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Dec 02, 2020

Synopsys Inc. (SNPS)

$230.02 (As of 12/01/20)

Price Target (6-12 Months): **$242.00**

Long Term: 6-12 Months	**Zacks Recommendation:** (Since: 07/24/19) Prior Recommendation: Outperform	Neutral
Short Term: 1-3 Months	**Zacks Rank:** (1-5)	**3-Hold**
	Zacks Style Scores:	VGM:C
	Value: D | Growth: A | Momentum: F	

Summary

Synopsys is benefiting from strong design wins owing to a robust product portfolio. Growth in work-from-home and e-learning trends induced by the coronavirus pandemic is driving demand for bandwidth. Moreover, strong traction for Synopsys' Fusion Compiler product boosted the top line. Growing demand for advanced technology, design, IP and security solutions is also creating solid prospects. Moreover, rising impact of AI, 5G, IoT and big data is driving investments in new compute and ML architectures. Shares of the company have outperformed the industry year-to-date. However, supply-chain disruptions stemming from the pandemic are a headwind. The company is also witnessing stiff competition. Moreover, geopolitical challenges coupled with uncertainties related to restrictions over trade with Huawei are other woes.

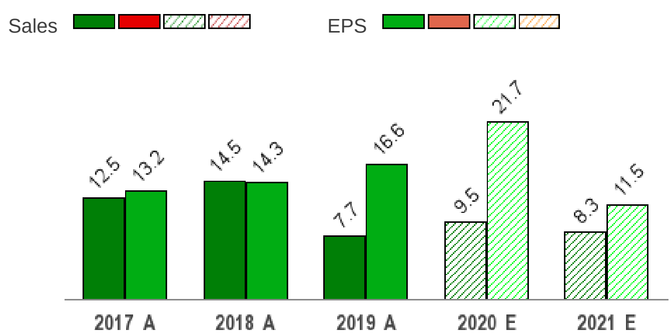
Price, Consensus & Surprise

Source: Zacks Investment Research

Data Overview

52-Week High-Low	**$246.69 - $104.90**
20-Day Average Volume (Shares)	**757,021**
Market Cap	**$34.9 B**
Year-To-Date Price Change	**65.2%**
Beta	**1.10**
Dividend / Dividend Yield	**$0.00 / 0.0%**
Industry	**Computer - Software**
Zacks Industry Rank	**Bottom 35% (166 out of 254)**
Last EPS Surprise	**28.9%**
Last Sales Surprise	**7.9%**
EPS F1 Estimate 4-Week Change	**0.0%**
Expected Report Date	**12/02/2020**
Earnings ESP	**0.0%**
P/E TTM	**44.9**
P/E F1	**37.2**
PEG F1	**3.4**
P/S TTM	**9.9**

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates **(millions of $)**

	Q1	Q2	Q3	Q4	Annual*
2021	963 E	980 E	1,004 E	1,046 E	3,987 E
2020	834 A	861 A	964 A	1,020 E	3,680 E
2019	820 A	836 A	853 A	851 A	3,361 A

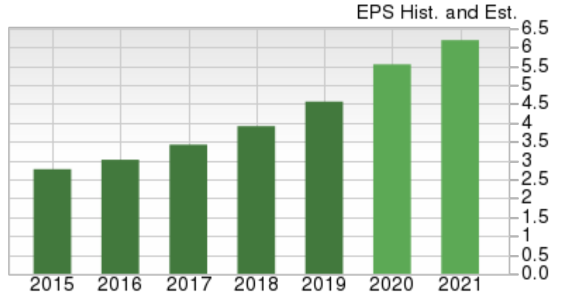
EPS Estimates

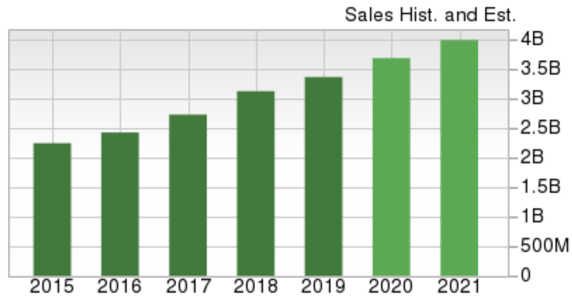
	Q1	Q2	Q3	Q4	Annual*
2021	$1.40 E	$1.49 E	$1.60 E	$1.75 E	$6.19 E
2020	$1.01 A	$1.22 A	$1.74 A	$1.57 E	$5.55 E
2019	$1.08 A	$1.16 A	$1.18 A	$1.15 A	$4.56 A

*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 12/01/2020. The reports text is as of 12/02/2020.

Overview





Synopsys is a vendor of electronic design automation (EDA) software to the semiconductor and electronics industries. The company offers a full suite of products used in the logic synthesis and functional verification phases of chip design, including a broad array of reusable design building blocks. It also sells physical synthesis and physical design products as well as physical verification products.

The company's products are used to design a chip, from concept to the point of delivery to the manufacturer for fabrication. Synopsis provides software and hardware, which are used to develop electronic systems that incorporate chips. Additionally, the company provides Intellectual Property (IP) used in semiconductor design and manufacturing to simplify the design process and accelerate time-to-market for its customers.

Synopsis reports revenues in three segments, namely Time-Based Products, Upfront Products and Maintenance and Service.

Time-Based Products (66% of fiscal 2019 revenues): Segment revenues are recognized as Technology Subscription License (TSL) revenues. Under this segment, the company recognizes revenues from fees over the period of the license or as and when the installments are paid by the customer, whichever is later.

Upfront Products (18%): These revenues are recognized as Term License revenues. Under this segment, the company recognizes revenues from term licenses in full after the completion of the shipment of the software, wherein at least 75% of the license fee is paid within a year of shipment, after fulfilling all other revenue recognition criteria.

Maintenance and Service (16%): Under this segment revenues come from maintenance fees that are generated over the maintenance period; along with revenues generated from professional service and training fees.

The company conducts its business across four geographic regions namely: The United States (51% of fiscal 2019 revenues), Asia-Pacific and Others (31%), Europe (10%) and Japan (8%).

Synopsys' competitors include EDA vendors like Cadence Design Systems Inc. and Mentor Graphics Corporation.

Source: Zacks Investment Research

Reasons To Buy:

> The company's recent product launches, acquisitions and deal wins will boost results. Also, unique intellectual properties and global support provided by the company are other positives.

- In the current economic scenario, as customers are strengthening their supplier relationships and focusing on cost efficiencies, many have selected Synopsys as their primary EDA partner. Relationships with companies such as Advanced Micro Devices, Juniper Networks, Realtek, Teradici, NetLogic Microsystems, Toshiba and Wolfson stand as evidence.

- Synopsys' penetration into new and growing artificial intelligence (AI) chip companies is a major growth driver. Further, with the growing need for enhanced security measures considering the rising security threats in interconnected systems laden with software, demand for the company's solutions is shooting up. Robust growth in software-based verification at both traditional semiconductor as well as emerging system companies focused on own in-house design is an upside. Notably, Fusion Design Platform, launched last November, is witnessing high demand, which is helping it generate strong results. The company's Verification Continuum platform steadily witnesses excellent demand and competitive wins. Further, ZeBu Server 4 product is generating a broad-based adoption by customers' designing storage, networking and AI chips.

- Synopsys has also made a few important acquisitions to build its product portfolio and stimulate growth. Acquisitions are central to the company's growth strategy and are helping it to gain access to newer markets and technologies. Also, since intense competition is making the EDA market tougher to penetrate, acquisitions have helped the company to boost revenues. Notably, the acquisitions of Cigital and Black Duck are establishing tactical quality relations with clients, leading to higher demand creation, cross-selling and a substantial rise in brand recognition.

- Synopsys is considered as a lower-leveraged company. Its total debt-to-total capital ratio of 0.15 is significantly lower than the industry average of 0.43. As of Jul 31, 2020, the company's total debts (including current maturities) were $131.4 million while its cash and equivalents were $1.05 billion. Moreover, the company's strong cash-flow generation capability is noteworthy. In the first nine months of fiscal 2020, Synopsys has generated operating cash flow of $789 million. Notably, the company's operating cash flows have grown significantly from $495 million in fiscal 2015 to $801 million in fiscal 2019.

- Synopsys returns cash to investors through share repurchases. According to the company, accelerated share repurchase (ASR) arrangements are an integral element of its overall framework for enhancing investors' worth. The company completed buybacks of $329 million in fiscal 2019 and $1.8 billion over the past five years, returning approximately 75% of free cash flow to its investors over that period. Additionally, in late February 2020, the company initiates an accelerated share repurchase (ASR) program worth $100 million, which was completed as of May 15, 2020. During the first nine months of fiscal 2020, the company has repurchased stocks worth $200 million.

Reasons To Sell:

Escalating costs and expenses, intense competition and uncertainty regarding the timeline for realization of acquisition synergies remain headwinds.

- The company faces tough competition from EDA vendors such as Cadence Design Systems Inc. and Mentor Graphics Corporation. These companies offer products focused more on distinct phases of the IC design process and provide a range of services to companies throughout the world to help optimize their product development process, among other things.Their facilities could increase competition, leading to lower prices and profits for Synopsys.

- The company also faces customer concentration risk, as small number of large customers account for significant portion of its revenues. Depending on a small number of customers for a large chunk of revenues could be risky, as loss of a single customer could affect operating performance significantly and jeopardize results. Therefore, the company is always under pressure to improve and maintain customer relations. As a result, the company needs to put more effort on customer retention through constant innovative product launches.

- A substantial portion of the company's sales is derived from outside the U.S. Hence, we believe that any unfavorable currency fluctuations and an uncertain macroeconomic environment may temper its growth prospects.

- Synopsys currently has a trailing 12 month P/E ratio of 56.94. This level compares unfavorably to some extent with what the industry saw over the last year. Hence, valuation looks slightly stretched from a P/E perspective.

Last Earnings Report

Synopsys' Q3 Earnings and Revenues Beat Estimates

Quarter Ending	07/2020
Report Date	Aug 19, 2020
Sales Surprise	7.90%
EPS Surprise	28.89%
Quarterly EPS	1.74
Annual EPS (TTM)	5.12

Synopsys' third-quarter fiscal 2020 non-GAAP earnings of $1.74 per share beat the Zacks Consensus Estimate by 28.9%. Moreover, the figure improved 47.5% year over year.

Further, revenues increased 13% year over year to $964.1 million and surpassed the Zacks Consensus Estimate by 7.9% as well.

The company is benefiting from increasing global design activity and customer engagements. The rising trend of machine learning, AI, 5G, IoT, Cloud, and the proliferation of Smart Everything are boosting demand for its advanced solutions.

Quarter in Detail

Time-Based Product revenues (63.5% of total revenues) of $612.1 million were up 13.9% year over year. Maintenance and Service revenues (14.6%) improved 2.4% to $141.1 million. Upfront Product revenues (21.9%) grew 18.8% to $210.9 million.

Segment wise, Semiconductor & System Design revenues (90.3% of total revenues) were $870.7 million, up 13.2% year over year. Within the same, EDA revenues (55% of revenues) were $531.8 million and IP & Systems Integration revenues (35% of revenues) came in at $335.7 million. Software Integrity revenues totaled $93.4 million, contributing approximately 10% to the top line in the reported quarter.

Geographically, Synopsys' revenues in North America (46% of total) were $443.7 million, and $94.3 million in Europe (10%). Revenues from Japan (8%), Korea (10%) and the Asia Pacific (26%) came in at $77.8 million, $96.3 million and $251.9 million, respectively.

Non-GAAP operating margin was 33.6%, expanding 820 basis points (bps) year over year. Semiconductor & System Design delivered an adjusted operating margin of 35.4%, up 840 bps year over year, while Software Integrity margin expanded 530 bps year over year to 15.8%.

Balance Sheet & Cash Flow

Synopsys had cash and cash equivalents of $1.05 billion as of Jul 31 compared with $856.4 million as of Apr 30.

Total debt came in at $131.4 million in the reported quarter compared with the previous quarter's $235.8 million.

Operating cash flow in the first nine months of fiscal 2020 was $789.2 million.

Guidance

For fourth-quarter fiscal 2020, the company's revenues are expected to be $1-$1.03billion. The Zacks Consensus Estimate for revenues is currently pegged at $1.04 billion, which indicates growth of 22% from the year-ago quarter.

Management expects non-GAAP earnings between $1.51 and $1.56 per share. The consensus mark for earnings is pegged at $1.70 cents, suggesting year-over-year growth of 47.8%.

Non-GAAP expenses are anticipated to be $717-$727 million.

For fiscal 2020, management projects revenues at $3.66-$3.69 billion, up from the previous forecast of $3.60-$3.65 billion. The Zacks Consensus Estimate for fiscal 2020 revenues is pinned at $3.63 billion, calling for year-over-year growth of 7.9%.

Non-GAAP earnings for the fiscal year are now expected between $5.48 and $5.53 per share, up from the prior guided range of $5.21-$5.28. The consensus mark for fiscal 2020 earnings is pegged at $5.27, which suggests growth of 15.6% from the year-earlier quarter.

For fiscal 2020, operating cash flow is expected to be approximately $900 million, higher than the previous estimates of $815-$840 million.

Recent News

On Nov 19, Synopsys announced the acquisition of Light Tec, an optical measurements provider. The acquisition will expand customer access to light scatter data for better optical product development.

On Nov 11, Synopsys announced the acquisition of Moortec, an in-chip monitoring solutions provider. The acquisition will enable extension of its Silicon Lifecycle Management Platform to include critical process, voltage and temperature (PVT) sensor data.

On Nov 10, Synopsys launched its industry's first Verification IP (VIP) for Compute Express Link (CXL) 2.0, which is designed to deliver breakthrough performance in system-on-chips (SoCs).

On Oct 28, Synopsys announced that it collaborated with Samsung Foundry to deliver optimized reference methodology to accelerate High-Performance Compute Designs.

On Oct 28, Synopsys announced the release of 3-nanometer Gate-All-Around (GAA) AMS Design Reference Flow in order to provide designers with a complete design methodology for designing analog and mixed-signal circuits using the Synopsys Custom Design Platform.

On Oct 27, Synopsys announced the availability of a Virtualizer Development Kit (VDK) to support Infineon's AURIX TC4xx 32-bit Microcontroller Family as a part of the Center of Excellence collaboration between the two companies.

On Oct 26, Synopsys announced that it jointly developed more than 30 new interoperable process design kits (iPDKs) in collaboration with Samsung Foundry. The collaboration included completing and validating a complete set of iPDKs, methodologies and design flows.

On Oct 20, Synopsys revealed that its 3DIC Compiler solution enabled Samsung Foundry to design, implement and tape out a complex 5-nanometer SoC featuring eight high-bandwidth memories (HBMs) in a single package.

On Oct 14, Synopsys announced collaborating with SiMa.ai to bring its machine learning inference at scale to the embedded edge.

On Oct 12, Synopsys revealed that Shankar Krishnamoorthy has been promoted to GM of the Digital Design Group.

On Sep 15, Synopsys published BSIMM11, the latest version of the Building Security In Maturity Model (BSIMM), created to help organizations plan, execute, measure, and improve their software security initiatives. The report reflects the software security practices observed across 130 firms from multiple industry verticals including financial services, FinTech, independent software vendors, cloud, healthcare, Internet of Things, insurance, and retail.

On Aug 20, Synopsys announced that it has appointed Sassine Ghazi as the company's new Chief Operating Officer.

Valuation

Synopsys shares are up 65.3% in the year-to-date (YTD) period and 70.2% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 32.7% and 25.2% YTD, respectively. Over the past year, the Zacks sub-industry and the sector are up 36.6% and 42.2%, respectively.

The S&P 500 Index is up 14.6% YTD and 19.6% in the past year.

The stock is currently trading at 36.76X forward 12-month earnings, which compares to 31.59X for the Zacks sub-industry, 27.43X for the Zacks sector and 22.5X for the S&P 500 index.

Over the past five years, the stock has traded as high as 57.87X and as low as 23.63X, with a 5-year median of 35.91X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our $242 price target reflects 38.6X forward 12-month earnings.

The table below shows summary valuation data for SNPS

Valuation Multiples - SNPS

		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	36.76	31.59	27.43	22.50
	5-Year High	57.87	35.41	28.01	23.47
	5-Year Low	23.63	19.26	16.95	15.27
	5-Year Median	35.91	25.77	19.95	17.75
P/S F12M	Current	8.70	7.45	4.37	4.23
	5-Year High	9.91	8.23	4.49	4.30
	5-Year Low	2.55	4.26	2.77	3.17
	5-Year Median	4.32	5.99	3.46	3.67
EV/Sales TTM	Current	9.67	8.37	5.18	4.22
	5-Year High	10.18	9.44	5.22	4.25
	5-Year Low	2.39	3.67	2.83	2.62
	5-Year Median	4.36	5.98	3.86	3.58

As of 12/01/2020 *Source: Zacks Investment Research*

Industry Analysis **Zacks Industry Rank:** Bottom 35% (166 out of 254)

Source: Zacks Investment Research

Top Peers

Company (Ticker)	Rec	Rank
Autodesk, Inc. **(ADSK)**	Neutral	3
ANSYS, Inc. **(ANSS)**	Neutral	3
Cadence Design Systems, Inc. **(CDNS)**	Neutral	2
Citrix Systems, Inc. **(CTXS)**	Neutral	3
Dassault Systemes SA **(DASTY)**	Neutral	4
International Business Machines Corporation **(IBM)**	Neutral	4
Keysight Technologies Inc. **(KEYS)**	Neutral	3
Microsoft Corporation **(MSFT)**	Neutral	2

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

Industry Comparison Industry: Computer - Software

	SNPS	X Industry	S&P 500	ANSS	CDNS	IBM
				Industry Peers		
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	3	-	-	3	2	4
VGM Score	C	-	-	F	D	B
Market Cap	34.91 B	2.10 B	25.67 B	29.27 B	32.26 B	109.74 B
# of Analysts	6	4	13	5	6	6
Dividend Yield	0.00%	0.00%	1.47%	0.00%	0.00%	5.29%
Value Score	D	-	-	D	D	A
Cash/Price	0.03	0.09	0.07	0.03	0.04	0.14
EV/EBITDA	41.94	19.92	14.52	47.69	50.35	8.49
PEG F1	3.33	2.53	2.76	NA	2.77	4.28
P/B	7.59	6.36	3.54	8.15	13.47	5.14
P/CF	43.38	23.74	13.83	51.97	29.08	6.23
P/E F1	36.65	32.37	21.98	54.57	42.81	14.03
P/S TTM	9.94	4.67	2.82	18.96	12.79	1.46
Earnings Yield	2.69%	2.69%	4.41%	1.83%	2.33%	7.12%
Debt/Equity	0.02	0.11	0.70	0.12	0.14	2.58
Cash Flow ($/share)	5.30	1.18	6.94	6.56	3.98	19.75
Growth Score	A	-	-	D	C	B
Historical EPS Growth (3-5 Years)	21.02%	10.39%	9.72%	13.68%	39.62%	-3.38%
Projected EPS Growth (F1/F0)	11.57%	10.35%	0.83%	-5.08%	22.80%	-31.50%
Current Cash Flow Growth	24.16%	7.44%	5.22%	8.84%	138.95%	2.09%
Historical Cash Flow Growth (3-5 Years)	8.09%	8.51%	8.33%	7.79%	24.55%	-3.76%
Current Ratio	1.06	1.56	1.38	2.60	1.55	1.05
Debt/Capital	2.27%	20.98%	42.00%	10.56%	12.64%	72.10%
Net Margin	17.88%	6.41%	10.44%	24.88%	42.68%	10.53%
Return on Equity	14.66%	11.24%	14.99%	12.09%	48.31%	48.69%
Sales/Assets	0.49	0.58	0.50	0.33	0.66	0.49
Projected Sales Growth (F1/F0)	8.33%	1.99%	0.30%	6.63%	13.59%	-4.33%
Momentum Score	F	-	-	D	D	C
Daily Price Change	1.11%	0.00%	0.90%	0.83%	-0.56%	-0.29%
1-Week Price Change	3.16%	1.70%	2.18%	3.82%	3.36%	6.34%
4-Week Price Change	3.73%	9.09%	9.00%	7.89%	1.81%	7.88%
12-Week Price Change	15.59%	6.86%	13.34%	10.45%	15.14%	1.61%
52-Week Price Change	70.12%	13.26%	7.41%	36.14%	77.32%	-6.78%
20-Day Average Volume (Shares)	757,021	89,367	2,137,857	379,068	1,535,401	4,973,821
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
EPS F1 Estimate 4-Week Change	0.00%	0.00%	0.10%	1.57%	0.00%	0.00%
EPS F1 Estimate 12-Week Change	-0.23%	2.98%	3.77%	1.57%	7.45%	-20.69%
EPS Q1 Estimate Monthly Change	0.00%	0.00%	0.00%	1.87%	0.00%	0.00%

Source: Zacks Investment Research

Zacks Stock Rating System

We offer two rating systems that take into account investors' holding horizons: Zacks Rank and Zacks Recommendation. Each provides valuable insights into the future profitability of the stock and can be used separately or in combination with each other depending on your investment style.

Zacks Recommendation

The Zacks Recommendation aims to predict performance over the next 6 to 12 months. The foundation for the quantitatively determined Zacks Recommendation is trends in the company's estimate revisions and earnings outlook. The Zacks Recommendation is broken down into 3 Levels; Outperform, Neutral and Underperform. Unlike many Wall Street firms, we maintain a balance between the number of Outperform and Neutral recommendations. Our team of 70 analysts are fully versed in the benefits of earnings estimate revisions and how that is harnessed through the Zacks quantitative rating system. But we have given our analysts the ability to override the Zacks Recommendation for the 1200 stocks that they follow. The reason for the analyst over-rides is that there are often factors such as valuation, industry conditions and management effectiveness that a trained investment professional can spot better than a quantitative model.

Zacks Rank

The Zacks Rank is our short-term rating system that is most effective over the one- to three-month holding horizon. The underlying driver for the quantitatively-determined Zacks Rank is the same as the Zacks Recommendation, and reflects trends in earnings estimate revisions.

Zacks Style Scores

The Zacks Style Score is as a complementary indicator to the Zacks rating system, giving investors a way to focus on the highest rated stocks that best fit their own stock picking preferences.

Academic research has proven that stocks with the best Value, Growth and Momentum characteristics outperform the market. The Zacks Style Scores rate stocks on each of these individual styles and assigns a rating of A, B, C, D and F. We also produce the VGM Score (V for Value, G for Growth and M for Momentum), which combines the weighted average of the individual Style Scores into one score. This is perfectly suited for those who want their stocks to have the best scores across the board.

Value Score	D
Growth Score	A
Momentum Score	F
VGM Score	C

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

Disclosures

This report contains independent commentary to be used for informational purposes only. The analysts contributing to this report do not hold any shares of this stock. The analysts contributing to this report do not serve on the board of the company that issued this stock.The EPS and revenue forecasts are the Zacks Consensus estimates, unless indicated otherwise on the reports first page. Additionally, the analysts contributing to this report certify that the views expressed herein accurately reflect the analysts personal views as to the subject securities and issuers. ZIR certifies that no part of the analysts compensation was, is, or will be, directly or indirectly, related to the specific recommendation or views expressed by the analyst in the report.

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ZIR uses the following rating system for the securities it covers. **Outperform-** ZIR expects that the subject company will outperform the broader U.S. equities markets over the next six to twelve months. **Neutral-** ZIR expects that the company will perform in line with the broader U.S. equities markets over the next six to twelve months. **Underperform-** ZIR expects the company will underperform the broader U.S. equities markets over the next six to twelve months.

Additional Disclosure

This material represents an assessment of the market and economic environment at a specific point in time and is not intended to be a forecast of future events, or a guarantee of future results. Forward-looking statements are subject to certain risks and uncertainties. Any statements that refer to expectations, projections or characterizations of future events or circumstances, including any underlying assumptions, are forwardlooking statements. Actual results, performance, or achievements may differ materially from those expressed or implied.

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

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

Glossary of Terms and Definitions

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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