

Silicon Motion (SIMO)

\$63.81 (As of 06/16/21)

Price Target (6-12 Months): **\$73.00**

Long Term: 6-12 Months

Zacks Recommendation:

Outperform

(Since: 05/14/21)

Prior Recommendation: Neutral

Short Term: 1-3 Months

Zacks Rank: (1-5)

1-Strong Buy

Zacks Style Scores:

VGM:D

Value: D

Growth: C

Momentum: D

Summary

Silicon Motion's Q1 results benefited from solid demand for its solid state drive (SSD) controllers as well as eMMC and UFS controllers, the momentum of which is anticipated to continue through the second quarter of 2021. Growing adoption of embedded memory controllers amid uptick in smartphone sales is a positive. Increased PC sales triggered by online learning and work-from-home wave augur well. New design wins for PCIe Gen4 SSD controllers from NAND makers also bode well. Efforts to reward shareholders through dividends are noteworthy. Shares of the company have outperformed the industry in the year-to-date period. Nevertheless, coronavirus crisis-led production delays and supply chain constraints are anticipated to hinder near-term prospects. Stiff competition in the USB flash drive controller market is likely to impede growth.

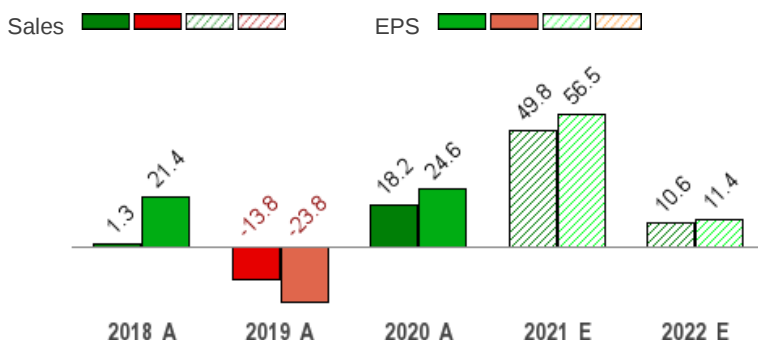
Price, Consensus & Surprise



Data Overview

52-Week High-Low	\$74.10 - \$35.13
20-Day Average Volume (Shares)	289,452
Market Cap	\$2.2 B
Year-To-Date Price Change	32.5%
Beta	1.11
Dividend / Dividend Yield	\$1.40 / 2.2%
Industry	Electronics - Semiconductors
Zacks Industry Rank	Top 38% (97 out of 252)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	18.1%
Last Sales Surprise	1.3%
EPS F1 Estimate 4-Week Change	0.0%
Expected Report Date	08/04/2021
Earnings ESP	2.4%

Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2022	213 E	225 E	241 E	238 E	895 E
2021	182 A	197 E	215 E	213 E	809 E
2020	133 A	137 A	126 A	144 A	540 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2022	\$1.27 E	\$1.35 E	\$1.44 E	\$1.42 E	\$5.65 E
2021	\$1.11 A	\$1.19 E	\$1.35 E	\$1.37 E	\$5.07 E
2020	\$0.80 A	\$0.81 A	\$0.76 A	\$0.86 A	\$3.24 A

*Quarterly figures may not add up to annual.

P/E TTM	18.0
P/E F1	12.6
PEG F1	2.5
P/S TTM	3.8

The data in the charts and tables, including the Zacks Consensus EPS and sales estimates, is as of 06/16/2021. The report's text and the

analyst-provided price target are as of 06/17/2021.

Overview

Founded in 1995, Silicon Motion Technology Corporation is a leading developer of microcontroller ICs for NAND flash storage devices.

The semiconductor company also designs, develops and markets high-performance, low-power semiconductor solutions for original equipment manufacturers ("OEM") and other customers.

On May 31, 2019, Silicon Motion announced that it has concluded the sale of mobile communications business (FCI product line) to Dialog Semiconductor Plc. for \$45 million.

Post the divestiture, the company's product portfolio is primarily aimed at SSD controllers in the mobile storage market.

Mobile storage: The main offerings of the market are Embedded memory controllers, SSD controllers & solutions, Flash memory card controllers and USB flash drive controllers.

Embedded memory controllers product offering includes controllers for eMMC and its derivative multi-chip package ("MCP") embedded memory, which combine NAND flash and mobile DRAM in an integrated solution; controllers for other embedded memory solutions and commercial-grade and industrial-grade products.

On the other hand, SSD controllers and solutions comprises SATA 6Gb/s SSD controllers for both NAND-cache SSDs and full-size client SSDs; controllers for single-chip SSDs and IDE/PATA disk-on-modules ("DOMs"); Ferri single-package SSD solutions, small single-chip SSDs.

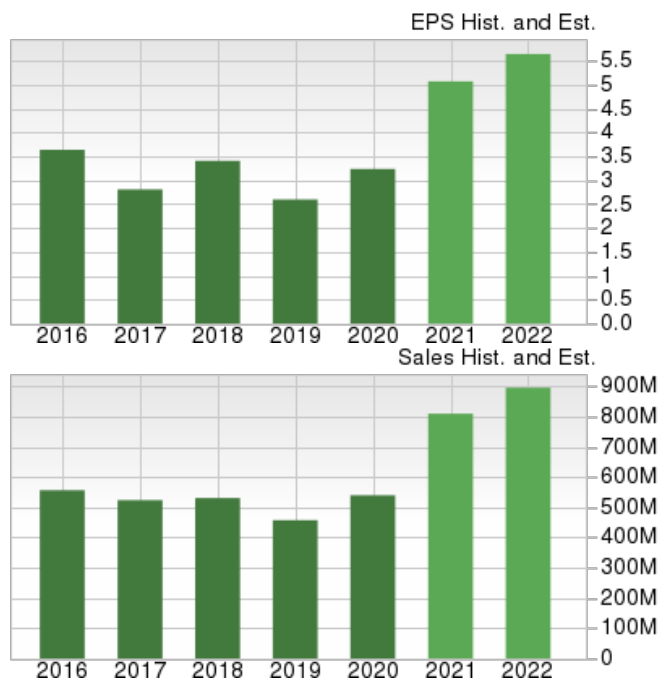
Shannon enterprise SSD solutions aimed at enterprise and hyperscale data centers offer high storage capacity, low latency, higher input/output operations per second (IOPS), and high performance capabilities.

Flash memory card controllers offers an extensive line of high-performance controllers for all major flash memory card formats, including Compact Flash ("CF"), SD and Memory Stick ("MS").

USB flash drive controllers include USB flash drives that are popular in computing and consumer electronics markets for portable storage of files.

Silicon Motion directs considerable resources toward research and development. As of Apr 30, 2020, the company had 1,522 patents (and 1,302 in pending applications) globally.

In 2020, Silicon Motion reported non-GAAP revenues of \$539.5 million.



Source: Zacks Investment Research

Reasons To Buy:

- ▲ Silicon Motion has established itself as the leading merchant supplier of client SSD controller to module makers, including most market leaders in the U.S., Taiwan and China. Most of the company's clients are ditching MLC flash for TLC flash. This has made the company focus on manufacturing SSD controllers that can manage TLC flash. Going forward, Silicon Motion believes the market will be dominated by SSDs that use TLC flash, which will further bolster their use in PC's, thereby displacing mechanical hard disk drives (HDDs). As TLC SSD offers higher performance and competitive advantage over HDDs, PCs are increasingly adopting them. Furthermore, the company believes a majority of its client SSD controller will be used for managing 3D flash, going forward. Silicon Motion believes it is well-equipped to adapt to industry changes as it has collaborated with flash vendors for nearly two years for developing proprietary controller technology to overcome existing weakness of 3D NAND and outshine peers. The company has commenced initial sales of 3D SSD controllers to flash partners and expect this controller to be a significant SSD controller growth driver for the next year, as NAND Flash partners' 3D capacity expands. Also, it commenced mass production of PCIe NVMe client SSD controller for flash partners. We believe accelerated product sales – along with favorable industry trends – signals bright prospects forward for Silicon Motion. In fact, Silicon Motion concluded the sale of mobile communications business (FCI product line) to Dialog Semiconductor Plc. to focus on SSD controllers domain. The company has also rolled out SM3282, a single chip flash controller, featuring accelerated performance and high storage capacity capabilities for cost-efficient external SSDs. Backed by pipeline expansion and growth in PC market, Silicon Motion is banking on robust growth in SSD controllers in 2021.
- ▲ Silicon Motion's eMMC is showing strong signals of rebound, thereby adding to the strength of its overall embedded storage market that comprises both SSD controllers and eMMC embedded memory. As market trends suggest the balance is tilting from transitioning of eMMC 4.5 toward that of eMMC 5.0, the company foresees lucrative prospects for eMMC 5.1 controller sales. We believe an expanding customer base and innovative products will likely act as tailwinds for the company's top-line growth, going forward. As a matter of fact, over the last 10 years, Silicon Motion has shipped over five billion controllers cumulatively – more than any other company in the world. On a yearly basis, Silicon Motion ships over 750 million NAND controllers.
- ▲ Silicon Motion has a keen eye for acquisitions that supplement its growth initiatives. In 2015, the company completed the acquisition of China's leading enterprise grade PCIe SSD and storage array vendor, Shannon Systems. The growing clout of Shannon products among leading Internet and e-commerce companies to utilities, telcos and other state-owned enterprises including government agencies, bodes well. Silicon Motion, expecting the high-end enterprise market of China to grow at least 15% for the next few years, has positioned itself well for catering to these needs. Shannon's strong leadership position, robust business pipeline and market opportunity in China will help it to achieve targeted growth in the long haul. Notably, the company's Open-Channel Shannon SSDs are being commercially deployed in data centers of Alibaba and another "B-A-T customer," which is a significant milestone. In addition, Ferri SSD controllers, also a part of the enterprise and industrial SSD offerings, is focusing on customized solution for industrial applications and gaining solid popularity among Japanese OEMs. Silicon Motion is expected to benefit from adoption of its enterprise and industrial SSD offerings.
- ▲ Silicon Motion directs considerable resources toward research and development in order to outshine its peers on that front. The company has an expert engineering team with profound knowledge in system architecture, digital, mixed-signal and RF IC design, and software engineering. For instance, in order to address the issue of affordability and to capture the higher-density equipment market, the company has planned to design its USB2 controllers such that they can be deployed in cheap versions of TLC NAND flash as well as futuristic high-density 3D NAND. Apart from this, the company's robust liquidity position allows it to undertake diligent capital deployment initiatives that supplements long-term growth. As of Apr 30, 2020, the company had 1,522 patents (and 1,302 in pending applications) globally.
- ▲ Silicon Motion has a strong balance sheet with ample liquidity position and no debt obligations. As of Mar 31, 2021, Silicon Motion had cash, cash equivalents, restricted cash and short-term investments of \$371 million. The company generated \$17.4 million cash from operations during the first quarter. Efforts to reward shareholders through dividend payouts deserve a special mention. Silicon Motion paid out dividends of \$12.2 million during the first quarter. The increasing liquidity and cash flow trend indicate that the company is making investments in the right direction. Since it carries no long-term debt, the cash is available for pursuing strategic acquisitions, investment in growth initiatives and distribution to shareholders. The company's ability to generate solid free cash flow is expected to help it sustain current dividend payout (0.55) level at least in the near term.

Silicon Motion has established itself as the leading merchant supplier of client SSD controller to module makers, including most market leaders in the U.S., Taiwan and China.

Risks

- The semiconductor industry, in general, is highly competitive which subjects Silicon Motion to stiff rivalry from peers. In the mobile storage market, the company encounters major competitors like Micron, Microchip, Marvell and ON Semiconductor. Of late, intensifying competition in the company's card and USB flash drive controller markets are proving to be major headwinds. Apart from this, the semiconductor industry is highly dynamic as it is prone to quick technological changes, competition from evolving industry standards and declining average selling prices. Also, customers sometimes develop their own products which reduce the need of the products supplied by the company. These factors may pose as threats.
 - Silicon Motion also faces macroeconomic risks like political, economic and social instability and certain industry-specific regulations in geographies where the company operates. The tense political condition between Taiwan and People's Republic of China increases the extent of political risk for the company. Moreover, North Korea's nuclear and ballistic missile testing programs, deteriorating relationship with South Korea, leadership woes and strained relations with the U.S. are likely to affect the nation's economic conditions that will, in turn, be harmful for the company's business. Sluggishness in the global economy is likely to weigh on the company's wireless and broader semiconductor market. Uncertain macroeconomic conditions and imposition of tariff owing to trade war between the United States and China has kept the company's OEM customers and NAND flash vendors on tenterhooks for quite some time now, which is a concern.
 - Silicon Motion 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, on May 15, 2019, Silicon Motion had revealed in annual filing that it is trimming Shannon sales forecast for 2019 "meaningfully." The declining operating performance of Shannon led to approximately \$5.0 million in inventory write-down in the second quarter. The company completed further write-down of goodwill and intangible assets in the third quarter of 2019 by \$16 million. In the third quarter of 2020, the company incurred SSD solutions restructuring charges worth \$2.7 million, owing to underperforming Shannon and Bigtera product lines. In the fourth quarter of 2020, the company completed the write down of remaining \$17.5 million of goodwill pertaining to underperforming Shannon product line.
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Last Earnings Report

Silicon Motion Q1 Earnings & Revenues Top Estimates

Silicon Motion Technology Corporation reported first-quarter 2021 non-GAAP earnings of \$1.11 per American Depositary Share (ADS), which surpassed the Zacks Consensus Estimate by 18.1%. Moreover, the bottom line increased 38.8% from the year-ago quarter's figure and increased 29.1% sequentially.

Net sales (non-GAAP) of \$182.4 million beat the Zacks Consensus Estimate by 1.3%. On a year-over-year basis, sales rallied 37% driven by higher sales of SSD controllers as well as eMMC and UFS controllers. Net sales also increased 27% sequentially in the first quarter.

Performance in Detail

Management noted that sales of SSD controllers surged in the range of 25-30% sequentially.

Notably, revenues from SSD solutions increased between 0% and 5% quarter over quarter. Revenues from eMMC and UFS controllers rose in the range of 30-35% sequentially.

In the first quarter of 2021, sales of SSD controllers increased 45-50% year over year, while sales of eMMC and UFS controllers surged 50-55% on a year-over-year basis. In the quarter under review, SSD solutions' sales declined 40-45% year over year

Margins

Non-GAAP gross margin of 50.7% expanded 250 basis points (bps) on a year-over-year basis and expanded 140 basis points (bps) sequentially.

Non-GAAP operating expenses, as a percentage of revenues, came in at 24.1%, contracting 410 bps year over year and 330 bps sequentially.

Non-GAAP operating margin expanded 660 bps on a year-over-year basis and 470 bps sequentially to 26.6%.

Balance Sheet & Cash Flow

As of Mar 31, 2021, Silicon Motion had cash, cash equivalents, restricted cash and short-term investments of \$371 million compared with \$369.2 million as of Dec 31, 2020.

The company generated \$17.4 million cash from operations during the reported quarter compared with \$21.7 million in the fourth quarter.

On Oct 26, 2020, the company's board of directors approved \$1.40 per ADS of annual dividend, slated to be paid out in quarterly installments of 35 cents per ADS. On Feb 26, 2021, the company paid out \$12.2 million as dividend to shareholders, which marked its second installment.

On Nov 21, 2018, Silicon Motion announced a new buyback program spread over a two-year period. Per the program, the company will repurchase approximately \$200 million ADS. In the reported quarter, the company did not repurchase any ADSs.

Under the buyback program, the company repurchased shares worth \$84.8 million of ADSs, with \$115.2 million remaining untapped under the program. On Oct 26, 2020, the board of directors approved the extension of the conclusion of the program to Nov 21, 2021.

Guidance

For second-quarter 2021, Silicon Motion expects non-GAAP revenues in the range of \$192-\$201 million.

Non-GAAP gross margin is anticipated in the range of 48-50%. Non-GAAP operating margin is projected in the range of 26-28%.

Second-quarter revenues are likely to reflect gains from strong sales of eMMC and UFS controllers as well as continued momentum in SSD controller sales, backed by strong foundry supply availability.

Notably, increased PC sales triggered by online learning and work-from-home wave hold promise. Strong PC shipments are expected to benefit the company's PCIe NVMe SSD controllers.

For 2021, Silicon Motion now expects non-GAAP revenues in the range of \$782-\$836 million compared with the previous view of \$650-\$700 million.

Non-GAAP gross margin is anticipated in the band of 47-49%. Non-GAAP operating margin is projected in the range of 26-28%.

Quarter Ending	03/2021
Report Date	May 05, 2021
Sales Surprise	1.33%
EPS Surprise	18.09%
Quarterly EPS	1.11
Annual EPS (TTM)	3.54

Recent News

On Apr 26, 2021, Silicon Motion announced that next quarterly installment of dividend worth 35 cents per ADS will be paid to shareholders on May 20, 2021 to shareholders as of record May 6, 2021.

On Mar 31, 2021, Silicon Motion announced that its SM2708 SD Express controller turnkey offering backs latest 3D NAND technology as well as SD 8.0 specification and backward compatibility to SD 7.1 specification.

On Nov 17, Silicon Motion unveiled an enterprise-grade PCIe 4.0 NVMe hardware and firmware turnkey solid state drive (SSD) controller solution — SM8266. The offering will enable manufacturers to accelerate time taken to introduce new enterprise SSD products (especially for data centers) in the market.

On Oct 23, Silicon Motion rolled out latest PCIe 4.0 NVMe 1.4 controller solutions which carry up to 7,400 MB/s sequential read speeds and 6,800 MB/s write speeds.

On Jun 10, Silicon Motion introduced SM768 graphics display SoC integrated with InstantView Driverless Docking technology to enable users to mirror the screen of any Android phone or laptop to display presentations without the need of downloading a driver.

Valuation

Silicon Motion shares are up 32.5% in the year-to-date period and 42.2% over the trailing 12-month period. Stocks in the Zacks sub-industry are up 3.1% while shares in the Zacks Computer & Technology sector are up 14.9% in the year-to-date period. In the past year, the Zacks sub-industry and sector are up 55.1% and 46.7%, respectively.

The S&P 500 index is up 13.2% in the year-to-date period and 37.6% in the past year.

The stock is currently trading at 11.95X forward 12-month earnings, which compares to 20.82X for the Zacks sub-industry, 27.41X for the Zacks sector and 21.71X for the S&P 500 index.

Over the past five years, the stock has traded as high as 30.43X and as low as 10.59X, with a 5-year median of 15.77X. Our Outperform recommendation indicates that the stock will perform better than the market. Our \$73 price target reflects 13.74X forward 12-month earnings.

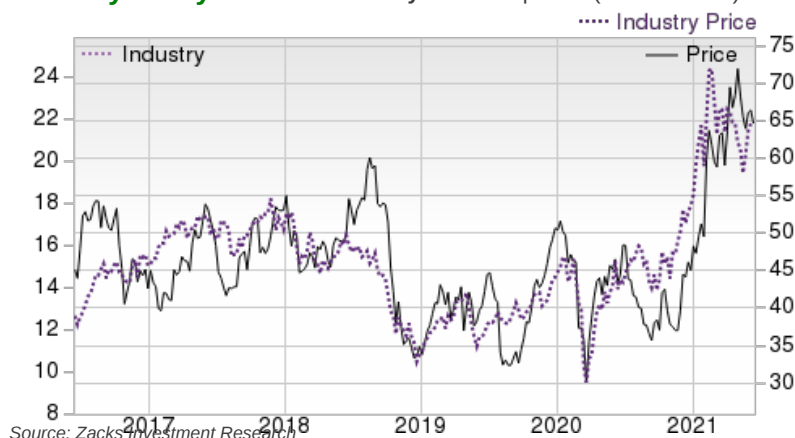
The table below shows summary valuation data for SIMO

Valuation Multiples - SIMO					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	11.95	20.82	27.41	21.71
	5-Year High	30.43	29.47	28.35	23.83
	5-Year Low	10.59	5.59	16.99	15.31
	5-Year Median	15.77	11.75	20.24	18.05
P/S F12M	Current	2.63	7.28	4.89	4.72
	5-Year High	4.23	8.39	4.89	4.74
	5-Year Low	1.9	4.81	2.81	3.21
	5-Year Median	2.85	5.89	3.53	3.72
EV/Sales TTM	Current	3.21	7.37	5.63	4.84
	5-Year High	3.92	8.69	5.79	4.88
	5-Year Low	1.57	3.99	3.08	2.65
	5-Year Median	2.52	5.62	4	3.64

As of 06/16/2021

Source: Zacks Investment Research

Industry Analysis Zacks Industry Rank: Top 38% (97 out of 252)



Top Peers

Company (Ticker)	Rec	Rank
Broadcom Inc. (AVGO)	Neutral	2
Cyclacel Pharmaceuticals, Inc. (CYCC)	Neutral	3
Microchip Technology Incorporated (MCHP)	Neutral	2
Marvell Technology, Inc. (MRVL)	Neutral	3
Micron Technology, Inc. (MU)	Neutral	2
Netlist, Inc. (NLST)	Neutral	3
ON Semiconductor Corporation (ON)	Neutral	2
QUALCOMM Incorporated (QCOM)	Neutral	3

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

Industry Comparison Industry: Electronics - Semiconductors				Industry Peers		
	SIMO	X Industry	S&P 500	MRVL	MU	ON
Zacks Recommendation (Long Term)	Outperform	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	1	-	-	3	2	2
VGM Score	D	-	-	D	B	A
Market Cap	2.23 B	1.18 B	29.96 B	36.56 B	90.26 B	15.92 B
# of Analysts	5	2	12	13	8	11
Dividend Yield	2.18%	0.00%	1.3%	0.44%	0.00%	0.00%
Value Score	D	-	-	D	B	B
Cash/Price	0.16	0.12	0.05	0.02	0.08	0.06
EV/EBITDA	18.95	13.98	17.13	88.49	10.10	17.98
PEG F1	2.52	1.57	2.12	1.88	0.93	0.43
P/B	3.77	3.90	4.17	4.31	2.22	4.36
P/CF	24.98	18.46	17.46	34.08	10.42	15.48
P/E F1	12.59	17.86	21.27	38.63	14.50	19.31
P/S TTM	3.78	3.96	3.46	11.77	3.84	2.92
Earnings Yield	7.95%	2.58%	4.62%	2.59%	6.90%	5.18%
Debt/Equity	0.00	0.02	0.66	0.12	0.15	0.77
Cash Flow (\$/share)	2.56	0.42	6.83	1.59	7.73	2.41
Growth Score	C	-	-	C	B	A
Historical EPS Growth (3-5 Years)	-3.29%	4.19%	9.44%	3.21%	61.53%	3.67%
Projected EPS Growth (F1/F0)	56.60%	47.32%	21.49%	52.26%	96.16%	127.16%
Current Cash Flow Growth	20.22%	14.87%	0.86%	33.62%	-31.58%	-18.87%
Historical Cash Flow Growth (3-5 Years)	5.18%	7.99%	7.28%	48.24%	7.44%	6.67%
Current Ratio	4.52	2.88	1.39	1.50	3.18	1.84
Debt/Capital	0.00%	3.74%	41.51%	10.53%	13.41%	43.47%
Net Margin	14.98%	6.49%	11.95%	-8.13%	13.60%	6.19%
Return on Equity	15.07%	10.84%	16.48%	5.25%	9.81%	13.23%
Sales/Assets	0.79	0.67	0.51	0.29	0.44	0.61
Projected Sales Growth (F1/F0)	49.99%	14.33%	9.41%	42.84%	26.04%	20.05%
Momentum Score	D	-	-	F	C	B
Daily Price Change	-1.63%	-0.55%	-0.54%	0.97%	-2.06%	-0.40%
1-Week Price Change	-2.65%	-0.53%	0.10%	6.98%	-5.28%	-1.13%
4-Week Price Change	-0.09%	8.30%	2.62%	21.57%	0.70%	-0.45%
12-Week Price Change	9.68%	4.72%	8.60%	19.58%	-3.02%	-2.18%
52-Week Price Change	40.03%	85.12%	35.66%	54.69%	57.95%	88.43%
20-Day Average Volume (Shares)	289,452	208,103	1,734,994	8,081,300	15,866,925	4,870,652
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%	0.05%	-7.31%	1.54%	0.13%
EPS F1 Estimate 12-Week Change	40.53%	9.80%	3.39%	-6.16%	25.66%	17.62%

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

EPS Q1 Estimate Monthly Change	0.00%	0.00%	0.00%	-13.74%	1.71%	0.59%
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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.

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

Value Score	D
Growth Score	C
Momentum Score	D
VGM Score	D

Disclosures

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

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Additional Disclosure

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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.