

Xilinx Inc. (XLNX)

\$105.50 (As of 08/13/20)

Price Target (6-12 Months): **\$111.00**

Long Term: 6-12 Months

Zacks Recommendation:

Neutral

(Since: 12/23/19)

Prior Recommendation: Underperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

3-Hold

Zacks Style Scores:

VGM:C

Value: D

Growth: B

Momentum: A

Summary

Xilinx continues to benefit from significant contributions from storage and networking customers. Moreover, growing demand for the company's 16-nanometer UltraScale+ family and Zynq platform are likely to remain major growth drivers. Furthermore, datacenter revenues are likely to continue growing due to expansion of the business at multiple hyperscalers. Additionally, the acquisition of Solarflare would bring in incremental revenues in the subsequent quarters. However, slowdown in 5G rollout across multiple regions remains a downside. The company's WWG revenue is likely to decline sequentially due to digestion of CIV accelerated orders. Additionally, the impact of the Huawei ban along with the adverse impact of the coronavirus pandemic on the business hurt the top line. The stock has performed in-line with industry over the past year.

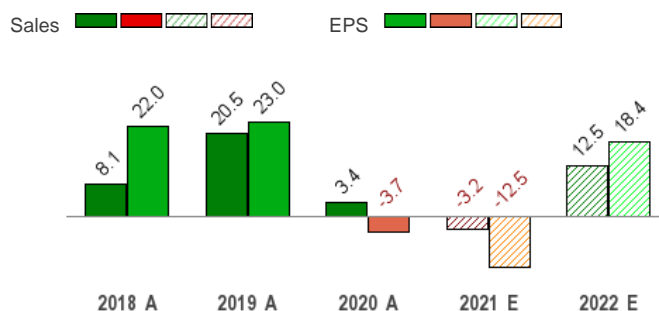
Price, Consensus & Surprise



Data Overview

52 Week High-Low	\$112.17 - \$67.68
20 Day Average Volume (sh)	2,614,761
Market Cap	\$25.8 B
YTD Price Change	7.9%
Beta	0.98
Dividend / Div Yld	\$1.52 / 1.4%
Industry	Semiconductors - Programmable Logic
Zacks Industry Rank	Top 49% (124 out of 252)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	3.2%
Last Sales Surprise	-0.1%
EPS F1 Est- 4 week change	3.8%
Expected Report Date	10/28/2020
Earnings ESP	0.0%
P/E TTM	34.6
P/E F1	36.0
PEG F1	3.0
P/S TTM	8.5

Sales Estimates (millions of \$)

	Q1	Q2	Q3	Q4	Annual*
2022	835 E	847 E	866 E	876 E	3,443 E
2021	727 A	755 E	777 E	808 E	3,061 E
2020	850 A	833 A	724 A	756 A	3,163 A

EPS Estimates

	Q1	Q2	Q3	Q4	Annual*
2022	\$0.83 E	\$0.87 E	\$0.90 E	\$0.92 E	\$3.47 E
2021	\$0.65 A	\$0.79 E	\$0.73 E	\$0.78 E	\$2.93 E
2020	\$0.97 A	\$0.94 A	\$0.68 A	\$0.78 A	\$3.35 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 08/13/2020. The reports text is as of 08/14/2020.

Overview

San Jose, CA-based Xilinx Inc., founded in 1984, designs and manufactures a broad range of programmable devices and associated technologies. This includes high-performance, high-density programmable logic devices (PLDs) such as programmable system on chips and three dimensional ICs; adaptive compute acceleration platform (ACAP); software design tools to program the PLDs; software development environments and embedded platforms; targeted reference designs; printed circuit boards and intellectual property (IP) core licenses covering Ethernet, memory controllers, Interlaken and peripheral component interconnect express interfaces as well as domain-specific IP in the areas of embedded, digital signal processing and connectivity plus market-specific IP cores.

In fiscal 2020, the company reported more than \$3.2 billion of revenues, up 3.4% over the fiscal 2019 figure.

The company classifies its products into two categories:

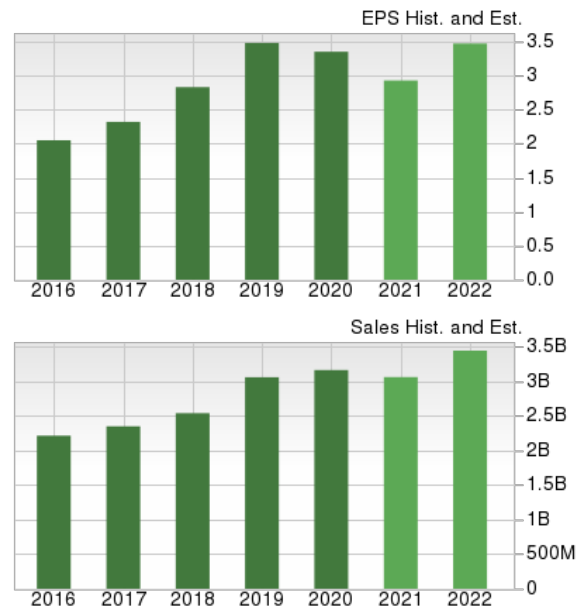
Advanced Products (70% of fiscal 2020 revenues) include Alveo, UltraScale+, Ultrascale and 7-series products.

Core Products (30%) include Virtex-6, Spartan-6, Virtex-5, CoolRunner- II Virtex-4, Virtex-II, Spartan-3, Spartan-2, XC9500 products, configuration solutions, software & support/services.

The company provides solutions for electronic equipment makers in wired and wireless communications, industrial, scientific and medical, aerospace and defense, audio, video and broadcast, consumer, automotive and data processing markets.

The company sells its products and services through independent domestic and foreign distributors and via direct sales to the original equipment manufacturers (OEMs) and its electronic manufacturing service providers (EMS). Sales are generated by these independent distributors, independent sales representative or the company's direct sales organization.

Starting first-quarter fiscal 2020, Xilinx changed its revenue reporting structure. Going forward, Communications is now called Wired and Wireless Group (WWG). Data Center Group is reported separately and includes high-performance computing. While Aerospace & Defense, Industrial and Test plus Measurement & Emulation (TME) is called AIT, the Automotive, Broadcast and Consumer group is called ABC.



Reasons To Buy:

- ▲ Xilinx's ongoing transition from a FPGA provider to an all-programmable devices producer has been helping the company gain market share. Its expanding product portfolio, which includes the Zynq RFSoc platform, is assisting it to counter intense competition from the likes of Intel. The company's Zynq portfolio, which is implemented in both the 28-nm and 16-nm node, is delivering sturdy top-line growth. The company has started shipping of the 16-nm RFSoc Silicon In-house family of product, which offers a superior architectural solution to 5G wireless with integrated RF-class analog technology. Moreover, its newly launched 7nm ACAP Versal platform is expected to be a game changer.
- ▲ We are optimistic over the demand of Xilinx's Ultrascale+ FPGAs by data-center operators for providing FPGA-as-a-Service. Amazon was the first to use Xilinx chips and started offering FPGA-as-a-Service in May 2017. The company's leadership position in China market with regard to FPGA-as-a-Service expanded with Alibaba moving from beta to general access. Alibaba Cloud recently announced that Xilinx is powering the data center and is being used by their cloud services enterprise customers. The company's Zynq MPSoc is powering Baidu's production-ready Apollo Computing Unit for automated valet parking.
- ▲ The ever-evolving technology sector has been witnessing a number of new trends over the past couple of years. Of these, the notable ones include AI, 5G connectivity, autonomous vehicles and IoT. This has created a whole new opportunity for hardware and software companies, in turn, increasing demand for programmable chips. We consider that the demand for FPGAs will surge over the long run, backed by its unique feature of the ability to be reprogrammed to the desired application or functionality requirements after manufacturing. Notably, Xilinx is a market leader in the FPGA market, with 58% share and has over one-year technology lead over its closest rival – Intel. Therefore, we believe that Xilinx is well placed to grab the opportunity arising from an increase in adoption of AI technologies, 5G connectivity, autonomous vehicles and IoT.
- ▲ Xilinx has significant exposure to Telecom & Wireless vertical markets. These markets are strongly co-related with global GDP growth and spending behavior. Most of the emerging economies are seeing unprecedented demand for mobile devices like smartphones and tablets and are also getting increasingly connected via the Internet. This has compelled these countries to heavily invest in Telecom & Wireless infrastructure. The growing usage of Zynq RFSocs and ACAP products for 5G deployments by both basebands and radios is a positive.
- ▲ The FPGA industry has a high barrier to entry. Bottlenecks such as a unique skill set that combines semiconductor and software expertise; high investment, especially at leading technology nodes; lack of third-party development tools; and intellectual property make this space less attractive. Hence, the FPGA market is operating as a duopoly with two key players, Xilinx and Altera, dominating approximately 80% of the market.
- ▲ Xilinx has a strong balance sheet with ample liquidity position and less debt obligations. As of Jun 27, 2020, the company had cash, cash equivalents and short-term investments of approximately \$3 billion. Moreover, long-term debt (including current maturities) as of Jun 27, 2020 was approximately \$2 billion. Also, its total debt-to-equity ratio of 0.46 is in-line with the industry average.
- ▲ Xilinx generates strong cash flows which provide it with ample liquidity to service its debts and fund future investments. The company generated \$1.19 billion in operating cash flow in fiscal 2020 compared with \$1.09 billion in fiscal 2019. At the same time, we are encouraged by Xilinx's endeavor to return shareholder value through continued share buybacks and dividends. During fiscal 2020, the company bought back shares worth \$1.21 billion and paid \$372 million in dividends. In first-quarter fiscal 2021, Xilinx generated \$245 million of cash from operations and \$230 million of free cash flows. During the quarter, the company repurchased \$54 million worth of common stocks and paid out dividends worth \$92 million.

Xilinx is well-positioned to tap the opportunities arising from an increase in the adoption of AI technologies, 5G connectivity, autonomous vehicles and IoTs, which will drive growth in the long run.

Reasons To Sell:

- ▼ Xilinx could face challenges from its biggest competitor, Intel. After acquiring Altera in 2015, Intel has been developing high-end high-performance next-generation 14 nm FPGA chips by using its 14 nm tri-gate transistor technology. To remain competitive, Xilinx is planning a transition to the 16 nm node using Taiwan Semiconductor Company's FinFET technology. However, as Intel's manufacturing process is technologically more advanced, we do not expect Xilinx to outperform Intel in the lower dimension nodes. Apart from this, both the companies are likely to compete in 20 nm products that are still under production.
- ▼ By acquiring Altera, Intel now has a strategic advantage over Xilinx regarding its HardCopy offering (a new type of high performance ASIC for which Xilinx does not have a competing product). HardCopy offers the performance of an ASIC and the flexibility of a PLD. HardCopy devices, therefore, have the potential to drive future revenues due to their low costs and ability to address opportunities beyond the PLD market. As far as development costs are concerned, ASICs are more economical and offer improved chip performance than PLDs when used in high-volume production. Therefore, they are ideal for large-volume, low-cost appliances such as consumer electronics. Customers often opt for PLDs initially for their time-to-market benefits and then shift to ASICs to produce greater volumes at lower costs. With no exposure into ASICs, it will be difficult for Xilinx to outperform Intel.
- ▼ Xilinx keeps on innovating for producing advanced FPGAs of lower geometries to improve performance, density and system-level functionality, integration, and lower cost and power consumption at each manufacturing process node. With each transition to a new process node, there are considerable tape-out costs, the need to navigate the learning curve and limited volume production, which are all significant headwinds for margins and profitability. Xilinx is on the verge of a 20-nm and 16-nm transition, so there will be related pressure on gross margin.
- ▼ Notably, Xilinx refrained from providing any guidance for fiscal 2021 as it is still assessing the expected impacts of COVID-19-related disruptions in some portions of its core markets, including Automotive, Broadcast, Consumer, Industrial and semiconductor test.

5G deployment and a few other product mixes are a threat to gross margin. Stiff competition from peers is another material headwind.

Last Earnings Report

Xilinx delivered first-quarter fiscal 2021 earnings of 65 cents per share, beating the Zacks Consensus Estimate of 63 cents. However, the bottom line comes in 33% lower than the prior-year quarter's 97 cents.

Revenues of \$727 million came in line with the Zacks Consensus Estimate but declined 17% year over year. The impact of the Huawei ban and other trade-related uncertainties, along with the pandemic's adverse impact on the business, hurt the top line.

The company witnessed improved chip demand across Data Center Group (DCG), Wired and Wireless Group (WWG), and the Industrials markets. However, demand from Automotive and Broadcast businesses remained weak through the quarter.

Quarter Ending **06/2020**

Report Date	Jul 30, 2020
Sales Surprise	-0.08%
EPS Surprise	3.17%
Quarterly EPS	0.65
Annual EPS (TTM)	3.05

Quarter in Detail

Product wise, advanced product revenues declined 16% year over year, contributing 68% to total revenues. Revenues from core products (32% of total revenues) also decreased 12% from the year-ago quarter.

During the quarter, the company recorded a 7% decline in Zynq product-based revenues primarily due to lower Zynq sales in the automotive businesses.

On the basis of end markets, A&D, Industrial and TME (AIT) revenues (45% of total revenues) dipped 2% on a year-over-year basis. The decline was mainly due to rescheduling of some customer program in the second quarter.

Automotive, Broadcast and Consumer group (ABC) (12% of total revenues) slipped 29% year over year. The automotive business suffered steep decline in auto sales and witnessed factory shutdowns due to the pandemic.

WWG revenues (33% of total revenues) dropped 33% year over year. The segment's sales were adversely impacted by trade restrictions on Huawei.

DCG revenues (12% of total) surged 104% from the year-ago period, primarily owing to contributions from compute acceleration, driven by a mix of cloud and high-performance compute customers. Notable contribution from a hyperscaler deployment of its FPGA-based SmartNIC was a tailwind.

Geographically, the company registered a year-over-year decrease of 6% in North America, 9% in the Asia Pacific, 18% in Japan and 39% in Europe.

Margins

Non-GAAP gross margin came in at 69%, up 240 basis points (bps) year over year. It also came within the company's guided range of 68-70%.

Non-GAAP OpEx was \$314 million, slightly above the company's guidance of \$307-\$311 million due to increased variable compensation.

The company posted non-GAAP operating income of \$186.6 million, down 28.2% year over year. Operating margin contracted 460 bps to 26% as benefit of higher gross margin was offset by elevated operating expenses.

Balance Sheet and Cash Flow

Xilinx exited the fiscal first quarter with cash, cash equivalents and short-term investments of approximately \$3 billion compared with the prior quarter's \$2.27 billion sequentially.

The company's total long-term debt increased to \$1.49 billion as of Jun 27, from \$747.1 million as of Mar 28. This upswing reflects senior notes issuance of \$750 million in May.

Xilinx generated \$245 million of cash from operations compared with the previous quarter's \$345 million. The company generated free cash flow of \$230 million compared with the \$313 million witnessed in the last quarter.

During the fiscal first quarter, the company repurchased 0.7 million shares at an average price of \$78 per share and paid out dividends worth \$92 million.

Outlook

For the second quarter of fiscal 2021, the company expects revenues between \$730 million and \$780 million.

In the earnings call, management predicted its WWG revenues to decline sequentially in the fiscal second quarter due to digestion of CIV accelerated orders. Additionally, it projects sales at DCG to remain flat or marginally decline on a sequential basis.

Nonetheless, the company anticipates solid sequential recovery in its AIT segment, led by the TME and A&D businesses. Xilinx also expects recovery across the automotive and broadcast markets.

Gross margin is forecast to be 69.5-72.5%. Operating expenses are projected at \$322-\$336 million for the fiscal second quarter.

Recent News

On June 29, Xilinx updated its guidance for the first quarter of fiscal 2021. Improved revenue guidance amid the prevalent market uncertainties highlights the company's strong operating abilities.

On June 17, Xilinx launched two real-time computing video appliances for scalable, ultra-high-density video transcoding applications. These appliances, based on Xilinx RT Server, will enable cost-efficient optimization of video quality, and bitrate for eSports and e-gaming applications, video conferencing platforms, live broadcast and telemedicine applications.

On May 19, Xilinx unveils industry's first 20-nm space-grade FPGA – Radiation Tolerant (RT) Kintex UltraScale XQRKU060.

On May 19, Xilinx announced pricing of 2.375% senior notes due 2030 offering worth \$750 million.

On May 5, Xilinx announced establishing Xilinx Adaptive Compute Clusters (XACC) at four of the world's most prestigious universities. The XACCs would provide critical infrastructure and funding to support novel research in adaptive compute acceleration for high performance computing.

On Apr 15, Xilinx announced that Samsung Electronics has adopted the Xilinx Versal adaptive compute acceleration platform (ACAP) to roll out 5G worldwide. The application of Xilinx's advanced platform to Samsung's solutions is expected to boost 5G performance.

On Apr 9, Xilinx announced appointing Brice Hill as the company's executive vice president and chief financial officer.

On Mar 10, Xilinx enhanced its Versal ACAP portfolio by launching Versal Premium platform. The platform features highly integrated, networked and power-optimized cores. Versal Premium has the industry's highest bandwidth and compute density on an adaptable platform.

On Mar 3, Xilinx unveiled industry's first SmartNIC platform Alveo U25 SmartNIC, which will deliver convergence of network, storage and compute acceleration functions on a single device.

Valuation

Shares of Xilinx have increased 7.9% in the year so far and 1.7% over the trailing 12-month period. Stocks in the Zacks sub-industry have increased 7.9% in the year-to-date (YTD) period, while the Zacks Computer & Technology sector has increased 20.7%. Over the past year, while the Zacks sub-industry increased 1.7%, the sector gained 39.3%.

The S&P 500 Index has increased 4.6% YTD and 18.6% in the past year.

The stock is currently trading at 33.7X forward 12-month earnings, which compares to 33.7X for the Zacks sub-industry, 26.26X for the Zacks sector and 22.91X for the S&P 500 index.

Over the past five years, the stock has traded as high as 37.41X and as low as 18.53X with a 5-year median of 24.52X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$111 price target reflects 35.39X forward 12-month earnings.

The table below shows summary valuation data for XLNX

Valuation Multiples - XLNX					
		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	33.70	33.70	26.26	22.91
	5-Year High	37.41	35.01	26.31	22.91
	5-Year Low	18.53	19.82	16.72	15.25
	5-Year Median	24.52	24.84	19.61	17.58
P/S F12M	Current	8.05	8.05	4.07	3.70
	5-Year High	10.78	9.46	4.07	3.70
	5-Year Low	4.45	4.67	2.32	2.53
	5-Year Median	6.44	6.42	3.14	3.05
P/B TTM	Current	11.11	11.11	6.28	4.70
	5-Year High	12.78	12.78	6.34	4.71
	5-Year Low	3.82	3.82	3.16	2.83
	5-Year Median	7.30	7.30	4.43	3.74

As of 08/13/2020

Industry Analysis Zacks Industry Rank: Top 49% (124 out of 252)



Top Peers

Company (Ticker)	Rec	Rank
Texas Instruments Incorporated (TXN)	Outperform	1
Ambarella, Inc. (AMBA)	Neutral	3
Broadcom Inc. (AVGO)	Neutral	2
Intel Corporation (INTC)	Neutral	3
Lattice Semiconductor Corporation (LSCC)	Neutral	3
Microchip Technology Incorporated (MCHP)	Neutral	3
Marvell Technology Group Ltd. (MRVL)	Neutral	3
NVIDIA Corporation (NVDA)	Neutral	3

Industry Comparison Industry: Semiconductors - Programmable Logic				Industry Peers		
	XLNX	X Industry	S&P 500	INTC	LSCC	NVDA
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	3	-	-	3	3	3
VGM Score	C	-	-	A	D	D
Market Cap	25.78 B	25.78 B	23.58 B	206.53 B	4.04 B	281.50 B
# of Analysts	9	11	14	14	5	13
Dividend Yield	1.44%	1.44%	1.68%	2.72%	0.00%	0.14%
Value Score	D	-	-	A	D	F
Cash/Price	0.11	0.11	0.07	0.13	0.04	0.06
EV/EBITDA	24.46	24.46	13.34	6.21	44.38	80.11
PEG Ratio	2.99	4.00	2.99	1.34	4.75	3.43
Price/Book (P/B)	11.11	11.11	3.20	2.52	11.10	21.49
Price/Cash Flow (P/CF)	25.43	25.43	12.83	6.39	40.99	87.13
P/E (F1)	35.91	36.03	21.99	10.02	47.55	57.92
Price/Sales (P/S)	8.48	8.48	2.53	2.62	10.06	23.90
Earnings Yield	2.78%	2.78%	4.35%	9.99%	2.11%	1.73%
Debt/Equity	0.64	0.64	0.77	0.44	0.51	0.57
Cash Flow (\$/share)	4.15	4.15	6.94	7.60	0.73	5.25
Growth Score	B	-	-	A	B	C
Hist. EPS Growth (3-5 yrs)	13.97%	13.97%	10.41%	22.01%	129.45%	40.62%
Proj. EPS Growth (F1/F0)	-12.60%	-12.39%	-6.32%	-0.45%	6.44%	36.48%
Curr. Cash Flow Growth	1.35%	1.35%	5.20%	6.53%	36.56%	-20.70%
Hist. Cash Flow Growth (3-5 yrs)	5.96%	5.96%	8.55%	9.99%	11.10%	28.68%
Current Ratio	3.50	3.50	1.33	1.97	3.66	10.29
Debt/Capital	39.14%	39.14%	44.59%	30.56%	33.85%	36.34%
Net Margin	21.22%	21.22%	10.13%	29.97%	11.53%	28.17%
Return on Equity	30.66%	30.66%	14.51%	31.55%	17.81%	28.59%
Sales/Assets	0.60	0.60	0.51	0.55	0.63	0.66
Proj. Sales Growth (F1/F0)	-3.21%	-3.21%	-1.43%	4.34%	-0.92%	32.57%
Momentum Score	A	-	-	C	D	C
Daily Price Chg	-0.51%	-0.51%	-0.44%	-1.28%	-0.10%	0.02%
1 Week Price Chg	0.10%	0.10%	2.30%	0.63%	-3.38%	5.51%
4 Week Price Chg	6.38%	6.38%	4.38%	-17.89%	2.12%	12.91%
12 Week Price Chg	20.93%	20.93%	13.59%	-21.65%	24.78%	30.40%
52 Week Price Chg	1.64%	1.64%	5.75%	6.26%	62.02%	207.67%
20 Day Average Volume	2,614,761	2,614,761	1,984,154	44,674,248	1,337,747	8,507,622
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
(F1) EPS Est 4 week change	3.82%	3.82%	2.08%	0.76%	-1.14%	0.11%
(F1) EPS Est 12 week change	7.99%	7.99%	2.66%	0.75%	-1.14%	4.41%
(Q1) EPS Est Mthly Chg	16.29%	16.29%	0.94%	-5.10%	-19.31%	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.

Academic research has proven that stocks with the best Value, Growth and Momentum characteristics outperform the market. The Zacks Style Scores rate stocks on each of these individual styles and assigns a rating of A, B, C, D and F. We also produce the VGM Score (V for Value, G for Growth and M for Momentum), which combines the weighted average of the individual Style Scores into one score. This is perfectly suited for those who want their stocks to have the best scores across the board.

Value Score	D
Growth Score	B
Momentum Score	A
VGM Score	C

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

Disclosures

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