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Sep 07, 2020

Ambarella, Inc. (AMBA)

$52.18 (As of 09/04/20)

Price Target (6-12 Months): **$55.00**

Long Term: 6-12 Months	**Zacks Recommendation:** (Since: 12/27/18) Prior Recommendation: Underperform	**Neutral**
Short Term: 1-3 Months	**Zacks Rank:** (1-5)	**3-Hold**
	Zacks Style Scores:	VGM:D
	Value: F | Growth: A	Momentum: D

Summary

Ambarella is benefiting from its transition to a video-AI company as reflected by its second-quarter fiscal 2021 results. The momentum in AI business continued as CV revenues represented mid-to-high single-digit percent of total revenues. Ambarella witnessed increase in blended average selling price ("ASP") due to solid demand for CV SoC which carries higher ASP compared with non-CV solutions. Momentum in CVflow SoCs in professional IP cameras across all geographies continued. However, softness in the automotive and other markets hurt Ambarella's top-line growth. Moreover, Ambarella predicts consumer-electronics revenues to decline as a percentage of revenues over the next three years, which makes us apprehensive. Also, coronavirus has impacted Ambarella's end markets. The stock has underperformed the industry year to date.

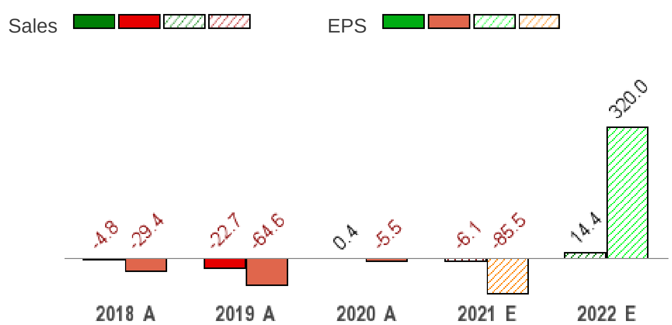
Price, Consensus & Surprise

Source: Zacks Investment Research

Data Overview

52-Week High-Low	**$73.59 - $36.02**
20-Day Average Volume (Shares)	**730,383**
Market Cap	**$1.8 B**
Year-To-Date Price Change	**-13.8%**
Beta	**1.22**
Dividend / Dividend Yield	**$0.00 / 0.0%**
Industry	**Electronics - Semiconductors**
Zacks Industry Rank	**Top 22% (54 out of 251)**
Last EPS Surprise	**400.0%**
Last Sales Surprise	**0.1%**
EPS F1 Estimate 4-Week Change	**0.0%**
Expected Report Date	**NA**
Earnings ESP	**14.6%**
P/E TTM	**93.2**
P/E F1	**521.8**
PEG F1	**34.8**
P/S TTM	**7.8**

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of $)

	Q1	Q2	Q3	Q4	Annual*
2022	53 E	59 E	68 E	66 E	246 E
2021	55 A	50 A	56 E	54 E	215 E
2020	47 A	56 A	68 A	57 A	229 A

EPS Estimates

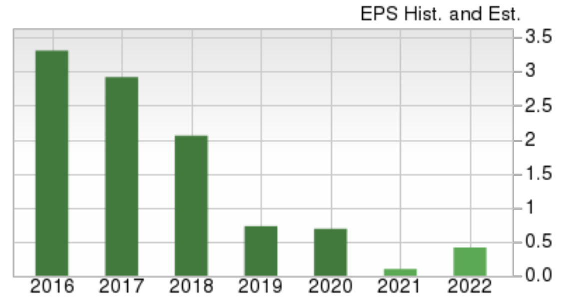
	Q1	Q2	Q3	Q4	Annual*
2022	$0.00 E	$0.08 E	$0.21 E	$0.17 E	$0.42 E
2021	$0.04 A	$0.06 A	$0.06 E	$0.03 E	$0.10 E
2020	$0.01 A	$0.21 A	$0.32 A	$0.14 A	$0.69 A

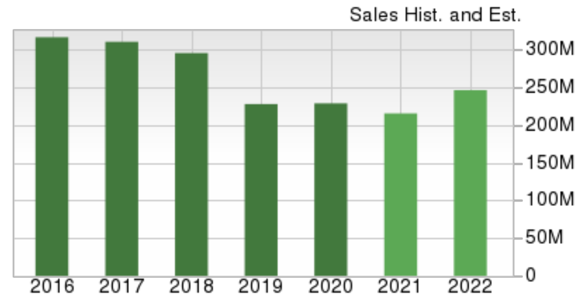
*Quarterly figures may not add up to annual.

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 09/04/2020. The reports text is as of 09/07/2020.

Overview

Headquartered in Santa Clara, CA, Ambarella Inc. develops video compression and image processing semiconductors, which enables high-definition or HD video capture, share and display.





Ambarella's system-on-a-chip (SoC) designs integrates HD video processing, image processing, audio processing, and system functions onto a single chip, which helps in delivering exceptional video and image quality at high compression rates, differentiated functionality and low power consumption.

The company's products are used in creating video content for wearable sports cameras, automotive aftermarket cameras, and professional and consumer Internet Protocol (IP) security cameras. Its solutions are also used in cameras incorporated into unmanned aerial vehicles, such as UAVs, drones or flying cameras. In the infrastructure market, Ambarella's solutions help in managing IP video traffic, broadcast encoding and transcoding, and IP video delivery applications.

Notably, of all the aforementioned, Ambarella is well known for its sports camera technology. It produces a video processing chip that is the main component in a popular brand of action cameras.

Ambarella caters to the following end markets, namely Professional IP Security Cameras, Consumer IP Security Cameras, Automotive Cameras, Wearable Cameras including Sports, Commercial and Social Media and UAVs or Drones.

Ambarella sells its solutions to original design manufacturers (ODM) and original equipment manufacturers (OEM) through its direct sales force and logistics providers including Wintech Microelectronics. Sales through Wintech accounted for approximately 60% of the company's fiscal 2020 total revenue.

For fiscal 2020, revenues were to $228.7 million. Sales to customers in Asia accounted for approximately 90% of total revenues in fiscal 2020.

For fiscal 2020, 2019 and 2018, 98% of the company's revenues were attributable to sales of its solutions into the camera markets and 2% of its revenues was attributable to sales of its solutions into the infrastructure market.

The company's primary competitors include Intel, Novatek, Omnivision, Qualcomm, Xilinx, NXP Semiconductors, NVIDIA and Texas Instruments among others.

Source: Zacks Investment Research

Reasons To Buy:

Ambarella's efforts toward expanding its reach in other markets, such as IP security, automotive and computer vision application manufacturing and simultaneously, lower dependency on GoPro will drive long-term growth.

- Ambarella is making steady progress on the development and delivery of computer video solution based on its CVFlow architecture. The company released CVFlow software developed kits, supporting its CV2 and CV22 SoCs, attracting positive consumer feedback.

- Ambarella is well known for its market leading high-performance video processing SoCs, which consume lowest power in this space. The company's proprietary video and image processing SoCs are highly configurable, providing it a cost and power advantage against its rivals, which uses multiple expensive semiconductors in their video and image processing solutions. This makes Ambarella a suitable choice for wearable camera, IP camera, automotive dashboard cameras and drone camera makers.

- New technologies, Internet penetration and invention of smart devices are driving demand for different kinds of cameras and broadcast infrastructure equipment mainly centered on high-definition video and image quality along with advanced features, transmission and analytics. High-definition cameras are now used in varied fields such as sports, medical, automobiles or mobiles, etc. With advancement in technology advancing video processing becoming a must-have feature across various end markets, the industry has huge growth potential. Being one of the most cost and power efficient SoC providers, we believe Ambarella is well positioned to grab the growing opportunity in this space.

- In a move to diversify its business and lower its dependency on GoPro, Ambarella has forayed into the VR camera space by launching H3 SoC in January 2017. Since then, the company has been continuously expanding its product portfolio in the high-end drones and VR cameras space. Although it will be very tough for Ambarella to compete against well established players such as NVIDIA and Advanced Micro, we believe that given its track record of innovation, the company has the potential to strengthen its position in the space.

- Nearly all automakers are now in various stages of developing self-driving cars. This has been creating huge demand for camera-based SoCs as well as computer vision technology. Notably, Ambarella already has deep technical knowledge in camera-based SoCs and to enhance its computer vision capabilities. Growing demand for Automated Driver Assistant Systems (ADAS) is a main driver. Design wins for automated parking systems are a positive. Ambarella expects the demand for security cameras with computer vision capability to continue to grow, giving it an opportunity to increase its value contribution per camera, and hence boost top-line.

- Ambarella has a strong balance sheet with ample liquidity position and less debt obligations. As of Jul 31, 2020, the company had cash and cash equivalents & marketable securities of $410.7 million compared with $411 million as of Apr 30. Moreover, operation lease liabilities at the end of its fiscal second-quarter 2021 were only $9.3 million.

Reasons To Sell:

Global tariff issues, probable export restrictions and changes in the macroeconomic conditions are key headwinds for the company.

- Ambarella is well known for its sports camera technology and GoPro is its second largest customer. However, since fiscal 2018, GoPro has been fulfilling its majority of requirements from one of Ambarella's competitors, thus hurting Ambarella's shipment volumes, resulting in revenue decline throughout the fiscal. Softness in the drone market continues to hurt the company's top-line. The company is also hurt by the U.S. ban on security camera purchase from Hikvision and Dahua, causing a lull in near-term orders, especially in the high end of the product range typically associated with its export business.

- The company is witnessing slowing sales growth rate and deteriorating operating margin. The company, which has registered over 25% sales growth since 2012, registered decline in the last four fiscals. Also, its operating margin, which increased till fiscal 2016, contracted in fiscal 2017, 2018, 2019, and 2020. The downtrend is believed to be mainly due to slowdown in sales of high-margin action cameras, losing business from GoPro and softness in drone market. We believe that the situation is not going to reverse in the near term. Further, the increasing mix of lower margin products being pulled in by Chinese customers fearing a trade ban is likely to be an overhang on margins.

- Ambarella uses third-party contractors to manufacture, assemble and test its SoCs. Therefore, the company is prone to suppliers risk as any issues with them may cause product delays and result in increased costs, thereby severely impacting its top- and bottom -line performances.

- Ambarella currently operates in a highly volatile market. Global tariff issues, probable export restrictions and changes in the macroeconomic conditions, which include deleveraging in China, are some unrelenting concerns. Speculations regarding many security camera customers in China to be subjected to U.S. Government Regulations are feared to limit or restrict the company's shipments to them. Higher import tariffs on customers based both in China and outside the country are headwinds.

Last Earnings Report

Ambarella Q2 Earnings Beat, Soft Auto Hurts Top Line

Quarter Ending	07/2020
Report Date	Sep 02, 2020
Sales Surprise	0.12%
EPS Surprise	400.00%
Quarterly EPS	0.06
Annual EPS (TTM)	0.56

Ambarella reported second-quarter fiscal 2021 non-GAAP earnings of 6 cents per share against the Zacks Consensus Estimate of a loss of 2 cents. However, earnings plunged 72.7% year over year.

Meanwhile, revenues of $50.1 million marginally beat the consensus mark but declined 11.1% year over year and 8% sequentially.

Softness in the automotive and other markets hurt Ambarella's top-line growth in the reported quarter. However, the security-camera business increased low single digits sequentially. Home security also increased sequentially.

The momentum in AI business continued as CV revenues represented mid-to-high single-digit percent of total second-quarter revenues. Ambarella witnessed increase in blended average selling price (ASP) due to solid demand for CV SoC which carries higher ASP compared with non-CV solutions.

Customer & Market Details

Ambarella had two customers that contributed more than 10% in the reported quarter. WT Microelectronics, a fulfillment partner serving multiple customers, accounted for 56% of revenues. Chicony, a Taiwanese OEM which manufactures for multiple customers, contributed 20%.

Moreover, the company noted that it continues to gain SoC share in the professional security-camera market outside China. Momentum in Ambarella's CVflow SoCs in professional IP cameras across all geographies continued in the reported quarter.

During the reported quarter, Japanese camera supplier PTZ continued to introduce more new models based on Ambarella's CVflow SoCs.

Outside China, the company has a very strong pipeline of new-customer introductions planned over the next 12 months.

Within China, Ambarella is now seeing additional opportunities, particularly at the high and middle ends of the market. Markedly, Chinese IP camera makers have resurrected evaluation of Ambarella-based camera designs including CVflow AI SoCs.

Further, in the consumer IP camera market, Ambarella witnessed a rebound in orders from the major home monitor camera makers.

In July, Taiwanese baby-monitor and sleep-analytics company Cubo introduced its Cubo Ai Plus monitor base on Ambarella's H.263 SoC.

Additionally, Ambarella held two online webinars to promote its Janus access control reference platform, which has been jointly developed with Lumentum and ON Semiconductor, and features CV25 SoC. Janus enables contact-free access control face recognition.

In the automotive space, Ambarella witnessed strong interest for its SoC solutions with various new OEM applications including ADAS, Level 2+ autonomous vehicles, electronic mirrors and car-recorder applications.

Since the beginning of 2020, the company has won a number of contracts from automotive OEMs. These contracts are estimated to generate roughly $200 million in revenues over the lifetime of their production.

During the reported quarter, Ambarella also won two contracts from Japanese automaker Nissan.

Operating Details

Ambarella reported non-GAAP gross margin of 62.4%, up 430 basis points (bps) year over year in the quarter under review. The gross-margin figure was better than management's guidance of 59-60.5% range. On a GAAP basis, gross margin expand 430 bps to 61.8%.

The healthy customer and product mix supported by strong operational execution benefited gross-margin expansion in second quarter.

Total operating expenses on a GAAP basis increased 7.9% year over year to $46.2 million. On a non-GAAP basis, operating expenses were $30.2 million, below management's guided range of $31-$33 million due to reduced employee expenses, lower depreciation from deferred capital expenditures and a one-time foreign subsidy related to COVID-19.

Research & development expenses increased 7.8% year over year to $32.8 million. Moreover, selling, general and administrative expenses of $13.4 million were up 8.2% year over year.

Total headcount at the end of the second quarter was 758, with about 81% of the employees dedicated to engineering. Roughly 69% of Ambarella's total headcount is located in Asia.

Balance Sheet & Cash Flow

As of Jul 31, 2020, Ambarella had cash and cash equivalents & marketable securities of $410.7 million compared with $411 million as of Apr 30.

The company reported operating cash outflow of $2.4 million primarily due to increases in operating assets, while current liabilities were flat sequentially.

Ambarella's board approved an extension of the current $50 million repurchasing program for an additional 12 months ending Jun 30, 2021.

Currently, $49 million is available under the program.

Key Q3 Developments

Markedly, in August, Ambarella selected the Lattice Semiconductor's ECP5 FPGA to enable MIPI bridging capabilities in systems using former's CVflowSoCs.

Moreover, Motorola Solutions announced the availability of Ambarella-based Avigilon H4 thermal elevated temperature-detection solution.

Further, U.K. and European dash-cam provider Nextbase launched its next-generation 622GW 4K dash cam based on Ambarella's H22 SoC.

Guidance

For third-quarter fiscal 2021, revenues are expected between $52 million and $56 million. Non-GAAP gross margin is anticipated to be 60-62%. Non-GAAP operating expenses are projected at $31-$33 million.

Management anticipates security-camera revenues to be down sequentially. Automotive revenues are expected to remain unchanged. Other revenues are expected to increase sequentially.

Ambarella also stated that the rate of order push-out and cancellations has slowed down and design activity has started to recover.

Moreover, Ambarella expects CV products to contribute 10% of revenues in fiscal 2021. Additionally, higher gross profit dollars per CV unit (due to solid demand for CV Soc) is expected to drive the bottom line.

Recent News

On Aug 6, Lattice Semiconductor Corporation announced that Ambarella has selected the Lattice ECP5 FPGA to enable MIPI bridging capabilities in systems using Ambarella CVflow SoCs.

On Jan 6, Ambarella collaborated with Lumentum and ON Semiconductor to provide 3D sensing platform for access control and smart video security solutions.

On the same day, the company also introduced the CV22FS and CV2FS automotive camera SoCs with CVflow AI processing and ASIL B compliance to enable safety-critical applications.

On Jan 2, Ambarella announced that it will demonstrate its new robotics platform during CES 2020. On the same day, it was revealed that Ambarella and AWS customers can now use Amazon SageMaker Neo to train ML models once and run them on any device equipped with an Ambarella CVflow-powered AI vision SoC.

Valuation

Shares of Ambarella have declined 13.8% in the year-to-date (YTD) period and 19.6% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector have gained 26.2% and 24.3%, respectively, YTD. Over the past year, the Zacks sub-industry and the sector increased 50.2% and 37.8%, respectively.

The S&P 500 Index has increased 6.6% YTD and 15.7% in the past year.

The stock is currently trading at 7.79X forward 12-month sales, which compares to 7.83X for the Zacks sub-industry, 4.33X for the Zacks sector and 4.19X for the S&P 500 index.

Over the past five years, the stock has traded as high as 10.2X and as low as 3.06X with a 5-year median of 5.5X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our $55 price target reflects 8.18X forward 12-month sales.

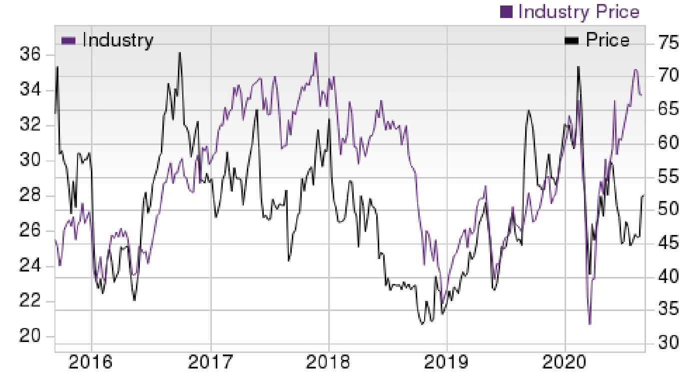
The table below shows summary valuation data for AMBA

Valuation Multiples - AMBA

		Stock	Sub-Industry	Sector	S&P 500
P/S F12M	Current	7.79	7.83	4.33	4.19
	5-Year High	10.2	7.99	4.33	4.19
	5-Year Low	3.06	4.68	2.32	2.53
	5-Year Median	5.5	5.75	3.15	3.07
P/B TTM	Current	3.93	9.91	5.34	4.46
	5-Year High	7.8	10.51	5.96	4.76
	5-Year Low	2.46	3.35	3.16	2.83
	5-Year Median	3.81	5.96	4.45	3.77
EV/Sales TTM	Current	6.04	7.33	4.94	3.38
	5-Year High	8.91	7.76	4.94	3.46
	5-Year Low	2.47	2.75	2.59	2.15
	5-Year Median	4.65	5.4	3.64	2.88

As of 09/04/2020

Industry Analysis **Zacks Industry Rank:** Top 22% (54 out of 251)



Source: Zacks Investment Research

Top Peers

Company (Ticker)	Rec	Rank
Cirrus Logic, Inc. **(CRUS)**	Outperform	2
Texas Instruments Incorporated **(TXN)**	Outperform	1
Intel Corporation **(INTC)**	Neutral	3
NVIDIA Corporation **(NVDA)**	Neutral	4
NXP Semiconductors N.V. **(NXPI)**	Neutral	3
QUALCOMM Incorporated **(QCOM)**	Neutral	2
Sony Corporation **(SNE)**	Neutral	3
Xilinx, Inc. **(XLNX)**	Neutral	3

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

Industry Comparison Industry: Electronics - Semiconductors

				Industry Peers		
	AMBA	**X Industry**	**S&P 500**	**INTC**	**NVDA**	**QCOM**
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	3	-	-	3	4	2
VGM Score	D	-	-	A	B	C
Market Cap	1.79 B	839.68 M	23.38 B	212.99 B	311.52 B	130.85 B
# of Analysts	10	3	14	13	13	10
Dividend Yield	0.00%	0.00%	1.62%	2.64%	0.13%	2.24%
Value Score	F	-	-	A	F	C
Cash/Price	0.23	0.22	0.07	0.12	0.03	0.08
EV/EBITDA	-44.83	5.90	13.13	6.40	90.36	13.97
PEG F1	34.79	1.62	2.96	1.37	3.09	1.50
P/B	3.93	2.26	3.22	2.60	22.39	39.58
P/CF	NA	13.84	12.65	6.59	96.11	27.78
P/E F1	521.80	19.70	21.59	10.31	55.77	29.68
P/S TTM	7.80	2.63	2.44	2.70	23.84	6.54
Earnings Yield	0.19%	2.57%	4.42%	9.70%	1.79%	3.37%
Debt/Equity	0.02	0.15	0.70	0.44	0.50	4.67
Cash Flow ($/share)	-0.97	0.57	6.93	7.60	5.25	4.17
Growth Score	A	-	-	A	A	B
Historical EPS Growth (3-5 Years)	-49.86%	3.53%	10.41%	22.01%	37.24%	-8.64%
Projected EPS Growth (F1/F0)	-85.65%	13.58%	-4.75%	-0.21%	56.37%	10.37%
Current Cash Flow Growth	9.54%	-0.89%	5.22%	6.53%	-20.70%	-22.34%
Historical Cash Flow Growth (3-5 Years)	NA%	10.34%	8.49%	9.99%	28.68%	-10.62%
Current Ratio	8.91	3.24	1.35	1.97	6.09	1.97
Debt/Capital	1.60%	13.27%	42.95%	30.56%	33.34%	82.35%
Net Margin	-20.67%	2.01%	10.25%	29.97%	25.93%	13.72%
Return on Equity	-10.09%	3.22%	14.59%	31.55%	30.41%	78.39%
Sales/Assets	0.44	0.63	0.50	0.55	0.64	0.61
Projected Sales Growth (F1/F0)	-5.84%	3.04%	-1.42%	4.34%	44.80%	-13.11%
Momentum Score	D	-	-	B	A	F
Daily Price Change	4.17%	-0.78%	-0.30%	-0.62%	-3.02%	-0.40%
1-Week Price Change	13.14%	0.00%	2.59%	2.33%	3.66%	4.60%
4-Week Price Change	12.29%	-9.53%	2.00%	3.11%	11.35%	4.42%
12-Week Price Change	1.76%	5.08%	10.57%	-16.11%	43.50%	38.03%
52-Week Price Change	-13.36%	18.63%	1.69%	-0.04%	180.91%	46.82%
20-Day Average Volume (Shares)	730,383	173,207	1,827,096	34,194,456	13,483,514	9,721,038
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%	4.08%	-0.25%
EPS F1 Estimate 12-Week Change	-0.02%	7.31%	3.89%	0.97%	4.16%	3.85%
EPS Q1 Estimate Monthly Change	0.00%	0.00%	0.00%	0.00%	10.36%	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	F
Growth Score	A
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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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.