

## Advanced Micro Devices (AMD)

**\$69.40** (As of 07/24/20)

Price Target (6-12 Months): **\$79.00**

Long Term: 6-12 Months

**Zacks Recommendation:** **Outperform**  
(Since: 07/15/20)

Prior Recommendation: Neutral

Short Term: 1-3 Months

**Zacks Rank:** (1-5) **2-Buy**  
Zacks Style Scores: VGM:D  
Value: F | Growth: C | Momentum: D

### Summary

AMD is gaining from robust adoption of second-generation 7 nanometer based EPYC server processors, courtesy of increasing proliferation of AI techniques and Machine Learning (ML) tools in industries like cloud gaming and supercomputing domain. Further, accelerated adoption of AMD's products in the data center industry remains a key catalyst. Growing clout of AMD's latest Ryzen and Radeon processors is expected to strengthen presence in the commercial market. Notably, shares of AMD have outperformed the industry on a year-to-date basis. Moreover, the improving trend in PC shipments, driven by work-from-home and online learning wave, is likely to positively impact PC-makers. This, in turn, bodes well for AMD's prospects. Also, partnerships with Amazon, Microsoft, Baidu and JD.com are opening newer business avenues for the company.

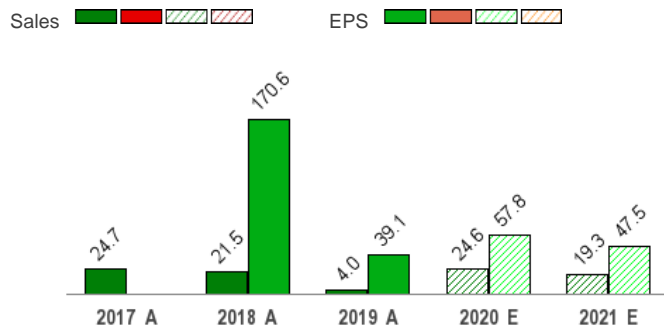
### Price, Consensus & Surprise



### Data Overview

52 Week High-Low	<b>\$69.94 - \$27.43</b>
20 Day Average Volume (sh)	<b>51,455,108</b>
Market Cap	<b>\$81.3 B</b>
YTD Price Change	<b>51.3%</b>
Beta	<b>2.14</b>
Dividend / Div Yld	<b>\$0.00 / 0.0%</b>
Industry	<b><a href="#">Electronics - Semiconductors</a></b>
Zacks Industry Rank	<b>Top 38% (97 out of 252)</b>

### Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	<b>0.0%</b>
Last Sales Surprise	<b>0.4%</b>
EPS F1 Est- 4 week change	<b>0.7%</b>
Expected Report Date	<b>07/28/2020</b>
Earnings ESP	<b>0.0%</b>
P/E TTM	<b>91.3</b>
P/E F1	<b>68.7</b>
PEG F1	<b>1.7</b>
P/S TTM	<b>11.2</b>

### Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2021	2,196 E	2,345 E	2,654 E	2,753 E	10,011 E
2020	1,786 A	1,853 E	2,311 E	2,434 E	8,389 E
2019	1,272 A	1,531 A	1,801 A	2,127 A	6,731 A

### EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2021	\$0.28 E	\$0.33 E	\$0.41 E	\$0.43 E	\$1.49 E
2020	\$0.18 A	\$0.16 E	\$0.31 E	\$0.36 E	\$1.01 E
2019	\$0.06 A	\$0.08 A	\$0.18 A	\$0.32 A	\$0.64 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 07/24/2020. The reports text is as of 07/27/2020.

## Overview

Advanced Micro Devices has strengthened its position in the semiconductor market on the back of its evolution as an enterprise-focus company from a pure-bred consumer-PC chip provider.

AMD has emerged as a strong challenger to NVIDIA's dominance in the graphic processing unit or GPU market based on its Radeon technology.

Launch of 7 nanometer (nm)-based AMD Radeon RX 5700-series gaming graphics card family featuring RDNA architecture, high-speed GDDR6 (Graphics Double Data Rate type 6) memory and support for the PCIe 4.0 interface, has helped the company increase presence among gamers.

Moreover, AMD's Radeon Pro graphics cards and Radeon VR Creator cards support game developers, and virtual reality (VR) and augmented reality (AR) technologies, respectively.

Further, AMD Radeon Instinct family of GPU products are gaining traction in data center applications, including deep learning training and traditional high-performance computing (HPC) workloads.

Additionally, AMD EPYC 7001 Series of high-performance processors is helping AMD gain share in the server market. Further, AMD EPYC Embedded 3000 Series of processors addresses new markets including, networking, storage and edge computing devices.

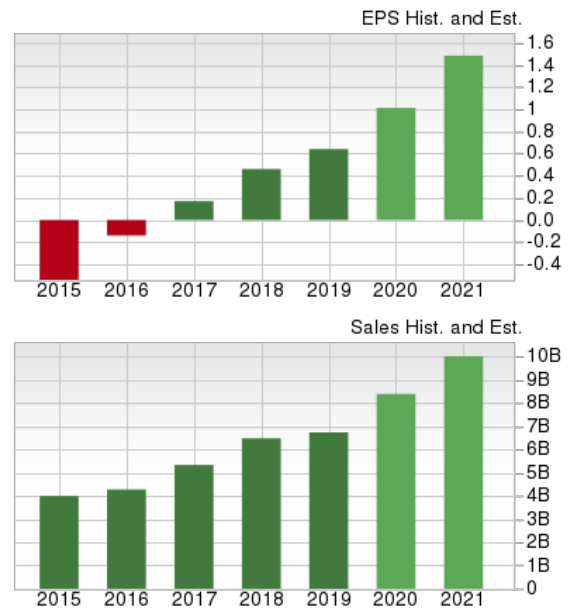
In consumer-PC market, AMD has become a key challenger to Intel courtesy AMD Ryzen desktop processor family. The company's desktop-based processor offerings include Ryzen and high-end Ryzen Threadripper processors, among others. AMD Athlon and AMD PRO series of processors cater to commercial and consumer desktop PC market.

AMD's processors are primarily powered by the company's proprietary "Zen" CPU and "Vega" GPU architectures.

Santa Clara, CA-based, AMD generated revenues of \$6.731 billion in 2019. The company reports operations under two segments — Computing and Graphics, and Enterprise, Embedded and Semi-Custom.

Computing and Graphics segment includes desktop and notebook processors and chipsets, discrete GPUs and professional graphics. This segment generated revenues of \$4.709 billion in 2019.

Enterprise, Embedded and Semi-Custom segment includes server and embedded processors, dense servers, semi-custom SoC products, engineering services and royalties. This segment generated \$2.02 billion in 2019.



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## Reasons To Buy:

- ▲ In order to diversify its business beyond the slowing, transitioning PC market, AMD is enhancing its semi-custom chip business, which has been performing well till date. AMD plans to expand its semi-custom business into other high-growth markets such as the semi-custom ultra-low power client, embedded, dense server and professional graphics markets, where it can offer differentiated products that use its APU and graphics IP. The company's release of Vega-based GPUs and increasing demand for in both gaming and blockchain industries are key catalysts. The number of Ryzen notebook models set to be launched in 2020 is 50% higher than the ones launched in 2019. These systems are mostly from the likes of Acer, Asus, Dell, HP, Lenovo and other OEMs.
- ▲ Despite its late entry, AMD has attained the position of a major player in the microprocessor and graphics processing markets. The company started small, targeting the low-end segment and gradually built a position for itself. AMD has had a very rough time because of the strength and market position of its two primary competitors Intel and NVIDIA. While Intel remains supreme in the microprocessor segment and has also notably strengthened its graphics capabilities, NVIDIA remains strong in the graphics market. AMD combined its own engineering talent with that of ATI to develop capabilities in both these areas. Considering the might of its competitors, AMD has done well to hold its own in the face of significant changes in the markets it serves. Moreover, increasing demand for cryptocurrency mining has been a key catalyst for AMD's GPU sales in recent times.
- ▲ Strength in 7 nanometer-based processors are expected to strengthen the company's competitive position in the commercial and server market against Intel. Notably, Intel's chips utilize process technologies that are designed in-house. Meanwhile, AMD is currently leveraging Taiwan Semiconductor Manufacturing Company's 7 nm process technology, which is enabling it to deliver its advanced 7 nm chips faster to market. Further, AMD aims to deliver "Zen 4" core architecture, which is "currently in design" utilizing advanced 5 nm process technology. This is a major concern for Intel, which is yet to deliver 7 nm chips. Markedly, Intel noted delay in 7nm process-based chips in its second-quarter earnings conference. The company has detected a defect mode in 7 nm process, which caused yield degradation. This is expected to favor AMD capture market share and challenge Intel's dominance in the semiconductor market.
- ▲ Given the persistent weakness in the core PC business, AMD like Intel, has started investing in its embedded business. Strength in this segment should continue in the future too as the company scores more wins. Given continued product enhancements and design wins at strategic players in key verticals such as digital signage and medical equipment, we expect the momentum to continue through 2020. The company is currently targeting the communications, industrial, and gaming segments of the market and there appear to be suitable design wins to generate substantial revenue growth over the next few years. AMD expects the total addressable market for its high-performance embedded SOC's and processors to be \$9 billion and therefore the company is trying to increase its share in this market by delivering competitive products.
- ▲ Per Gartner's preliminary data, PC shipments in second-quarter 2020 improved 2.8% year over year to 64.8 million units. Going by the IDC report, shipments were up 11.2% on a year-over-year basis to 72.3 million in the quarter. The improving trend in PC shipments, driven by work-from-home and online learning wave, is likely to positively impact PC-makers that eventually bode well for AMD's growth prospects.
- ▲ Management execution has been good amid testing times in the wake of the coronavirus pandemic. The solid net-cash balance of \$902 million as of Mar 28, 2020, provides the flexibility required to pursue strategic acquisitions and invest in other growth initiatives. Moreover, total debt to total capital of 13.8% is lower than prior-quarter figure of 14.7%. Further, times interest earned is 7.7X, compared with the prior-quarter figure of 5X.

AMD is well-poised to benefit from strong demand for its x86-based microprocessors, semi-custom chips, and embedded processors, and GPUs driven by increasing adoption of AI and ML techniques.

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## Risks

- In the traditional computing market, which still generates a chunk of its revenues, AMD is up against Intel's strong market position. With Intel systems so well entrenched, there is an obvious preference for system integrators to choose Intel processors over AMD. So far, Intel processors have also afforded superior functionality, enabling it to exercise pricing power. In the past, AMD was forced to resort to penetration pricing, which severely impacted its profitability. Now that it is getting into the higher-range segment, it is facing very stiff competition from Intel. Moreover, AMD faces significant competition from NVIDIA in GPU market. AMD has had relatively greater success in the mobile segment and its current product lineup indicates that this focus will continue. However, competition in the mobile segment is likely to accelerate, with more ARM-based devices coming on the market.
  - AMD faces significant customer concentration from Sony and Microsoft. Consequently, loss of any one of these customers is anticipated to massively hurt the top line. Notably, Sony accounted for more than 10% of the company's total revenues in 2019. Also, AMD derives a significant proportion of its revenues from outside the United States (74% in 2019), subjecting the company to exchange rate volatility.
  - AMD anticipates decline in the PC total addressable market (TAM) in the second half of 2020 as weakness in economy is likely to offset the spike in coronavirus-led demand, which remains a major concern. In fact, sluggishness in China on account of coronavirus crisis-induced lockdowns, weighed on PC-related sales in first-quarter 2020.
  - Moreover, the company is trading at premium in terms of Price/Book (P/B). AMD currently has a trailing 12-month P/B ratio of 26.76X. This level compares unfavorably with what the industry witnessed in the last year. Additionally, the ratio is higher than the average level of 19.4X and is near the high end of the valuation range in this period. Consequently, the valuation looks slightly stretched from P/B perspective.
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## Last Earnings Report

### AMD Q1 Earnings Match Estimates, Revenues Up Y/Y

Advanced Micro Devices reported first-quarter 2020 non-GAAP earnings of 18 cents per share, which matched the Zacks Consensus Estimate. Notably, the bottom line improved 200% year over year but declined 43.8% sequentially.

Revenues of \$1.79 billion surpassed the Zacks Consensus Estimate by 0.4% and surged 40% year over year. However, the top line declined 16% sequentially.

Strength in Computing and Graphics, and Enterprise segment drove year-over-year improvement.

#### Segmental Details

**Computing and Graphics** segment (80.4% of total revenues) revenues of \$1.44 billion, improved 73% year over year. This can be attributed to robust adoption of Ryzen and Radeon processors. The figure declined 13% sequentially thanks to sluggish graphics processor sales.

In desktop vertical, seasonal uptick in demand for second and third generation Ryzen processors across retailers and e-tailers drove segment results.

However, sluggishness in China, owing to coronavirus crisis-induced lockdowns, weighed on PC-related sales.

Client processor average selling price (ASP) improved year over year on higher Ryzen processor sales. Client processor ASP declined sequentially on account of higher notebook sales.

In mobile domain, unit shipments grew double-digit on a year-over-year basis. Revenues from Notebook processors benefited from continued demand for previous generation products and increasing traction of Ryzen 4000 mobile processors.

Management also remains optimistic regarding growing clout of Ryzen 4000 mobile processors families across leading OEMs. Markedly, Ryzen 4000 mobile processors powered laptops from HP, Dell, Lenovo and other major OEMs, slated for release in 2020, are expected to help AMD in expanding presence in the commercial market. ASUS and Acer have already launched notebooks based on the AMD Ryzen 4000 Series mobile processors.

The latest AMD Ryzen PRO 4000 Series mobile processors are witnessing traction across leading commercial OEMs. Lenovo is set to leverage the processors in its ThinkPad T series, X series and L series of business notebooks, while HP has rolled out new "enterprise-ready" ProBooks.

In graphics domain, higher sales of Radeon RX 5000 series GPUs based on RDNA architecture drove double-digit growth in unit shipments and revenues on a year-over-year basis. However, GPU ASP declined on a year-over-year basis and sequentially due to product mix.

Management notes that the company is on track to launch next-generation gaming GPUs, enhanced with a 50% increase in performance per watt over the existing products, later in 2020.

Moreover, desktop channel sales increase was driven by robust utilization of Radeon RX 500 series GPUs and new processors based on 7 nanometer (nm) RDNA architecture.

Management noted that Data Center GPU business is making progress. The company inked new deal wins in cloud, game streaming and VDI verticals in the reported quarter.

**Enterprise, Embedded and Semi-Custom** segment (19.4% of total revenues) revenues of \$348 million were down 21% year over year and 25% sequentially.

The decline can primarily be attributed to lower semi-custom product revenues, partially offset by higher EPYC server processor sales.

In server domain, unit shipments improved by double-digit growth on a sequential basis and more than tripled on a year-over-year basis. Strength in AMD's latest EPYC processors are enabling the company to win new deals from major enterprise, cloud, and HPC companies.

In cloud vertical, AMD's second gen EPYC processors witnessed traction across IBM, Google Cloud Platform and Microsoft Azure. Moreover, major cloud players utilized server processors to meet accelerated demand for collaboration services induced by coronavirus-led work-from-home wave and increased use of online schooling solutions.

In enterprise domain, AMD rolled out new high-performance processors to support complex applications, advanced modeling, database and hyper-converged workloads.

Considering HPC vertical, Lawrence Livermore National Laboratories intends to use AMD's second Gen EPYC processors and Radeon Instinct GPUs to power El Capitan supercomputer.

Management is optimistic on increasing utilization of AMD CPUs and GPUs across supercomputing systems.

#### Operating Details

Non-GAAP gross margin expanded 500 basis points (bps) on a year-over-year basis to 46%, driven by strong adoption of EPYC and Ryzen processors.

### Quarter Ending 03/2020

Report Date	Apr 28, 2020
Sales Surprise	0.39%
EPS Surprise	0.00%
Quarterly EPS	0.18
Annual EPS (TTM)	0.76

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Non-GAAP operating expenses on a non-GAAP basis increased 7.2% year over year to \$584 million, due to higher investments in Research & development (R&D) and go-to-market initiatives.

R&D expenses rose 18.5% year over year to \$442 million. Marketing, general and administrative expenses climbed 17.1% year over year to \$199 million.

Adjusted EBITDA soared 133.8% year over year to \$304 million on earnings growth.

Non-GAAP operating income came in at \$236 million, up 181% year over year. Rising revenue base, and higher contribution from EPYC and Ryzen processors sales drove year-over-year improvement.

Segment wise, Computing and Graphics operating income was \$262 million, compared with \$16 million reported in the year-ago quarter courtesy of higher revenues. Enterprise, Embedded and Semi-Custom loss was \$26 million against an operating income of \$68 million in the year-ago quarter.

#### **Balance Sheet & Cash Flow**

As of Mar 28, 2020, AMD had cash and cash equivalents (including marketable securities) of \$1.39 billion compared with \$1.50 billion as of Dec 28, 2019.

As of Mar 28, 2020, total debt (long-term plus short-term) was \$488 million, up from \$486 million as of Dec 28, 2019.

Operating cash outflow was reported at \$65 million, against \$442 million generated in the previous quarter.

Free cash outflow was \$120 million against free cash flow of \$400 million in the prior quarter.

#### **Guidance**

AMD expects second-quarter 2020 revenues to be roughly \$1.85 billion (+/- \$100 million), indicating year-over-year and quarter-over-quarter growth of 21% and 4%, respectively.

For second-quarter 2020, AMD expects robust sales from Ryzen and EPYC processor to drive year-over-year revenues. Further, sequential increase in revenues is anticipated on account of growth in EPYC processor and semi-custom sales.

Semi-custom revenues are projected to gain from production increase to support the launch of the latest Xbox Series X and PlayStation 5 gaming consoles scheduled for holiday season of 2020.

Non-GAAP gross margin is anticipated to be 44%.

For 2020, AMD projects revenues to grow 25% (+/-5%) over 2019 amid weak demand environment induced by the coronavirus crisis. Non-GAAP gross margin is anticipated to be 45%.

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## Recent News

On Jul 21, AMD unveiled 7nm based x86 Ryzen 4000 Series Desktop Processors and Athlon 3000 Series Desktop Processors, processors embedded with advanced Radeon graphics for commercial and consumer PC markets.

On Jul 14, AMD announced that Google Cloud is expanding its use of second-gen EPYC processors to provide enhanced security features to customers. Google Cloud's latest Confidential Virtual Machines ("VMs") will leverage second-gen EPYC processors' Secure Encrypted Virtualization feature to help customers encrypt sensitive data not only when it is at rest but also while it is being processed.

On Jul 14, AMD expanded Ryzen Threadripper PRO Processor family of processors with up to 64 cores and enhanced bandwidth performance integrated with enterprise-grade AMD PRO technologies.

On Jun 22, AMD announced that the AMD EPYC processors have been adopted by multiple high-performance computers that include seventh fastest supercomputer in the world and four of the 50 highest-performance systems on the bi-annual TOP500 list. The processors are witnessing adoption in advanced science and health research with new installations at Purdue University, Indiana University and CERN.

On Jun 16, AMD expanded third generation Ryzen desktop processor family with Ryzen 9 3900XT, Ryzen 7 3800XT and Ryzen 5 3600XT processors to aid users maximize performance of complex workloads and higher boost frequencies to enhance gaming experience.

On Jun 15, AMD launched new AMD Radeon Pro 5600M Mobile GPU for Apple's 16-inch MacBook Pro laptops. The GPU leverages 7 nanometer (nm) process technology and AMD RDNA architecture.

On Jun 8, AMD announced that its second-generation EPYC processors will help NVIDIA in delivering high-performance computing capabilities to customers to support diverse AI workloads.

On Jun 4, AMD announced that its second-generation EPYC processors will help AWS deliver higher compute power and optimized performance to customers. Notably, AWS' Amazon Elastic Compute Cloud (EC2) C5a instances leverage the EPYC processor's high core count to deliver optimal performance to customers, which will help them handle compute intensive workloads including distributed analytics, web applications and video game development.

On May 7, AMD expanded Ryzen PRO 4000 Series Mobile family with x86 7nm-based commercial notebook processors to enable remote work capabilities with advanced computing performance to facilitate business productivity.

## Valuation

Advanced Micro Devices shares are up 51.3% in the year-to-date period and 107.3% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 11.3% and 13.4% in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and the sector are up 29.1% and 21.6%, respectively.

The S&P 500 index is up 0.1% in the year-to-date period and 6.9% in the past year.

The stock is currently trading at 8.73X forward 12-month sales, which compares to 7.23X for the Zacks sub-industry, 3.88X for the Zacks sector and 3.55X for the S&P 500 index.

Over the past five years, the stock has traded as high as 8.73X and as low as 0.32X, with a 5-year median of 2.32X. Our Outperform recommendation indicates that the stock will perform better than the market. Our \$79 price target reflects 9.94X forward 12-month sales.

The table below shows summary valuation data for AMD

Valuation Multiples - AMD					
		Stock	Sub-Industry	Sector	S&P 500
P/S F12M	Current	8.73	7.23	3.88	3.55
	5-Year High	8.73	7.23	3.88	3.55
	5-Year Low	0.32	4.68	2.32	2.53
	5-Year Median	2.32	5.72	3.14	3.02
EV/Sales TTM	Current	11.1	6.78	4.51	3.15
	5-Year High	11.1	6.78	4.51	3.45
	5-Year Low	0.53	2.63	2.59	2.14
	5-Year Median	2.65	5.34	3.65	2.84

As of 07/24/2020

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



## Top Peers

Company (Ticker)	Rec	Rank
Microchip Technology Incorporated (MCHP)	Outperform	1
Synaptics Incorporated (SYNA)	Outperform	2
Amkor Technology, Inc. (AMKR)	Neutral	3
Cirrus Logic, Inc. (CRUS)	Neutral	3
DIALOG SEMICON (DLGNF)	Neutral	2
Intel Corporation (INTC)	Neutral	3
NVIDIA Corporation (NVDA)	Neutral	3
SemiconductorManufacturing International Corporation (SMICY)	Neutral	3

Industry Comparison Industry: Electronics - Semiconductors				Industry Peers		
	AMD	X Industry	S&P 500	AMKR	INTC	NVDA
Zacks Recommendation (Long Term)	Outperform	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	2	-	-	3	3	3
VGM Score	D	-	-	A	A	C
Market Cap	81.28 B	844.51 M	22.16 B	2.91 B	214.20 B	250.78 B
# of Analysts	11	3	14	1	14	13
Dividend Yield	0.00%	0.00%	1.81%	0.00%	2.61%	0.16%
Value Score	F	-	-	B	A	F
Cash/Price	0.02	0.19	0.06	0.34	0.08	0.07
EV/EBITDA	106.61	6.39	13.07	4.45	6.59	71.09
PEG Ratio	1.71	1.78	3.03	NA	1.39	3.06
Price/Book (P/B)	26.76	2.88	3.11	1.41	2.81	19.15
Price/Cash Flow (P/CF)	91.25	14.46	12.27	4.38	6.66	77.63
P/E (F1)	68.71	22.61	21.88	17.25	10.45	51.60
Price/Sales (P/S)	11.22	2.83	2.38	0.68	2.71	21.29
Earnings Yield	1.46%	1.46%	4.34%	5.80%	9.57%	1.94%
Debt/Equity	0.16	0.11	0.76	0.71	0.48	0.57
Cash Flow (\$/share)	0.76	0.57	7.01	2.76	7.60	5.25
Growth Score	C	-	-	B	A	C
Hist. EPS Growth (3-5 yrs)	NA%	3.40%	10.82%	4.26%	21.32%	40.62%
Proj. EPS Growth (F1/F0)	58.09%	-0.18%	-9.01%	25.00%	-0.56%	36.48%
Curr. Cash Flow Growth	44.79%	-4.50%	5.47%	-5.49%	6.53%	-20.70%
Hist. Cash Flow Growth (3-5 yrs)	27.24%	10.34%	8.55%	-0.41%	9.99%	28.68%
Current Ratio	2.21	3.40	1.31	2.06	1.74	10.29
Debt/Capital	13.84%	13.62%	44.41%	41.51%	32.32%	36.34%
Net Margin	6.72%	1.51%	10.46%	4.82%	29.97%	28.17%
Return on Equity	28.28%	3.12%	15.13%	10.69%	32.17%	28.59%
Sales/Assets	1.30	0.64	0.54	0.95	0.57	0.66
Proj. Sales Growth (F1/F0)	24.63%	3.33%	-2.06%	12.81%	2.84%	32.57%
Momentum Score	D	-	-	A	A	A
Daily Price Chg	16.50%	-0.71%	-0.65%	-4.47%	-16.24%	0.64%
1 Week Price Chg	-1.50%	0.41%	3.82%	-0.25%	0.79%	-2.65%
4 Week Price Chg	33.64%	3.67%	4.96%	-0.86%	-13.54%	7.42%
12 Week Price Chg	32.47%	20.82%	9.30%	22.22%	-15.66%	39.52%
52 Week Price Chg	106.12%	17.87%	-2.82%	50.19%	-3.01%	135.19%
20 Day Average Volume	51,455,108	241,022	2,026,477	922,065	20,095,930	9,225,891
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(F1) EPS Est 4 week change	0.72%	0.00%	0.15%	0.00%	0.12%	0.11%
(F1) EPS Est 12 week change	-8.13%	0.00%	-3.24%	7.69%	-0.01%	5.48%
(Q1) EPS Est Mthly Chg	0.00%	0.00%	0.00%	0.00%	0.36%	-1.30%



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## 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 have an excellent 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.

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### 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	C
Momentum Score	D
VGM Score	D

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

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### Disclosures

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