

Aspen Technology, Inc. (AZPN)

\$133.93 (As of 10/12/20)

Price Target (6-12 Months): **\$141.00**

Long Term: 6-12 Months

Zacks Recommendation:
Neutral

(Since: 10/12/20)

Prior Recommendation: Outperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

3-Hold

Zacks Style Scores:

VGM:D

Value: D

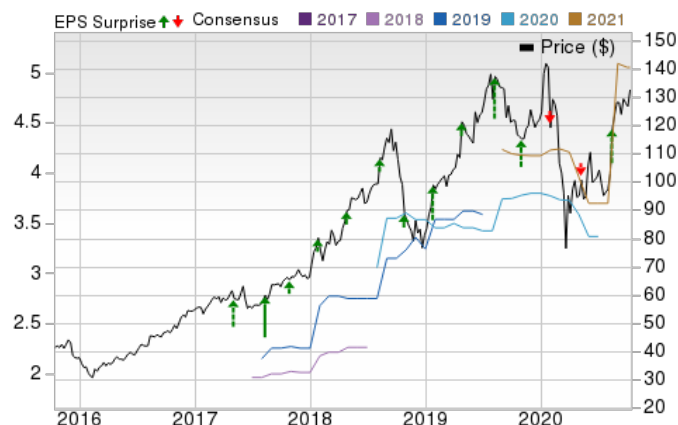
Growth: C

Momentum: D

Summary

Aspen Technology is benefitting from its diversified product portfolio, which is showing resilience amid coronavirus-induced macroeconomic weakness. Rapid adoption of cloud-based solutions, proliferation of big data analytics and Internet of Things (IoT) technologies along with higher spend on software will likely drive the top line in the long haul. Furthermore, upbeat guidance for fiscal 2021 driven by strong pipeline of its Asset Performance Management and Aspen Mtell suite bode well. However, coronavirus crisis-induced supply chain disruptions and major oil industry downturn amid steep drop in oil prices are an overhang. A highly leveraged balance sheet along with stiff competition in the asset optimization software market is another headwind. Notably, shares of Aspen have underperformed the industry on a year-to-date basis.

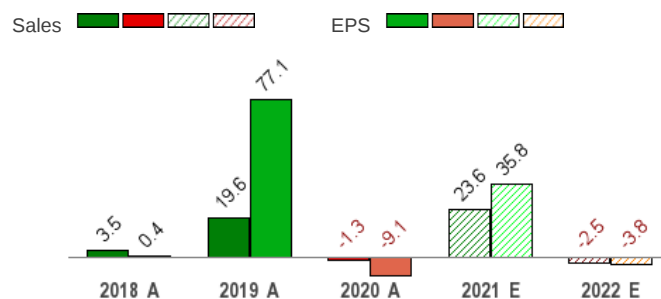
Price, Consensus & Surprise



Data Overview

52-Week High-Low	\$142.89 - \$73.07
20-Day Average Volume (Shares)	361,399
Market Cap	\$9.1 B
Year-To-Date Price Change	10.8%
Beta	1.31
Dividend / Dividend Yield	\$0.00 / 0.0%
Industry	Computer - Software
Zacks Industry Rank	Top 38% (97 out of 254)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	30.5%
Last Sales Surprise	12.8%
EPS F1 Estimate 4-Week Change	0.0%
Expected Report Date	11/04/2020
Earnings ESP	-9.6%
P/E TTM	35.9
P/E F1	26.5
PEG F1	13.5
P/S TTM	15.3

Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2022	148 E	164 E	174 E	225 E	711 E
2021	151 E	171 E	175 E	232 E	729 E
2020	134 A	125 A	132 A	199 A	590 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2022	\$0.85 E	\$1.04 E	\$1.14 E	\$1.73 E	\$4.86 E
2021	\$0.92 E	\$1.16 E	\$1.18 E	\$1.81 E	\$5.05 E
2020	\$0.79 A	\$0.66 A	\$0.74 A	\$1.54 A	\$3.72 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 10/12/2020. The reports text is as of 10/13/2020.

Overview

Bedford, MA-based Aspen Technology, Inc. provides asset optimization software solutions.

The company facilitates the processes of asset management for various industries, consequently, enabling the clientele to improve the efficiency of assets.

The company's solutions aid in optimizing process manufacturing by supporting real-time decision making, predicting equipment failure, and providing the ability to forecast and simulate potential actions. Asset management solutions not only assists manufacturers understand the operating conditions of their assets but also to take appropriate action to increase their productivity in an efficient way. These solutions help in expanding operating margins of process manufacturers.

The company provides aspenONE Asset Performance Management (APM) suite of solutions which comprise Aspen Mtell, Aspen Fidelis Reliability, Aspen ProMV, Aspen Column Analytics, and Aspen Root Cause Analytics

Aspen Mtell enables customers to augment asset utilization by providing a robust set of solutions which supervise health of the machinery, identify failure symptoms in real time, analyze the root-cause of the problem and provide valuable feedback to avoid equipment failure.

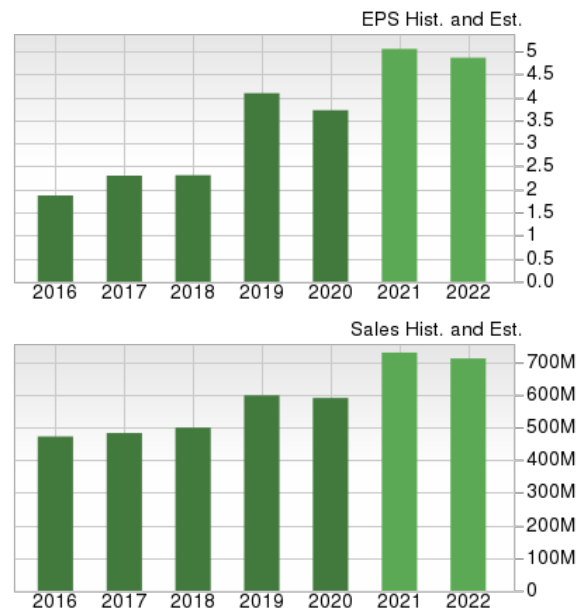
Notably, Aspen Technology acquired Mteligence Corporation (also recognized as Mtell) in October 2016, with an aim to strengthen its asset performance optimization software suite with robust prescriptive and predictive maintenance capabilities.

The subscription based aspenONE software is classified into three suites, namely Engineering, Manufacturing & Supply Chain, and Asset Performance Management ("APM").

In fiscal 2020, the company generated revenues of \$590.2 million. Aspen Technology reports in three segments, namely License, Maintenance and Services and other.

License revenue (63.9% of fiscal 2020 revenues) represents the portion of a term license agreement allocated to the initial license. Maintenance revenues (30.5%) represent the portion of the term license agreement related to on-going support and the right to future product enhancements. Meanwhile, Services and other revenues (5.6%) comprises training and professional services.

As of Jun 30, 2020, the total contract value or TCV amounted to \$2.76 billion, compared with \$2.57 billion as of Jun 30, 2019.



Source: Zacks Investment Research

Reasons To Buy:

- ▲ Aspen Technology's revenue growth continues to be driven by high demand for its asset optimization and management solutions. This can be attributed to its solution which aids in optimizing process manufacturing by supporting real-time decision making, predicting equipment failure, and providing the ability to forecast and simulate potential actions. Asset management solution not only assists manufacturers understand the operating conditions of their assets but also to take appropriate action to increase their productivity in an efficient way. These solutions help in expanding operating margins of process manufacturers. Per P&S Intelligence data, enterprise asset management market is projected to hit \$8.7 billion by 2024, witnessing a CAGR of 13.5%, between 2019 and 2024. Based on its portfolio strength, we believe that the company is well poised to gain from this robust growth prospect going forward.
- ▲ Aspen Technology has witnessed accelerated adoption of its solutions that has driven top-line growth over the years. Its revenues witnessed CAGR of almost 8% from fiscal 2015 through fiscal 2020. The company provides end-to-end asset management and optimization solutions that are in high demand. The depth in its product portfolio has been the primary growth driver in recent times. Rapid adoption of cloud-based solutions, integration with big data analytics, ongoing favorable trends in penetration of IoT, and increasing investment on software are expected to be major factors driving growth.
- ▲ Aspen Technology has a strong pipeline for new business bookings, and continues to innovate & improve operations. The company's diversified product portfolio and sticky customer base impose significant barriers to entry. Subscription based model comprising long-term contracts averaging five years with high-end customers ensure that the revenues keep growing. Further, AspenTech has streamlined business to strengthen core-operations in the long run. Its continuous efforts to improve its Asset Performance Management (APM) bode well. The APM suite continues to gain traction, with the company signing significant deals globally. The company also witnessed pipeline expansion, which is a positive. As of Jun 30, 2020, the total contract value or TCV amounted to \$2.76 billion, compared with \$2.57 billion as of Jun 30, 2019.
- ▲ The company has also been active on the acquisition front. Buyouts have aided growth by expanding product portfolio and adding competence. During first-quarter fiscal 2020, the company announced acquisition of Mnubo, which offers custom AI and analytics infrastructure solutions for IoT. The company is also anticipated to gain from Sabisu buyout, which provides enterprise workflow and visualization solutions. In February 2018, Aspen Technology acquired Apex Optimisation, for their unique Generic Dynamic Optimisation Technology ("GDOT") to enable the company align Advanced Process Control ("APC") with Planning & Scheduling, helping unified production optimization for petrochemical companies and refineries in complex industrial environments. In December 2017, Aspen Technology acquired RtTech Software, in a bid to leverage its Industrial Internet of Things (IIoT) cloud and edge technology to bolster the capabilities of APM Solutions. Similarly, Mtell (October 2016), The Fidelis Group (June 2016), Hyprotech (March 2002) and Petrolsoft (June 2000) have aided the company not only to explore new avenues but also improvise the existing solutions with advanced technologies.

Robust adoption driven by high demand for asset optimization and management solutions, sticky customer base and a strong pipeline for new business bookings are positives.

Reasons To Sell:

- ▼ Increasing competition in the market for asset optimization software could lead to pricing pressure and affect Aspen Technology's margins. AspenTech's offerings compete with similar solutions from SAP, IBM and Oracle, to mention a few, which is a concern. Notably, the pricing and functionalities of Maximo offering of IBM, Oracle Enterprise Asset Management solution, SAP Enterprise Asset Management (EAM) suite, among other comparable offerings are likely to have an impact on adoption rate of Aspen Technology's solutions. The company's market share could be challenged further by new entrants. This might compel the company resort to competitive pricing to maintain as well as capture further market share. Moreover, consolidating applications market is fuelling competition in the software sector, which is likely to limit company's growth prospects. Additionally, major oil industry downturn and steep drop in oil prices, is likely to dampen growth at least in the near term.
- ▼ Aspen Technology continues to acquire a large number of companies. While this improves revenue opportunities, business mix and profitability, it also adds to integration risks. Moreover, frequent acquisitions are a distraction for management, which could impact organic growth, going forward. Notably, goodwill and net intangible assets comprised 14.6% of total assets as of Jun 30, 2020.
- ▼ Aspen Technology has a leveraged balance sheet, which adds to the risk of investing in the company. The company had cash and cash equivalents of \$287.8 million and total borrowings, net of debt issuance costs, of \$427.5 million as of Jun 30, 2020. The cash crunch can not only jeopardize its ability to sustain share buybacks but also pursue accretive acquisitions. Markedly, Aspen Technology had paused share buybacks and drawn down \$100 million from revolving credit facility, to maintain near-term liquidity and financial flexibility amid the COVID-19 crisis. The company did not repurchase any shares in fourth-quarter fiscal 2020. However, the company will resume stock repurchase program. Recently, the company's board of directors authorized share repurchase of up to \$200 million for fiscal year 2021. Consequently, the company is under consistent pressure to generate adequate amount of operating cash flow to service its debt and resume share buybacks.
- ▼ Moreover, the company is trading at premium in terms of Price/Book (P/B). Aspen Technology currently has a trailing 12-month P/B ratio of 23.51X. This level compares unfavorably with what the industry witnessed in the last year. Additionally, the ratio is higher than the average level of 20.09X and is near the high end of the valuation range in this period. Consequently, the valuation looks slightly stretched from P/B perspective.

Intensifying competition in the asset management market, continuing investments to stay afloat and integration risks are major concerns.

Last Earnings Report

Aspen Technology Q4 Earnings & Revenues Beat Estimates

Aspen Technology reported fourth-quarter fiscal 2020 non-GAAP earnings of \$1.54 per share that surpassed the Zacks Consensus Estimate by 30.5% but declined 3.1% on a year-over-year basis.

Revenues of \$199.3 million beat the Zacks Consensus Estimate by 12.8% and improved 1.8% from the year-ago quarter's figure. Uptick in contract renewals, as economies reopened, drove year-over-year growth.

As of Jun 30, 2020, the total contract value or TCV amounted to \$2.76 billion, compared with \$2.57 billion as of Jun 30, 2019.

Total bookings were \$236.2 million, down 2% year over year.

The fiscal fourth-quarter performance highlights the indispensability of the company's product portfolio and its business resilience amid the COVID-19 induced macroeconomic weakness.

Quarter in Detail

License revenues (73.9% of revenues) declined 0.9% year over year to \$147.2 million.

Maintenance revenues (22.9%) increased 15.8% year over year to \$45.7 million.

Services and other revenues (3.2%) declined 17.9% from the year-ago quarter's figure to \$6.4 million.

Annual spend increased 9.6% year over year to \$593 million.

Margins

Gross profit increased 2.2% year over year to \$184.2 million. As a percentage of total revenues, the figure expanded 30 basis points (bps) on a year-over-year basis to 92.4%.

Total operating expenses climbed 2.1% from the year-ago quarter's figure to \$70.5 million due to increase in research & development and general & administrative expenses.

Non-GAAP operating income of \$122.9 million improved 2.5% year over year. Non-GAAP operating margin was 61.7%, which expanded 40 bps on a year-over-year basis.

Balance Sheet & Cash Flow

As of Jun 30, 2020, cash and cash equivalents were \$287.8 million compared with \$192.2 million as of Mar 31, 2020.

The company generated \$99.7 million cash from operations during the quarter under review compared with \$81.4 million in the previous quarter. Free cash flow was \$99.5 million compared with \$81.2 million in the prior quarter.

The company did not repurchase any shares in fourth-quarter fiscal 2020. However, the company will resume stock repurchase program. Recently, the company's board of directors authorized share repurchase of up to \$200 million for fiscal year 2021.

Fiscal 2021 View

For fiscal 2021, Aspen Technology expects revenues in the range of \$704-\$754 million. The Zacks Consensus Estimate for revenues is pegged at \$598.94 million.

Non-GAAP net income is anticipated in the range of \$4.78-\$4.83 per share. The consensus mark for earnings stands at \$3.20.

Management projects non-GAAP operating income in the range of \$374-\$420 million. Free cash flow is anticipated between \$260 million and \$270 million.

Quarter Ending	06/2020
Report Date	Aug 12, 2020
Sales Surprise	12.78%
EPS Surprise	30.51%
Quarterly EPS	1.54
Annual EPS (TTM)	3.73

Recent News

On Oct 6, Aspen Technology announced general availability of aspenONE V12 software solution. The solution boasts of Industrial AI hybrid model capacity that is well-suited for capital intensive industries.

On Sep 9, Aspen Technology inked deal with engineering and consultancy firm Wood to offer the latter's clientele with Aspen Mtell asset performance management technology. This solution will help Wood's customers to improve the efficiency of manufacturing and facility assets.

On Sep 3, Aspen Technology announced that Heide Refinery selected its Aspen Generic Dynamic Optimization Technology (GDOT) software solutions to accelerate digital transformation.

On Aug 12, Aspen Technology unveiled a new AIoT Hub, a product of the integration of its recent investments in Industry 4.0 functionalities. The new offering facilitates flexible data exchange and integration across the enterprise from sensors to the edge and cloud. This aids enterprises to reduce the risks and accelerate time to market for introducing AI to simplify the complexity in operations.

On Jun 3, Aspen Technology announced partnership with Hargrove, provider of automation services in a bid to offer engineering services for a "Digital Twin" to aid plant owners and operators to enhance uptime in a secure manner and boost operating margins.

Valuation

Aspen Technology shares are up 10.8% in the year-to-date period and 10.2% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 38% and 29.8% in the year-to-date period, respectively. In the past year, the Zacks sub-industry and the sector are up 50.2% and 42.7%, respectively.

The S&P 500 index is up 9.9% in the year-to-date period and 19.4% in the past year.

The stock is currently trading at 29.15X forward 12-month earnings compared with 34.49X for the Zacks sub-industry, 27.7X for the Zacks sector and 22.97X for the S&P 500 index.

In the past five years, the stock has traded as high as 46.4X and as low as 19.07X with a five-year median of 33.22X. Our Neutral recommendation indicates that the stock will perform in line with the market. Our \$141 price target reflects 30.69X forward 12-month earnings.

The table below shows summary valuation data for AZPN

Valuation Multiples - AZPN					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	29.15	34.49	27.7	22.97
	5-Year High	46.4	35.43	28	23.47
	5-Year Low	19.07	19.26	16.95	15.27
	5-Year Median	33.22	25.56	19.95	17.68
P/S F12M	Current	12.5	8.02	4.33	4.23
	5-Year High	17.11	8.22	4.48	4.31
	5-Year Low	5.15	4.25	2.77	3.18
	5-Year Median	10.49	5.84	3.44	3.67
EV/Sales TTM	Current	15.52	9.06	5.1	4.08
	5-Year High	16.33	9.43	5.22	4.16
	5-Year Low	4.98	3.61	2.85	2.61
	5-Year Median	11.12	5.86	3.82	3.57

As of 10/12/2020

Source: Zacks Investment Research

Industry Analysis Zacks Industry Rank: Top 38% (97 out of 254)



Source: Zacks Investment Research

Top Peers

Company (Ticker)	Rec	Rank
Avid Technology, Inc. (AVID)	Outperform	1
Progress Software Corporation (PRGS)	Outperform	2
Cornerstone OnDemand, Inc. (CSOD)	Neutral	4
CommVault Systems, Inc. (CVLT)	Neutral	3
International Business Machines Corporation (IBM)	Neutral	3
MicroStrategy Incorporated (MSTR)	Neutral	2
Oracle Corporation (ORCL)	Neutral	3
SAP SE (SAP)	Neutral	3

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

Industry Comparison Industry: Computer - Software				Industry Peers		
	AZPN	X Industry	S&P 500	IBM	ORCL	SAP
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	3	-	-	3	3	3
VGM Score	D	-	-	B	B	D
Market Cap	9.05 B	1.73 B	23.69 B	113.29 B	185.05 B	189.51 B
# of Analysts	5	4	13	7	12	6
Dividend Yield	0.00%	0.00%	1.59%	5.13%	1.56%	0.79%
Value Score	D	-	-	A	B	D
Cash/Price	0.02	0.08	0.07	0.13	0.23	0.04
EV/EBITDA	28.61	23.36	13.64	8.79	12.37	24.93
PEG F1	13.58	2.79	2.95	3.51	1.33	3.31
P/B	23.51	6.43	3.55	5.48	18.25	5.92
P/CF	33.51	27.48	13.58	6.44	13.14	27.48
P/E F1	26.61	34.92	22.44	11.50	14.68	26.57
P/S TTM	15.34	4.70	2.67	1.50	4.72	6.10
Earnings Yield	3.77%	2.74%	4.29%	8.69%	6.82%	3.77%
Debt/Equity	0.77	0.11	0.70	2.68	6.68	0.50
Cash Flow (\$/share)	4.00	1.19	6.93	19.75	4.68	5.78
Growth Score	C	-	-	C	C	D
Historical EPS Growth (3-5 Years)	21.51%	9.71%	10.41%	-3.28%	10.02%	8.37%
Projected EPS Growth (F1/F0)	35.75%	10.79%	-2.99%	-13.63%	8.75%	4.49%
Current Cash Flow Growth	75.58%	0.52%	5.49%	2.09%	-2.42%	-1.75%
Historical Cash Flow Growth (3-5 Years)	23.92%	8.51%	8.51%	-3.76%	-0.39%	3.01%
Current Ratio	2.29	1.48	1.35	1.04	2.66	1.05
Debt/Capital	43.47%	21.93%	42.91%	72.83%	86.99%	33.28%
Net Margin	38.24%	6.61%	10.28%	10.44%	26.13%	16.30%
Return on Equity	59.19%	10.54%	14.79%	51.06%	85.71%	16.31%
Sales/Assets	0.55	0.60	0.51	0.50	0.37	0.46
Projected Sales Growth (F1/F0)	23.56%	1.96%	-0.59%	-4.52%	1.96%	6.68%
Momentum Score	D	-	-	C	A	B
Daily Price Change	1.16%	0.25%	0.65%	-0.45%	0.51%	1.04%
1-Week Price Change	4.63%	3.45%	4.06%	5.99%	3.94%	1.85%
4-Week Price Change	5.57%	5.14%	3.76%	4.19%	3.36%	-1.20%
12-Week Price Change	39.45%	5.38%	8.70%	0.66%	10.94%	-0.63%
52-Week Price Change	10.21%	23.53%	6.31%	-10.44%	8.86%	25.96%
20-Day Average Volume (Shares)	361,399	130,372	2,117,216	4,851,545	14,685,307	529,404
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
EPS F1 Estimate 4-Week Change	0.00%	0.00%	0.00%	0.00%	0.54%	0.00%
EPS F1 Estimate 12-Week Change	46.89%	4.91%	3.69%	-1.75%	4.24%	-0.20%
EPS Q1 Estimate Monthly Change	0.00%	0.00%	0.00%	0.00%	0.16%	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	C
Momentum Score	D
VGM Score	D

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

Disclosures

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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 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.