# NVIDIA Corporation (NVDA)

**$240.38** (As of 01/08/20)

Price Target (6-12 Months): **$247.00**

| | | |
|---|---|---|
| Long Term: 6-12 Months | **Zacks Recommendation:** (Since: 03/29/19) Prior Recommendation: Underperform | **Neutral** |
| Short Term: 1-3 Months | **Zacks Rank:** (1-5) Zacks Style Scores: Value: F \| Growth: B \| Momentum: D | **2-Buy** VGM:D |

## Summary

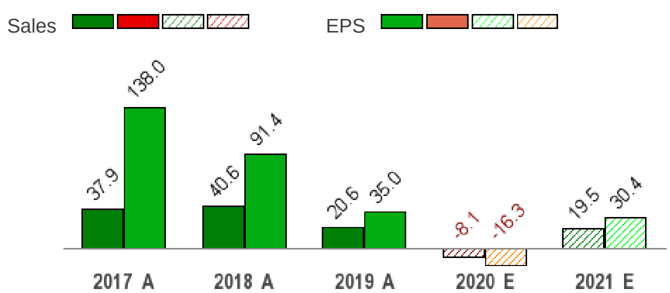
NVIDIA is benefiting from strong growth in GeForce desktop and notebook GPUs, which is boosting gaming revenues. Solid momentum of its real-time ray tracing technology is also a positive. Increase in Hyperscale demand is a tailwind for Data Center business as well. Growing adoption in the inference market is an upside too. Further, the solid uptake of AI-based smart cockpit infotainment solutions is a boon. Additionally, strength across mobile workstation products is aiding Professional Visualization revenues. However, in the near-term management expects strong sequential growth in Data Center to be offset by a seasonal decline in GeForce notebook GPUs and SoC modules for gaming platforms. Moreoever, the U-China trade war remains a key concern.

## Price, Consensus & Surprise


## Data Overview

| | |
|---|---|
| 52 Week High-Low | $242.04 - $131.00 |
| 20 Day Average Volume (sh) | 7,037,875 |
| Market Cap | $147.1 B |
| YTD Price Change | 2.2% |
| Beta | 2.04 |
| Dividend / Div Yld | $0.64 / 0.3% |
| Industry | Semiconductor - General |
| Zacks Industry Rank | Top 9% (23 out of 254) |
| Last EPS Surprise | 13.4% |
| Last Sales Surprise | 3.9% |
| EPS F1 Est- 4 week change | -0.2% |
| Expected Report Date | 02/13/2020 |
| Earnings ESP | 0.0% |
| P/E TTM | 51.2 |
| P/E F1 | 43.2 |
| PEG F1 | 4.6 |
| P/S TTM | 14.7 |

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




## Sales Estimates (millions of $)

| | Q1 | Q2 | Q3 | Q4 | Annual* |
|---|---|---|---|---|---|
| 2021 | 2,837 E | 3,085 E | 3,421 E | 3,476 E | 12,865 E |
| 2020 | 2,220 A | 2,579 A | 3,014 A | 2,958 E | 10,770 E |
| 2019 | 3,207 A | 3,123 A | 3,181 A | 2,205 A | 11,716 A |

## EPS Estimates

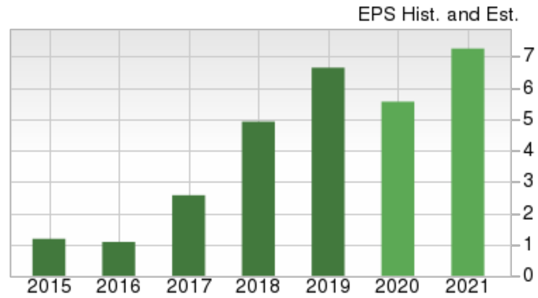
| | Q1 | Q2 | Q3 | Q4 | Annual* |
|---|---|---|---|---|---|
| 2021 | $1.51 E | $1.70 E | $1.97 E | $2.02 E | $7.25 E |
| 2020 | $0.88 A | $1.24 A | $1.78 A | $1.66 E | $5.56 E |
| 2019 | $2.05 A | $1.94 A | $1.84 A | $0.80 A | $6.64 A |

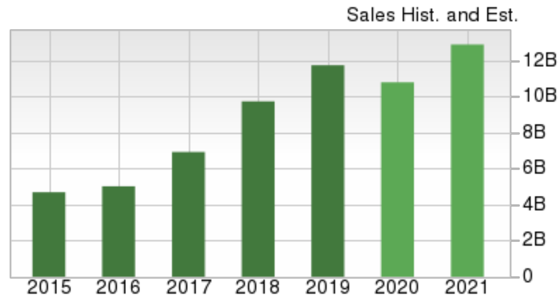
*Quarterly figures may not add up to annual.

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 01/08/2020. The reports text is as of 01/09/2020.

## Overview

Santa Clara, CA-based NVIDIA Corporation, founded in 1993, offers graphics chip processors and related software for a wide range of visual computing platforms.The company is a worldwide leader in visual computing technologies and the inventor of the graphic processing unit, or GPU, which is a high-performance processor generating realistic, interactive graphics on workstations, personal computers, game consoles and mobile devices. Its processors are also used in applications for digital content creation, personal digital image editing and industrial product designing.




The company sells products to original equipment manufacturers (OEM), original design manufacturers, add-in-card manufacturers, system builders and consumer electronics companies in the United States, Europe, China, Taiwan and other Asia-Pacific regions.

NVIDIA reported revenues of $11.7 billion in fiscal 2019, up 21% year over year. The company has two reportable segments, namely GPU and Tegra Processor that are based on a single underlying architecture.

NVIDIA's GPU Business consists primarily of the GeForce line for high-end graphics in desktop and notebook PCs, generating 87% of fiscal 2019 revenues.

A GPU can sit on top of a video card, or it can be integrated directly into the motherboard. The majority of NVIDIA's GeForce GPUs are sold on a video card. NVIDIA's GeForce line of video cards is its flagship product line and is primarily designed for the gaming market, which requires complex graphics processing.

The Tegra Processor Business mainly takes into account the Tegra product line. Tegra Processors generated 13% of fiscal 2019 revenue. This segment marked the entry of the first Tegra 3 phone along with the HTC One X.

The company competes in five end-markets, such as Gaming, Professional Visualization, Datacenter, Automotive and OEM/IP.

NVIDIA competes with suppliers of discrete and integrated GPUs and accelerated computing solutions like Advanced Micro Devices (AMD), Intel and Xilinx. It also faces rivalry from the suppliers of SOC products that are embedded into automobiles, autonomous machines and gaming devices, such as Ambarella, AMD, Broadcom, Intel, Qualcomm, Renesas Electronics, Samsung, Texas Instruments and Xilinx.

## Reasons To Buy:

> Growth opportunities in ray-traced gaming, rendering, high-performance computing, AI and self-driving cars are encouraging.

- NVIDIA is gaining a decent market share among the gaming service providers. The strong line-up of advanced graphics cards has made it a favorite graphics card provider among the PC makers. A strong uptick in PC gamers, eSports players and higher spending on the gaming GPUs are key catalysts. Further, NVIDIA's Turing GPU and its real-time ray tracing technology are witnessing a massive adoption. To propel wider embracement, NVIDIA is enabling ray tracing backup to several GeForce GTX GPUs, which is likely to lend developers a massive installed base of gamers. Moreover, the launch of GeForce RTX SUPER GPUs is expected to strengthen its leadership in the high end of the market. The company announced that the increasing number of blockbuster AAA titles have pledged support for NVIDIA RTX ray tracing technology. To this end, recently, Microsoft teamed up with NVIDIA to add real-time ray tracing technology to *Minecraft*. Moreover, per NVIDIA, Activision Blizzard's *Call of Duty: Modern Warfare*, Ubisoft Toronto's *Watch Dogs: Legion* and Tencent NExT Studios' *Synced: Off Planet* have also adopted RTX.

- Datacenter presents a solid growth opportunity for the company. As more and more businesses are shifting toward cloud, the need for datacenters is increasing. To cater to this huge demand, datacenter operators like Amazon, Microsoft and Alphabet are expanding their operations across the world, which is driving demand for the GPUs. This bodes well for NVIDIA's uptrend as well. Further, the company intends to focus on new growth boosters for its data center business, such as inference, data science and machine learning techniques to consolidate its presence in this niche market. NVIDIA anticipates datacenter TAM to more than double to $50 billion by 2023. Considered most preferred by the datacenter operators, NVIDIA's GPUs are likely to help the company grab a larger market space. The company's recently announced acquisition of Mellanox is a key catalyst in this regard.

- NVIDIA's GPUs are rapidly benefiting from the proliferation of AI. By applying its GPUs in AI models, the company is expanding its base in the other untapped markets like automotive, healthcare and manufacturing, which will support its earnings and revenues. The company is engaged with a number of organizations including the top cloud server companies like Amazon, Baidu and Facebook, which are infusing AI in various applications. NVIDIA has also partnered with the industry biggies — IBM, Microsoft and SAP in order to bring AI to the enterprise users' table. The company recently collaborated with the top-ranked OEMs including Dell, HP and Lenovo to deliver powerful workstations inclusive of Quadro RTX GPUs and its new CUDAX AI accelerated software. Moreover, a steady ramp-up of the new products is enabling the company to gain a competitive edge over the likes of AMD and Intel, and also widen its market share.

- NVIDIA's foray into the autonomous vehicles and other automotive electronics space is a positive. The company currently is on a firmer footing in the autonomous vehicle market. It is working with more than 320 automakers, tier-one suppliers, automotive research institutions, HD mapping companies and start-ups to develop and deploy AI systems for self-driving vehicles. Notably, NVIDIA's focus on incorporating AI into the cockpit for infotainment systems is allowing it to grow its autonomous driving revenues. The company expects its automotive TAM to be $30 billion by 2025, which comprises $25 billion for driving, $3 billion for training/development of deep neural networks and $2 billion for validation and testing.

- NVIDIA is a cash-rich company that lends it flexibility to invest in the long-term growth prospects and return money to its shareholders. During fiscal 2019, the company returned $1.95 billion to investors through a combination of $1.58 billion in share repurchases and $371 million in quarterly cash dividends. The company is committed to returning $3 billion to shareholders. During the fourth quarter of fiscal 2019, share buybacks worth $700 million were made and the company returned $195 million in the form of quarterly cash dividends in the first half of fiscal 2020. It intends to return the remaining $2.11 billion via a combination of share repurchases and cash dividends. However, management stated that no buyback can happen prior to the closing of the Mellanox buyout and thus, this phase may extend into fiscal 2021. As of Oct 27, 2019, NVIDIA's cash, cash equivalents and marketable securities were $9.77 billion.

## Reasons To Sell:

Weakness in the gaming and data-center businesses due to soft demand conditions in China and the increasing customer wariness make us slightly cautious about the company's near-term performance.

- Although datacenter has a tremendous growth scope in the long run, the near-term headwinds make us anxious, due to a temporary pause in spending by data center customers. Increasingly watchful behavior of customers across the broad-based vertical markets and geographies due to economic volatility poses a threat to NVIDIA.

- Recent developments like the suspension of test drives for all its driverless vehicles and the absence of demand from cryptocurrency miners make us slightly alert about the company's short-term functions. The discontinuation of mid-range Pascal GPU shipments for stabilizing the channel-inventory levels is a major headwind to its gaming revenues.

- The competition between NVIDIA and AMD has taken a meaningful turn. Previously, NVIDIA and ATI made graphics chips for the PC market. Later AMD acquired ATI and combined the CPU and parallel graphics chip into a single component. AMD is now making an effort to strengthen its position in the commodity graphics segment and CPUs for console gaming systems. AMD chips have made an entry into Sony Corp.'s PS4. Nintendo's Wii U and Microsoft's Xbox One will also be going with AMD. NVIDIA also has limited scope for growth in the apps processor market as it is dominated by Apple, Samsung and Qualcomm. We believe that competitive pressure from two CPU vendors, Intel and AMD, who are planning to integrate graphics cores into their chips can negatively impact NVIDIA's revenues, going forward.

- A substantial portion of the company's sales is derived from outside the United States. Notably, sales revenues to customers outside the United States accounted for 87% of the total revenue for each of the last three fiscal years. Hence, we believe that any unfavorable currency fluctuation and an uncertain macroeconomic environment may moderate the company's growth.

- NVIDIA currently has a trailing 12-month P/E ratio of 66.4X. This level compares unfavorably to some extent with what the industry saw over the last year. Hence, valuation looks stretched from a P/E perspective.

## Last Earnings Report

**NVIDIA Q3 Earnings Top Estimates**

| Quarter Ending | 10/2019 |
|---|---|
| Report Date | Nov 14, 2019 |
| Sales Surprise | 3.87% |
| EPS Surprise | 13.38% |
| Quarterly EPS | 1.78 |
| Annual EPS (TTM) | 4.70 |

NVIDIA reported third-quarter fiscal 2020 non-GAAP earnings of $1.78 per share that beat the Zacks Consensus Estimate by 13.4% but declined 3.3% year over year. However, the bottom line surged 43.5% sequentially.

Revenues of $3.01 billion beat the consensus mark by 3.9% but declined 5.2% year over year. However, the top line rose 16.9% sequentially.

**Top-Line Details**

Revenues at the GPU Business fell 7.1% year over year to $2.57 billion. However, on a sequential basis, segment revenues grew 21.9%.

Tegra Processor Business revenues were $449 million, up 10.3% on a year-over-year basis but down 5.5% sequentially.

On the basis of market platform, Gaming revenues were down 6% on a year-over-year basis to $1.66 billion due to decreased shipments of GeForce desktop GPUs. However, the same was up 26.4% sequentially, backed by strong growth in GeForce desktop and notebook GPUs.

Meanwhile, revenues from Data Center deteriorated 8.3% year over year to $726 million. The decline reflects lower enterprise revenues due to an unfavorable product mix and decreased DGX sales. This was partially offset by an increase in Hyperscale demand, which sequentially drove revenues by 10.8%.

Automotive revenues in the reported quarter totaled $162 million, reflecting a 5.8% year-over-year and a 22.5% sequential decline. The year-over-year decline reflects lower revenues from legacy infotainment modules and autonomous vehicle solutions, partially negated by growth in AI cockpit solutions.

Moving to Professional Visualization, revenues climbed 6.2% year over year and 11.3% sequentially to $324 million. Strength across mobile workstation products was the primary driver.

OEM and IP revenues dropped 3.4% year over year to $143 million. However, the same grew 28.8% sequentially, owing to increased shipments of entry-level GPUs for notebook PCs.

**Quarter Highlights**

During the quarter, NVIDIA announced that Microsoft's Minecraft game will feature ray tracing technology. The company also collaborated with Microsoft to provide an optimized hybrid-cloud platform, combining Microsoft Azure software with NVIDIA EGX powered by NVIDIA T4 GPUs to address edge-computing demand.

In the Gaming segment, the company announced SUPER versions of GeForce GTX GPUs. NVIDIA also launched the RTX Broadcast Engine, which uses the AI capabilities of GeForce RTX GPUs to enable virtual greenscreens, filters and AR effects in live streaming.

NVIDIA announced two new models of the SHIELD TV streaming media player. Additionally, the company extended the reach of the GeForce NOW game streaming service in the reported quarter. The service is now offered by Taiwan Mobile and Russia's Rostelcom with GFN.ru, apart from Korea's LG U+ and Japan's SoftBank.

Moreover, the company launched the NVIDIA EGX Intelligent Edge Computing Platform. Walmart, BMW, NTT East, Procter & Gamble and Samsung Electronics are among the early adopters of this platform.

NVIDIA also entered the 5G telecom market in the reported quarter. In collaboration with Ericsson, the company will help telcos build high-performing, efficient, virtualized 5G radio access networks using GPUs.

Further, the company announced a collaboration with Red Hat to deliver software-defined 5G RAN using Red Hat OpenShift and GPU accelerated servers.

Moreover, NVIDIA entered a partnership with VMware to accelerate VMware Cloud on AWS, using NVIDIA T4 GPUs. The partnership also introduced the new NVIDIAvComputeServer software for enterprises to run AI workloads on GPU servers in virtualized environments.

Additionally, the company introduced Jetson Xavier NX, the world's smallest, most powerful AI supercomputer for robotic and embedded computing devices at the edge.

**Operating Details**

NVIDIA's non-GAAP gross margin expanded 310 basis points (bps) from the year-ago quarter to 64.1%. Improved margins on GeForce GPUs for gaming and lower component costs were the primary drivers.

The abovementioned factors also helped the gross margin expand 390 bps sequentially. Additionally, GeForce GPUs' higher average selling price drove the gross margin.

Non-GAAP operating expenses increased 2.7% year over year to $774 million due to increase in headcount, higher employee compensation and infrastructure costs.

Non-GAAP operating income declined 4.5% year over year to $1.16 billion. Operating margin expanded 30 bps to 38.4% in the reported quarter.

**Balance Sheet and Cash Flow**

As of Oct 27, 2019, NVIDIA's cash, cash equivalents and marketable securities were $9.77 billion, up from $8.47 billion as of Jul 27, 2019.

Total debt, as of Oct 27, was $1.99 billion compared with $24.67 billion as of Jul 27.

Cash flow from operating activities was $1.64 billion in the fiscal third quarter, up from $936 million in the previous quarter.

Free cash flow was $1.54 billion, up from $823 million in the previous quarter.

The company did not make any stock repurchase in the reported quarter due to its pending buyout of Mellanox. The company expects to close the acquisition in early calendar-year 2020.

**Guidance**

For the fourth quarter of fiscal 2020, NVIDIA anticipates revenues of $2.95 billion (+/-2%).

Management expects strong sequential growth in Data Center to be offset by a seasonal decline in GeForce notebook GPUs and SoC modules for gaming platforms.

Non-GAAP gross margin is projected to be 64.5% (+/-50 bps). Non-GAAP operating expenses are expected to be $805 million.

## Recent News

On Jan 5, 2020, NVIDIA, in collaboration with ASUS, announced that it will showcase new gaming displays — the ASUS ROG Swift 360 — at the Consumer Electronics Show, which is scheduled to be held on Jan 7-10.

On Dec 18, 2019, NVIDIA announced that it has tied up with China-based Tencent Games to launch cloud gaming in the region. The the company also introduced a highly advanced software-defined platform, NVIDIA DRIVE AGX Orin, for autonomous vehicles and robots. Further, NVIDIA announced that the Chinese mobile transportation company DiDi Chuxing Technology Co. will leverage its GPUs and AI technology to develop autonomous driving and cloud computing solutions.

On Nov 18, 2019, NVIDIA launched a suite of software, NVIDIA Magnum IO, to assist data scientists and AI plus high-performance computing researchers, who can process massive amounts of data much faster. The company also recently rolled out "a new kind of" Microsoft Azure-based GPU-accelerated supercomputer at the Supercomputing 2019 event held at Denver, CO.

On Nov 6, 2019, NVIDIA introduced Jetson Xavier NX, an AI supercomputer for robotic and embedded computing devices at the edge.

On Oct 22, 2019, NVIDIA announced collaboration with Ericsson to accelerate virtualized 5G radio access networks. The company also partnered with Microsoft for intelligent edge computing. On the same day, NVIDIA also expanded alliance with Red Hat to deliver high-performance, software-defined 5G wireless infrastructure to the telecom industry.

On Sep 4, 2019, NVIDIA and ASUS announced that the Quadro RTX 6000 GPU will power the ASUS ProArt StudioBook One.

## Valuation

NVIDIA shares are up 50.2% in the last six months and 65.6% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Technology sector are up 27.2% and 12.3% in the last six months, respectively. Over the past year, while the Zacks sub-industry gained 36%, the sector increased 30.3%.

The S&P 500 index is up 8.7% in the last six months and 23.7% in the past year.

The stock is currently trading at 33.67X forward 12-month earnings, which compares to 18.25X for the Zacks sub-industry, 22.32X for the Zacks sector and 18.74X for the S&P 500 index.

Over the past five years, the stock has traded as high as 57.4X and as low as 16.49X, with a 5-year median of 34.36X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our $247 price target reflects 35.35X forward 12-months earnings.

The table below shows summary valuation data for NVDA

**Valuation Multiples - NVDA**

| | | Stock | Sub-Industry | Sector | S&P 500 |
|---|---|---|---|---|---|
| P/E F12M | Current | 33.67 | 18.25 | 22.32 | 18.74 |
| | 5-Year High | 57.4 | 19.73 | 22.32 | 19.34 |
| | 5-Year Low | 16.49 | 12.86 | 16.86 | 15.17 |
| | 5-Year Median | 34.36 | 16.2 | 19.24 | 17.44 |
| P/S F12M | Current | 11.55 | 4.94 | 3.59 | 3.47 |
| | 5-Year High | 15.37 | 5.16 | 3.59 | 3.47 |
| | 5-Year Low | 2.13 | 2.4 | 2.3 | 2.54 |
| | 5-Year Median | 7.64 | 3.64 | 3.01 | 3 |
| P/B TTM | Current | 13.12 | 4.92 | 5.37 | 4.42 |
| | 5-Year High | 23.55 | 5.44 | 5.38 | 4.45 |
| | 5-Year Low | 2.28 | 2.15 | 3.13 | 2.85 |
| | 5-Year Median | 9.99 | 3.53 | 4.21 | 3.6 |

As of 01/08/2020

## Industry Analysis **Zacks Industry Rank:** Top 9% (23 out of 254)


## Top Peers

| | |
|---|---|
| Ambarella, Inc. **(AMBA)** | Neutral |
| Advanced Micro Devices, Inc. **(AMD)** | Neutral |
| Broadcom Inc. **(AVGO)** | Neutral |
| Intel Corporation **(INTC)** | Neutral |
| Marvell Technology Group Ltd. **(MRVL)** | Neutral |
| QUALCOMM Incorporated **(QCOM)** | Neutral |
| Texas Instruments Incorporated **(TXN)** | Neutral |
| Xilinx, Inc. **(XLNX)** | Neutral |

## Industry Comparison Industry: Semiconductor - General

Industry Peers

| | NVDA Neutral | X Industry | S&P 500 | AMD Neutral | INTC Neutral | TXN Neutral |
|---|---|---|---|---|---|---|
| **VGM Score** | D | - | - | C | A | C |
| Market Cap | 147.11 B | 14.67 B | 23.84 B | 53.26 B | 256.52 B | 121.30 B |
| # of Analysts | 11 | 6.5 | 13 | 12 | 14 | 10 |
| Dividend Yield | 0.27% | 0.99% | 1.79% | 0.00% | 2.14% | 2.77% |
| **Value Score** | F | - | - | F | B | D |
| Cash/Price | 0.07 | 0.10 | 0.04 | 0.02 | 0.05 | 0.04 |
| EV/EBITDA | 33.16 | 9.53 | 13.88 | 80.32 | 8.28 | 15.65 |
| PEG Ratio | 4.61 | 2.57 | 2.02 | 1.81 | 1.67 | 2.57 |
| Price/Book (P/B) | 13.12 | 3.46 | 3.33 | 24.48 | 3.46 | 13.50 |
| Price/Cash Flow (P/CF) | 35.90 | 13.53 | 13.76 | 81.71 | 8.66 | 19.59 |
| P/E (F1) | 43.23 | 19.23 | 18.76 | 43.75 | 12.49 | 26.05 |
| Price/Sales (P/S) | 14.68 | 3.12 | 2.63 | 8.84 | 3.64 | 8.22 |
| Earnings Yield | 2.31% | 5.19% | 5.32% | 2.28% | 8.00% | 3.84% |
| Debt/Equity | 0.22 | 0.30 | 0.72 | 0.40 | 0.32 | 0.59 |
| Cash Flow ($/share) | 6.70 | 5.28 | 6.94 | 0.59 | 6.81 | 6.62 |
| **Growth Score** | B | - | - | A | B | B |
| Hist. EPS Growth (3-5 yrs) | 47.42% | 34.22% | 10.56% | NA | 19.47% | 21.02% |
| Proj. EPS Growth (F1/F0) | -16.32% | -11.53% | 7.46% | 76.58% | 2.42% | -3.02% |
| Curr. Cash Flow Growth | 29.72% | 26.37% | 14.83% | 123.28% | 23.02% | 20.88% |
| Hist. Cash Flow Growth (3-5 yrs) | 41.59% | 20.49% | 9.00% | 30.77% | 11.64% | 13.94% |
| Current Ratio | 8.42 | 3.48 | 1.23 | 2.10 | 1.20 | 4.34 |
| Debt/Capital | 17.98% | 23.02% | 42.99% | 28.61% | 24.20% | 37.11% |
| Net Margin | 24.08% | 20.31% | 11.08% | 3.47% | 27.46% | 35.10% |
| Return on Equity | 22.02% | 19.17% | 17.16% | 16.54% | 28.28% | 58.00% |
| Sales/Assets | 0.69 | 0.69 | 0.55 | 1.21 | 0.54 | 0.84 |
| Proj. Sales Growth (F1/F0) | -8.07% | -0.82% | 4.16% | 27.10% | 1.56% | -2.13% |
| **Momentum Score** | D | - | - | D | A | C |
| Daily Price Chg | 0.19% | 0.05% | 0.39% | -0.87% | 0.07% | 0.27% |
| 1 Week Price Chg | -0.34% | 0.00% | -0.30% | 5.24% | 0.03% | -0.56% |
| 4 Week Price Chg | 10.60% | 3.44% | 2.38% | 21.18% | 3.33% | 4.88% |
| 12 Week Price Chg | 23.77% | 17.36% | 6.40% | 55.24% | 12.44% | 0.20% |
| 52 Week Price Chg | 68.59% | 42.85% | 22.97% | 136.90% | 22.83% | 34.83% |
| 20 Day Average Volume | 7,037,875 | 827,030 | 1,610,101 | 50,416,424 | 18,356,320 | 3,736,275 |
| (F1) EPS Est 1 week change | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| (F1) EPS Est 4 week change | -0.16% | 0.00% | 0.00% | 0.00% | -0.02% | 0.00% |
| (F1) EPS Est 12 week change | 6.03% | 3.48% | -0.50% | -0.75% | 6.34% | -14.27% |
| (Q1) EPS Est Mthly Chg | 0.00% | 0.00% | 0.00% | -0.70% | 0.00% | 0.00% |

## 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.

## 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.

| | |
|---|---|
| Value Score | F |
| Growth Score | B |
| Momentum Score | D |
| VGM Score | D |

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.

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