fiscal year, which may not represent the nitty-gritty of each quarter, F12M figures suggest an all-inclusive annualized estimate for the following four quarters. The annualization helps neutralize the potential effects of seasonality and other quarter-to-quarter variations.

P/E Ratio: The price-to-earnings ratio measures a company's current market price per share relative to its earnings per share (EPS). Usually, the trailing-12-month (TTM) EPS, current-fiscal-year (F1) EPS estimate, or forward-12-month (F12M) EPS estimate is used as the denominator. In essence, this ratio shows what the market is willing to pay today for each dollar of EPS. In other words, this ratio gives a sense of what the relative value of the company is at the already reported level of earnings or at a future level of earnings.

It is one of the most widely-used multiples for determining the value of a company and helps comparing its valuation with that of a competitor, the industry group or a benchmark.

PEG Ratio: The price/earnings to growth ratio is a stock's P/E ratio using current fiscal year (F1) EPS estimate divided by its expected EPS growth rate over the coming 3 to 5 years. This ratio essentially determines a stock's value by factoring in the company's expected earnings growth and is thus believed to provide a more complete picture than just the P/E ratio, particularly for faster-growing companies.

P/S Ratio: The price-to-sales ratio is calculated as a company's current price per share divided by trailing 12 months (TTM) sales or revenues per share. This ratio shows what the market is willing to pay today for each dollar of TTM sales per share. The P/S ratio is at times the only valuation metric when the company has yet to become profitable.

Cash/Price Ratio: The cash-to-price ratio or Cash Yield is calculated as cash and marketable securities per share divided by the company's current share price. Like the earnings yield, which shows the anticipated yield (or return) on a stock from earnings for each dollar invested, the cash yield does the same, with cash being the source of return instead of earnings. For example, a cash/price ratio of 0.08 suggests a return of 8% or 8 cents for every \$1 investment.

EV/EBITDA Ratio: The EV/EBITDA ratio, also known as Enterprise Multiple, is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by EBITDA (earnings before interest, taxes, depreciation and amortization). Usually, trailing-12-month (TTM) or forward-12-month (F12M) EBITDA is used as the denominator.

EV/Sales Ratio: The enterprise value-to-sales ratio is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by annual sales. It is an expansion of the P/S valuation, which uses market value instead of enterprise value. The EV/Sales ratio is perceived as more accurate than P/S, in part, because the market capitalization does not take a company's debt into account when valuing it.

EV/CF Ratio: The enterprise value-to-cash flow ratio is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by the trailing-12-month (TTM) operating cash flow. It's a measure of how long it would take to buy the entire business if you were able to use all the company's operating cash flow.

The EV/CF ratio is perceived as more accurate than the P/CF ratio, in part, because the market price does not take a company's debt into account when valuing it.

EV/FCF Ratio: The enterprise value-to-free cash flow metric compares a company's enterprise value to its trailing-12-month (TTM) free cash flow (FCF). This metric is very similar to the EV/CF ratio, but is considered a more exact measure owing to the fact that it uses free cash flow, which subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding growth activities and payments to shareholders.

P/EBITDA Ratio: The P/EBITDA ratio is calculated as a company's per share market value divided by EBITDA (earnings before interest, taxes, depreciation, and amortization). This metric is very similar to the EV/EBITDA ratio, but is considered a little less exact measure as it uses market price, which does not take a company's debt into account. However, since EBITDA is often considered a proxy for cash income, the metric is used as a measure of what the market is willing to pay today for each dollar of the company's cash profitability in the trailing 12 months (TTM) or forward 12 months (F12M).

P/B Ratio: The price-to-book ratio is calculated as a company's current price per share divided by its book value (total assets – liabilities – preferred stocks) per share. In short, the book value is how much a company is worth. In other words, it reflects the total value of a company's assets that its common shareholders would receive if it were to be liquidated. So, the P/B ratio indicates whether you're paying higher or lower than what would remain if the company went bankrupt immediately. Investors typically use this metric to determine how a company's stock price stacks up to its intrinsic value.

P/TB Ratio: The price-to-tangible-book value ratio is calculated as a the per share market value of a company divided by the value of its tangible assets (total assets – liabilities – preferred stocks – intangible assets) per share. Tangible book value is the same thing as book value except it excludes the value of intangible assets to get a step closer to the baseline value of the company.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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