Aug 31, 2020

VMware, Inc.(VMW)

$146.09 (As of 08/28/20)

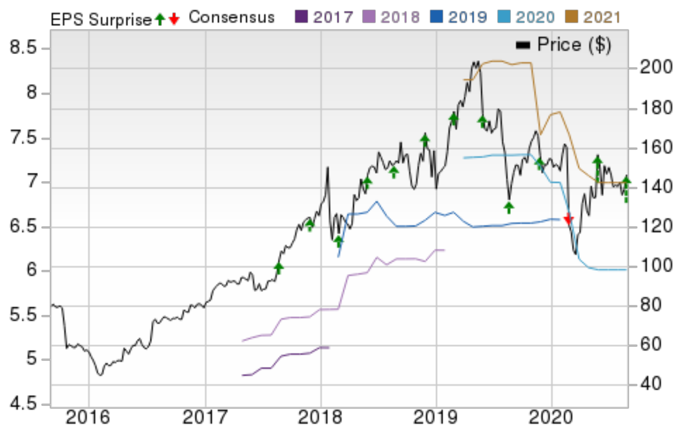
Price Target (6-12 Months): **$153.00**

Long Term: 6-12 Months	**Zacks Recommendation:** (Since: 04/28/20) Prior Recommendation: Underperform	**Neutral**
Short Term: 1-3 Months	**Zacks Rank:** (1-5)	**3-Hold**
	Zacks Style Scores:	VGM:B
	Value: D | Growth: B	Momentum: C

Summary

VMware reported impressive second-quarter fiscal 2021 results despite coronavirus woes. Top-line growth benefited from the ongoing cloud-based digital transformation that fully offset sluggish on-premise project developments. VCPP, modern applications, EUC and Carbon Black were major top-line contributors. Apart from strong demand for its cloud-based solutions, VMware gained traction from an expanded portfolio. The company's widening cloud customer base is driven by partnerships with the likes of AWS, IBM, Microsoft, Google, Oracle and Alibaba. Acquisitions like Carbon Black and Pivotal along with the newlylaunched Tanzu portfolio are expected to boost the top line in the long haul. However, shares have underperformed the industry on a year-to-date basis. Economic uncertainty over the coronavirus outbreak remains a major headwind.

Price, Consensus & Surprise

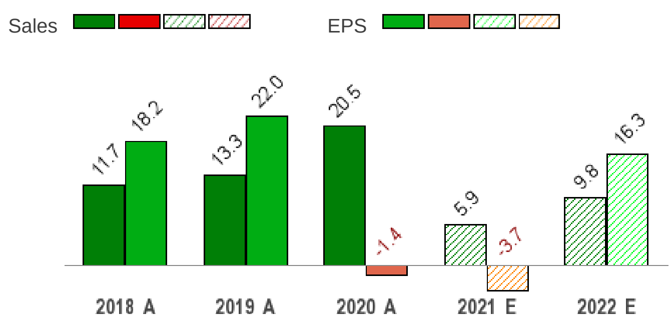


Source: Zacks Investment Research

Data Overview

52-Week High-Low	**$173.37 - $86.00**
20-Day Average Volume (Shares)	**1,178,593**
Market Cap	**$61.2 B**
Year-To-Date Price Change	**-3.8%**
Beta	**0.74**
Dividend / Dividend Yield	**$0.00 / 0.0%**
Industry	**Computer - Software**
Zacks Industry Rank	**Top 26% (66 out of 252)**
Last EPS Surprise	**24.8%**
Last Sales Surprise	**2.6%**
EPS F1 Estimate 4-Week Change	**0.0%**
Expected Report Date	**NA**
Earnings ESP	**0.0%**
P/E TTM	**21.3**
P/E F1	**24.3**
PEG F1	**1.8**
P/S TTM	**5.5**

Sales and EPS Growth Rates (Y/Y %)



Sales Estimates (millions of $)

	Q1	Q2	Q3	Q4	Annual*
2022	2,964 E	3,083 E	3,082 E	3,486 E	12,570 E
2021	2,734 A	2,875 A	2,779 E	3,145 E	11,445 E
2020	2,266 A	2,439 A	2,456 A	3,073 A	10,811 A

EPS Estimates

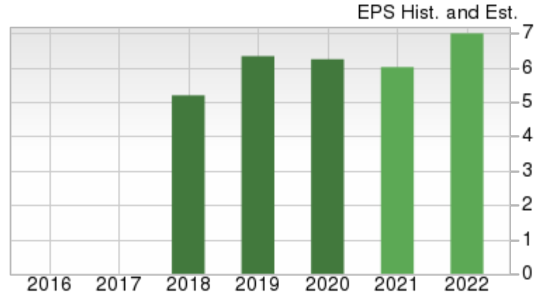
	Q1	Q2	Q3	Q4	Annual*
2022	$1.55 E	$1.71 E	$1.64 E	$2.11 E	$6.99 E
2021	$1.52 A	$1.81 A	$1.34 E	$1.72 E	$6.01 E
2020	$1.32 A	$1.60 A	$1.49 A	$2.05 A	$6.24 A

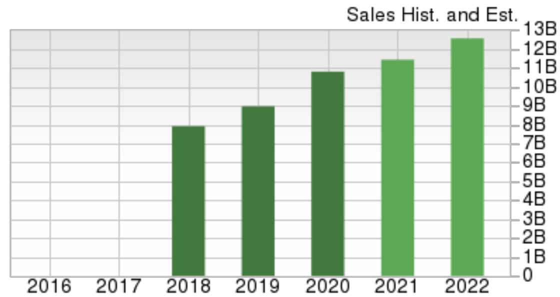
*Quarterly figures may not add up to annual.

The data in the charts and tables, including the Zacks Consensus EPS and Sales estimates, is as of 08/28/2020. The reports text is as of 08/31/2020.

Overview

VMware is the pioneer in developing core x86 server virtualization software solutions. With innovative virtualization products and cloud suit solutions, the company is helping businesses in their digital transformation journey.





VMware assists its customers in managing their IT resources across private clouds and complex multi-cloud, multi-device environments by offering solutions across three categories: Software-Defined Data Center (SDDC), Hybrid and Multi-Cloud Computing and Digital Workspace — End-User Computing (EUC).

Notably, VMware Cloud Services enables its customers to run, manage, connect and better secure their applications across hybrid and multiple public clouds including Amazon Web Services (AWS), Microsoft Azure, Google Cloud and IBM Cloud.

VMware completed the acquisition of Pivotal Software, a subsidiary of Dell, in December 2019 to enhance its cloud native applications portfolio. The company bought Avi Networks, a provider of multi-cloud application delivery services, in July 2019.

VMware's SDDC architecture consists of four main product categories: Compute (vSphere — flagship data center platform), Cloud Management (vRealize Operations, vRealize Automation, Wavefront, CloudHealth), Networking (NSX, VeloCloud, Network Insight, VMware NSX Advanced Load Balancer by Avi Networks), and Storage and Availability (vSAN, VxRail).

Moreover, EUC solution consists of VMware Workspace ONE, powered by Unified Endpoint Management (formerly known as AirWatch), and Horizon application and desktop virtualization.

Notably, in September 2016, VMware's parent company EMC was acquired by Dell for $67 billion. The newly-formed company named Dell Technologies holds 80.9% of VMware shares as of Jan 31, 2020.

In fiscal 2020, VMware reported revenues worth $10.81 billion. Beginning the fourth quarter of 2019, the company presented a new revenue line item, subscription & SaaS.

Total license, and subscription & SaaS contributed to 46.8% of total revenues. License, and Subscription & SaaS contributed to 62.9 and 37.1% of segmental revenues, respectively.

Services accounted for 53.2% of total revenues. Software Maintenance and Professional Services contributed to 82.6% and 17.4% of revenues, respectively.

Source: Zacks Investment Research

Reasons To Buy:

VMware holds a prime position in the virtualization market and has placed itself well to benefit from the increasing adoption of cloud-based solutions.

- VMware has placed itself well to benefit from the increasing adoption of cloud-based solutions. Enabling software support on cloud is a positive as many enterprises now prefer public cloud platforms like Amazon Web Services (AWS), Microsoft's Azure and Google Cloud. VMware has partnered AWS to offer an integrated hybrid cloud solution, functioning much like a SDDC. Moreover, VMware and AWS have expanded their partnership that now enables the latter to resell VMware Cloud on the platform. VMware Cloud on AWS is now available in 17 regions globally. Notably, the overall node count increased more than four times in the past year. The company has expanded partnership with IBM to include a new IBM Service offering that will help migrate and extend mission-critical VMware workloads to the IBM Cloud. It also encompasses new integrations to help enterprises modernize applications with Kubernetes and containers. Further, partnerships with Alibaba, Google Cloud and Azure are expected to drive VCPP growth in the long haul.

- VMware has been consistently taking initiatives to diversify its product portfolio to include most of the IT infrastructure. The company's offerings in domains like SDDC (vSphere, vSAN, NSX), hybrid cloud (vCloud Air, VMware Cloud Provider Program) and EUC (AirWatch, Horizon) have helped it to gain market share. As a part of its product strategy, the company aims bring SDDC mainstream and vCloud Air as an important hybrid cloud platform, getting an edge to win customers in network architecture (especially in NSX and vSAN) and solidifying its position in the business mobility market.These factors are expected to drive revenue growth in fiscal 2021.

- The addition of Carbon Black solutions equips VMware's existing security portfolio to uniquely and radically reduce the attack surface and provide deep protection across infrastructure, applications and endpoints. Post the completion of the acquisition, VMware launched a new security business unit, including Carbon Black and AppDefense offerings. Moreover, Dell is promoting Carbon Black Cloud, along with Dell Trusted Devices and Secureworks, as the preferred endpoint security solution its commercial customers. Solid adoption rate post VMware acquisition has increased Carbon Black's total customer count to roughly 15K.

- Moreover, the Heptio and Pivotal acquisitions combined with the VMware Cloud native offerings make up the Tanzu, a portfolio of products and services designed to transform the way enterprises build, run and manage application software. VMware aims to simplify the use of Kubernetes in a multi-cloud environment by offering this solution. Moreover, the Nyansa acquisition will enable VMware to deliver an end-to-end network visibility monitoring and remediation solution within VMware SD-WAN. Addition of Nyansa's artificial intelligence (AI) & machine learning (ML) capabilities to VMware's existing network and security portfolio will further strengthen the company's ability to enable self-healing networks. These new solutions based on the recent acquisitions are expected to drive the top line in fiscal 2021 and beyond.

Reasons To Sell:

> Intensifying competition, sluggish license bookings and leveraged balance sheet are major headwinds.

- Intensifying competition from providers of public cloud infrastructure and SaaS-based offerings, including AWS, Microsoft Azure and vendors like Oracle (free server virtualization software) and Cisco (network virtualization technology), are major concerns. Moreover, we also expect increased competition from open source companies that are targeting data center virtualization and private cloud, including Red Hat, now a part of IBM, and Nutanix. The stiff competitive environment hurts VMware's pricing ability, which impacts profitability.

- Growth in license bookings has been muted for the last few quarters owing to customer delays and macro-economic weakness in some key regions. Though the decline in compute license bookings is slowing down, it can weigh on the financials in the near term.

- VMware's balance sheet is highly leveraged, which restricts its ability to invest in growth opportunities, including acquisitions. Total debt as of Jul 31, 2020, was $6.21 billion compared with $7.46 billion as of May 1, 2020. During the reported quarter, VMware redeemed $1.250 billion of notes..

- VMware's frequent acquisitions have escalated integration risks. Moreover, we note that the large acquisitions negatively impacted the company's balance sheet in the form of high level of goodwill and intangible assets, which totaled $10.66 billion or almost 37.8% of total assets, as of Jul 31, 2020.

Last Earnings Report

VMware Q2 Earnings Beat Estimates, Revenues Rise Y/Y

Quarter Ending	07/2020
Report Date	Aug 27, 2020
Sales Surprise	2.62%
EPS Surprise	24.83%
Quarterly EPS	1.81
Annual EPS (TTM)	6.87

VMware's second-quarter fiscal 2021 non-GAAP earnings of $1.81 per share beat the Zacks Consensus Estimate by 24.8% and also increased 18.3% year over year.

Moreover, revenues of $2.88 billion surpassed the consensus mark by 2.6% and also improved 9.2% on a year-over-year basis.

VMware's results for the fiscal second quarter reflected benefits from its ongoing transition to cloud that fully offset sluggish on-premise project developments. Subscription & SaaS generated 22% of total revenues in the quarter under review. VCPP, modern applications, EUC and Carbon Black were major top-line contributors.

Markedly, VMware has reached general-availability status for new first-party services offerings with Alphabet's Google Cloud and Oracle.

Google Cloud announced the general availability of Google Cloud VMware Engine that provides end-to-end support to migrate and run the VMware environment in Google Cloud.

Moreover, Oracle introduced Oracle Cloud VMware Solution. This dedicated, cloud-native VMware-based environment enables enterprises to easily move their production workloads to Oracle Cloud Infrastructure.

Further, in early fiscal second quarter, Microsoft unveiled its next-generation Azure VMware solution.

Notably, VMware Cloud on AWS revenues grew triple digits year over year. Additionally, VMware announced new capabilities that further improve the economic value of VMware Cloud on AWS.

The company also witnessed solid adoption of VMware Cloud Foundation at clients like Daimler and across financial services end-market.

VMware also made available the second generation of VMware Cloud on Dell EMC in the quarter under review.

Furthermore, VMware vSphere BitFusion, a new integrated feature in VMware vSphere 7 was introduced. The solution will enable enterprises to deliver elastic infrastructure on-demand for AI and machine learning applications.

Top-Line Details

Region-wise, U.S. revenues (50.1% of revenues) increased 9.3% year over year to $1.44 billion. International revenues (49.9%) grew 9.2% from the year-ago quarter to $1.44 billion.

Services revenues (53% of revenues) rose 7.4% year over year to $1.53 billion. Software Maintenance (83.3% of Services revenues) climbed 8.4% to $1.27 billion. Professional Services (16.7% of Services revenues) were $255 million, up 2.8% year over year.

Total License and Subscription & SaaS revenues (47% of revenues) improved 11.4% from the year-ago quarter to $1.35 billion.

License revenues (53.3% of License and Subscription & SaaS revenues) declined7% year over year to $719million.

Subscription & SaaS revenues (46.7% of segment revenues) jumped 43.7% year over year to $631 million.

Coronavirus Hurt Bookings in Q2

VMware witnessed slowdown in a number of on-premise projects in the Americas due to the coronavirus outbreak. This negatively impacted bookings in the reported quarter.

NSX product bookings (includes Subscription and SaaS, and license bookings equivalent to those stated in prior periods) declined in the mid-single-digits range.

Further, vSAN product bookings (includes Subscription and SaaS, and license bookings equivalent to as the same stated in prior periods) decreased in the low-single-digits range year over year.

Markedly, Carbon Black's customer base jumped to more than 20,000. VMware's modern applications business, which includes Pivotal, Heptio and Wavefront, generated product bookings well ahead of expectations in the fiscal second quarter.

EUC product bookings (includes Subscription and SaaS, and license bookings equivalent to the ones stated in prior periods) decreased in high-single-digits range on a year-over-year basis. However, EUC SaaS based on annual contract value grew more than 35% year over year.

Moreover, core SDDC product bookings (includes Subscription and SaaS, and license bookings equivalent to the levels stated in prior periods) decreased in the low-single-digit range year over year.

At the end of the quarter, VMware had license backlog of $8 million and total backlog of $36 million.

Revenue Performance Obligation increased 17% year over year to $10.3 billion. Of this, 54% is classified as current.

Operating Details

Research & development (R&D) expenses as a percentage of revenues slipped 20 basis points (bps) year over year to 19%.

Moreover, sales & marketing (S&M) expenses as a percentage of revenues decreased 290 bps on a year-over-year basis to 27.3%.

However, general & administrative (G&A) expenses as a percentage of revenues increased 50 bps to 6.9%.

Non-GAAP operating margin expanded 280 bps on a year-over-year basis to 33% in the reported quarter, driven by lower spending.

Balance Sheet & Cash Flow

As of Jul 31, 2020, cash & cash equivalents were $4.70 billion compared with $5.95 billion as of May 1, 2020.

Total debt as of Jul 31, 2020, was $6.21 billion compared with $7.46 billion as of May 1, 2020. During the reported quarter, VMware redeemed $1.250 billion of notes.

Operating cash flow plunged 47.7% sequentially but increased 12.2% year over year to $643 million.

Free cash flow fell 50% sequentially but increased 16.9% year over year to $643 million.

In the reported quarter, VMware bought back $130 million worth of shares. The company has approximately $1.69 billion remaining under its current share-repurchase authorization.

Acquisitions

During the reported quarter, VMware acquired Lastline, a pioneer in anti-malware research and AI-powered network detection and response-solution provider. The company integrated it into NSX to provide a complete, internal firewall capability.

VMware also bought True Visibility Suite team and products from Blue Medora. This enables VMware vRealize Operations to provide visibility and insight into customers' broad data center and hybrid cloud environments.

Further, the Datrium acquisition expands VMware Cloud on AWS' Site Recovery offering.

Q3 Developments

On Aug 5, VMware and Intel announced a collaboration that focuses on developing an integrated software platform for virtualized Radio Access Networks to accelerate the rollout of both existing LTE and future 5G networks.

Moreover, VMware was selected as the cloud platform by DISH Network to deploy its 5G cloud-native Open Radio Access Network on Jul 31.

Guidance

For the fiscal third quarter, total revenues are expected to be $2.80 billion, suggesting 5.4% year-over-year growth.

Subscription & SaaS and License Revenues are expected to be $1.265 billion (more than 50% from Subscription & SaaS), hinting at 5.6% growth year over year.

Non-GAAP operating margin is anticipated to be 27.5%. Moreover, non-GAAP earnings are expected to be $1.42 per share.

For fiscal 2021, VMware now expects revenues of roughly $11.6 billion, suggesting 7% year-over-year growth.

Subscription & SaaS and License Revenues are expected to be $5.5 billion (more than 45% from Subscription & SaaS), indicating nearly 9% growth year over year.

Non-GAAP operating margin is anticipated to be 30.5%. Moreover, non-GAAP earnings are expected to be $6.62 per share for fiscal 2021.

Further, cash flow from operations, capital expenditure and free cash flow are now expected to be roughly $3.7 billion, $300 million and $3.4 billion, respectively.

Recent News

On Aug 20, VMware unveiled the newest versions of its VMware Fusion and VMware Workstation desktop hypervisor solutions.

On Aug 5, VMware and Intel announced a collaboration that focuses on developing an integrated software platform for virtualized Radio Access Networks ("RAN") to accelerate the rollout of both existing LTE and future 5G networks.

Moreover, VMware was selected as the cloud platform by DISH Network to deploy its 5G, cloud-native Open Radio Access Network (O-RAN) on Jul 31.

On Jul 30, VMware announced that IDC ranked it as #1 in the worldwide IT automation and configuration management (ITACM) software market for 2019.

On Jul 15, Dell Technologies announced that it is planning to spin-off its 81% equity ownership interest at VMware. The deal is expected to not materialize before September 2021.

On Jun 24, VMware announced the expansion of its VMware Ready for Telco Cloud program, formerly known as the VMware Ready for NFV program. The enhanced certification program will enable VMware partners to test the interoperability and readiness of their Virtual Network Functions and Cloud-Native Network Functions with the VMware Telco Cloud platform. It also enables VMware partners to accelerate onboarding and deployment of their 5G-ready services on the VMware Telco Cloud platform.

On Jun 19, VMware introduced an integrated feature in vSphere 7 that will enable enterprises to deliver elastic infrastructure on-demand for artificial intelligence (AI) and machine learning (ML) applications.

On Jun 1, VMware announced the general availability of vRealize Automation Cloud Service in Singapore. The solution will boost data center capacity, allowing all data to be hosted locally in Singapore, enhancing accessibility and security while enabling businesses in the region to define, aggregate and deploy across clouds.

On May 13, VMware announced its plans to acquire Octarine, an early-stage startup. Octarine's innovative security platform for Kubernetes applications helps simplify DevSecOps and enables cloud-native environments to be intrinsically secure from development through runtime.

Valuation

VMware shares are down 3.7% in the year-to-date period but up 3.3% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 40.2% and 28.6%, in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and the sector are up 54.8% and 44.3%, respectively.

The S&P 500 index is up 9% in the year-to-date period and 20.3% in the past year.

The stock is currently trading at 22.19X forward 12-month earnings, which compares to 35.60X for the Zacks sub-industry, 27.79X for the Zacks sector and 23.5X for the S&P 500 index.

Over the past five years, the stock has traded as high as 40.71X and as low as 12.43X, with a 5-year median of 28.37X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our $153 price target reflects 23.30X forward 12-month earnings.

The table below shows summary valuation data for VMW

Valuation Multiples - VMW

		Stock	Sub-Industry	Sector	S&P 500
P/E F12M	Current	22.19	35.60	27.79	23.5
	5-Year High	40.71	35.60	27.79	23.5
	5-Year Low	12.43	18.62	16.72	15.25
	5-Year Median	28.37	25.13	19.70	17.6
P/S F12M	Current	5.06	8.29	4.32	3.84
	5-Year High	8.17	8.29	4.32	3.84
	5-Year Low	2.45	3.88	2.32	2.53
	5-Year Median	5.34	5.63	3.14	3.05
EV/Sales TTM	Current	5.48	9.27	5.05	3.45
	5-Year High	9.30	9.27	5.05	3.46
	5-Year Low	1.91	3.26	2.59	2.15
	5-Year Median	5.33	5.85	3.64	2.88

As of 08/28/2020

Industry Analysis **Zacks Industry Rank:** Top 26% (66 out of 252)

Source: Zacks Investment Research

Top Peers

Company (Ticker)	Rec	Rank
Adobe Systems Incorporated **(ADBE)**	Neutral	3
Amazon.com, Inc. **(AMZN)**	Neutral	3
Cisco Systems, Inc. **(CSCO)**	Neutral	3
Hewlett Packard Enterprise Company **(HPE)**	Neutral	3
International Business Machines Corporation **(IBM)**	Neutral	4
Microsoft Corporation **(MSFT)**	Neutral	3
Nutanix Inc. **(NTNX)**	Neutral	2
Oracle Corporation **(ORCL)**	Neutral	4

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

Industry Comparison Industry: Computer - Software

	VMW	X Industry	S&P 500	Industry Peers: CSCO	IBM	NTNX
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	3	-	-	3	4	2
VGM Score	B	-	-	B	A	F
Market Cap	61.22 B	1.73 B	23.71 B	178.18 B	111.38 B	5.46 B
# of Analysts	11	4	14	12	6	11
Dividend Yield	0.00%	0.00%	1.63%	3.41%	5.21%	0.00%
Value Score	D	-	-	C	A	F
Cash/Price	0.10	0.07	0.07	0.16	0.13	0.18
EV/EBITDA	24.81	17.99	13.37	9.80	8.68	-10.53
PEG F1	1.82	2.61	3.08	2.51	3.44	NA
P/B	8.25	6.48	3.22	4.70	5.38	NA
P/CF	21.87	23.48	12.90	12.53	6.33	NA
P/E F1	24.29	35.94	21.82	13.57	11.29	NA
P/S TTM	5.50	4.65	2.52	3.61	1.48	4.17
Earnings Yield	4.11%	2.64%	4.41%	7.37%	8.85%	-7.92%
Debt/Equity	0.78	0.24	0.74	0.31	2.68	-3.29
Cash Flow ($/share)	6.68	1.17	6.94	3.37	19.75	-2.48
Growth Score	B	-	-	B	C	D
Historical EPS Growth (3-5 Years)	13.76%	9.39%	10.41%	9.17%	-3.28%	NA
Projected EPS Growth (F1/F0)	-3.67%	10.11%	-4.94%	-3.14%	-13.54%	7.04%
Current Cash Flow Growth	0.87%	6.56%	5.22%	-2.66%	2.09%	121.11%
Historical Cash Flow Growth (3-5 Years)	13.69%	9.63%	8.50%	2.34%	-3.76%	NA
Current Ratio	0.87	1.51	1.35	1.72	1.04	1.54
Debt/Capital	43.71%	27.95%	43.86%	23.39%	72.83%	NA
Net Margin	15.94%	6.61%	10.25%	22.75%	10.44%	-66.75%
Return on Equity	29.11%	10.54%	14.66%	34.75%	51.06%	-1,175,319.00%
Sales/Assets	0.44	0.60	0.50	0.53	0.50	0.71
Projected Sales Growth (F1/F0)	11.83%	2.10%	-1.43%	-2.14%	-4.43%	9.75%
Momentum Score	C	-	-	C	B	F
Daily Price Change	2.23%	0.32%	0.71%	-0.21%	0.34%	29.17%
1-Week Price Change	2.21%	0.61%	-1.45%	-0.59%	-1.68%	-1.04%
4-Week Price Change	5.19%	4.76%	4.59%	-9.13%	1.77%	26.38%
12-Week Price Change	-1.34%	9.66%	4.86%	-9.94%	-2.96%	15.44%
52-Week Price Change	7.63%	31.62%	3.09%	-10.73%	-7.27%	16.74%
20-Day Average Volume (Shares)	1,178,593	140,783	1,887,168	23,064,888	3,570,133	2,007,314
EPS F1 Estimate 1-Week Change	0.00%	0.00%	0.00%	0.00%	0.00%	-0.64%
EPS F1 Estimate 4-Week Change	0.00%	0.00%	0.79%	-0.80%	0.00%	-0.90%
EPS F1 Estimate 12-Week Change	0.00%	2.50%	3.43%	-0.63%	-1.88%	-0.90%
EPS Q1 Estimate Monthly Change	0.00%	0.00%	0.00%	-7.03%	0.00%	-0.97%

Source: Zacks Investment Research

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	D
Growth Score	B
Momentum Score	C
VGM Score	B

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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Returns quoted represent past performance which is no guarantee of future results. Investment returns and principal value will fluctuate so that when shares are redeemed, they may be worth more or less than their original cost. Current performance may be higher or lower than the performance shown.

Investing involves risk; principal loss is possible. There is no guarantee that companies that can issue dividends will declare, continue to pay or increase dividends.

Glossary of Terms and Definitions

52-Week High-Low: The range of the highest and lowest prices at which a stock has traded during the past year. This range is determined based on the stock's daily closing price which may differ from the intra-day high or low. Many investors use it as a technical indicator to determine a stock's current value and future price movement. The idea here is that if price breaks out from the 52-week range, in either direction, the momentum may continue in the same direction.

20-Day Average Volume (Shares): The average number of shares of a company traded in a day over the last 20 days. It is a direct indication of a security's overall liquidity. The higher the average daily trading volume, the easier it is to enter or exit the stock at a desired price with more buyers and sellers being available.

Daily Price Change: This is the percentage difference between a trading day's closing price and the prior trading day's closing price. This item is updated at 9 p.m. EST each day.

1-Week Price Change: This is the percentage change in a stock's closing price over the last 5 trading days. This change reflects the collective buying and selling sentiment over the 1-week period.

A strong weekly price increase for the stock, especially when accompanied by increased volume, is an indication of it gaining momentum.

4-Week Price Change: This is the percentage change in a stock's closing price over the last 20 trading days or past 4 weeks. This is a mediumterm price change metric and an indication of the stock gaining momentum.

12-Week Price Change: This is the percentage change of a stock's closing price over the last 60 trading days or past 12 weeks. Similar to 4-week price change, this is a medium-term price change metric. It shows whether a stock has been enjoying strong investor demand, or if it has been in consolidation, or distress over this period.

52-Week Price Change: This is the percentage change in a stock's closing price over the last 260 trading days or past 52 weeks. This long-term price change metric is a good reference point for investors. Some investors seek stocks with the best percentage price change over the last 52 weeks, expecting the momentum to continue.

Market Cap: The number of outstanding common shares of a company times its latest price per share. This figure represents a company's size, which indicates various characteristics, including price stability and risk, in which investors could be interested.

Year-To-Date Price Change: Change in a stock's daily closing price in the period of time beginning the first day of the current calendar year through to the previous trading day.

# of Analysts: Number of EPS estimates used in calculating the current-quarter consensus. These estimates come from the brokerage analysts tracking this stock. However, the number of such analysts tracking this stock may not match the number of estimates, as all brokerage analysts may not come up with an estimate or provide it to us.

Beta: A measure of risk commonly used to compare the volatility of a stock to the overall market. The S&P 500 Index is the base for calculating beta and carries a value of 1. A stock with beta below 1 is less risky than the market as a whole. And a stock with beta above 1 is riskier.

Dividend: The portion of earnings a company is expected to distribute to its common shareholders in the next 12 months for each share they own. Dividends are usually paid quarterly. Dividend payments reflect positively on a company and help maintain investors' trust. Investors typically find dividend-paying stocks appealing because the dividend adds to any market price appreciation to result in higher return on investment (ROI). Moreover, a steady or increasing dividend payment provides investors a cushion in a down market.

Dividend Yield: The ratio of a company's annual dividend to its share price. The annual dividend used in the ratio is calculated based on the mostrecent dividend paid by the company. Dividend yield is an estimate of the dividend-only return from a stock in the next 12 months. Since dividend itself doesn't change frequently, dividend yield usually changes with a stock's price movement. As a result, often an unusually high dividend yield is a result of weak stock price.

S&P 500 Index: The Standard & Poor's 500 (S&P 500) Index is an unmanaged group of securities considered to be representative of the stock market in general. It is a market-capitalization-weighted index of stocks of the 500 largest U.S. companies. Each stock's weight in the index is proportionate to its market value.

Industry: One of the 250+ groups that Zacks classifies all stocks into based on the nature of business. These groups are termed as expanded (aka "X") industries and map to their respective (economic) sectors; Zacks has 16 sectors.

Zacks Industry Rank: The Zacks Industry Rank is determined by calculating the average Zacks Rank for all stocks in the industry and then assigning an ordinal rank to it. For example, an industry with an average Zacks Rank of 1.6 is better than an industry with an average Zacks Rank of 2.3. So, the industry with the better average Zacks Rank would get a better Zacks Industry Rank. If an industry has the best average Zacks Rank, it would be considered the top industry (1 out of 250+), which would place it at the top 1% of Zacks-ranked industries. Studies have shown that roughly half of a stock's price movement can be attributed to the industry group it belongs to. In fact, the top 50% of Zacks-ranked industries outperforms the bottom 50% by a factor of more than 2 to 1.

Last EPS Surprise: The percentage deviation of a company's last reported earnings per share from the Zacks Consensus Estimate. Companies with a positive earnings surprise are more likely to surprise again in the future (or miss again if they recently missed).

Last Sales Surprise: The percentage deviation of a company's last reported sales from the Zacks Consensus Estimate.

Expected Report Date: This is an estimated date of a company's next earnings release. The information originated or gathered by Zacks Investment Research from its information providers or publicly available sources is the basis of this estimate.

Earnings ESP: The Zacks Earnings ESP compares the Most Accurate Estimate to the Zacks Consensus Estimate for the yet-to-be reported quarter. The Most Accurate Estimate is the most recent version of the Zacks Consensus EPS Estimate. The idea here is that analysts revising their estimates closer to an earnings release have the latest information, which could potentially be more accurate than what they and others contributing to the consensus had predicted earlier. Thus, a positive or negative Earnings ESP reading theoretically indicates the likely deviation of the actual earnings from the consensus estimate. However, the model's predictive power is significant for positive ESP readings only. A positive Earnings ESP is a strong predictor of an earnings beat, particularly when combined with a Zacks Rank #1 (Strong Buy), #2 (Buy) or #3 (Hold). Our research shows that stocks with this combination produce a positive surprise nearly 70% of the time.

Periods:

TTM: Trailing 12 months. Using TTM figures is an effective way of analyzing the most-recent financial data in an annualized format that helps neutralize the effects of seasonality and other quarter-to-quarter variation.

F1: Current fiscal year. This period is used to analyze the estimates for the ongoing full fiscal year.

F2: Next fiscal year. This period is used to analyze the estimates for the next full fiscal year.

F12M: Forward 12 months. Using F12M figures is an effective way of analyzing the near-term (the following four unreported quarters) estimates in an annualized manner. Instead of typically representing estimates for the full fiscal year, which may not represent the nitty-gritty of each quarter, F12M figures suggest an all-inclusive annualized estimate for the following four quarters. The annualization helps neutralize the potential effects of seasonality and other quarter-to-quarter variations.

P/E Ratio: The price-to-earnings ratio measures a company's current market price per share relative to its earnings per share (EPS). Usually, the trailing-12-month (TTM) EPS, current-fiscal-year (F1) EPS estimate, or forward-12-month (F12M) EPS estimate is used as the denominator. In essence, this ratio shows what the market is willing to pay today for each dollar of EPS. In other words, this ratio gives a sense of what the relative value of the company is at the already reported level of earnings or at a future level of earnings.

It is one of the most widely-used multiples for determining the value of a company and helps comparing its valuation with that of a competitor, the industry group or a benchmark.

PEG Ratio: The price/earnings to growth ratio is a stock's P/E ratio using current fiscal year (F1) EPS estimate divided by its expected EPS growth rate over the coming 3 to 5 years. This ratio essentially determines a stock's value by factoring in the company's expected earnings growth and is thus believed to provide a more complete picture than just the P/E ratio, particularly for faster-growing companies.

P/S Ratio: The price-to-sales ratio is calculated as a company's current price per share divided by trailing 12 months (TTM) sales or revenues per share. This ratio shows what the market is willing to pay today for each dollar of TTM sales per share. The P/S ratio is at times the only valuation metric when the company has yet to become profitable.

Cash/Price Ratio: The cash-to-price ratio or Cash Yield is calculated as cash and marketable securities per share divided by the company's current share price. Like the earnings yield, which shows the anticipated yield (or return) on a stock from earnings for each dollar invested, the cash yield does the same, with cash being the source of return instead of earnings. For example, a cash/price ratio of 0.08 suggests a return of 8% or 8 cents for every $1 investment.

EV/EBITDA Ratio: The EV/EBITDA ratio, also known as Enterprise Multiple, is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by EBITDA (earnings before interest, taxes, depreciation and amortization). Usually, trailing-12-month (TTM) or forward-12-month (F12M) EBITDA is used as the denominator.

EV/Sales Ratio: The enterprise value-to-sales ratio is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by annual sales. It is an expansion of the P/S valuation, which uses market value instead of enterprise value. The EV/Sales ratio is perceived as more accurate than P/S, in part, because the market capitalization does not take a company's debt into account when valuing it.

EV/CF Ratio: The enterprise value-to-cash flow ratio is calculated as a company's enterprise value (market capitalization + value of total long-term debt + book value of preferred shares - cash and marketable securities) divided by the trailing-12-month (TTM) operating cash flow. It's a measure of how long it would take to buy the entire business if you were able to use all the company's operating cash flow.

The EV/CF ratio is perceived as more accurate than the P/CF ratio, in part, because the market price does not take a company's debt into account when valuing it.

EV/FCF Ratio: The enterprise value-to-free cash flow metric compares a company's enterprise value to its trailing-12-month (TTM) free cash flow (FCF). This metric is very similar to the EV/CF ratio, but is considered a more exact measure owing to the fact that it uses free cash flow, which subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding growth activities and payments to shareholders.

P/EBITDA Ratio: The P/EBITDA ratio is calculated as a company's per share market value divided by EBITDA (earnings before interest, taxes, depreciation, and amortization). This metric is very similar to the EV/EBITDA ratio, but is considered a little less exact measure as it uses market price, which does not take a company's debt into account. However, since EBITDA is often considered a proxy for cash income, the metric is used as a measure of what the market is willing to pay today for each dollar of the company's cash profitability in the trailing 12 months (TTM) or forward 12 months (F12M).

P/B Ratio: The price-to-book ratio is calculated as a company's current price per share divided by its book value (total assets – liabilities – preferred stocks) per share. In short, the book value is how much a company is worth. In other words, it reflects the total value of a company's assets that its common shareholders would receive if it were to be liquidated. So, the P/B ratio indicates whether you're paying higher or lower than what would remain if the company went bankrupt immediately. Investors typically use this metric to determine how a company's stock price stacks up to its intrinsic value.

P/TB Ratio: The price-to-tangible-book value ratio is calculated as a the per share market value of a company divided by the value of its tangible assets (total assets – liabilities – preferred stocks – intangible assets) per share. Tangible book value is the same thing as book value except it excludes the value of intangible assets to get a step closer to the baseline value of the company.

P/CF Ratio: The price-to-cash flow ratio measures a company's per share market price relative to its trailing-12-month (TTM) operating cash flow per share. This metric is used to determine whether a company is undervalued or overvalued relative to another stock, industry or sector. And like the P/E ratio, a lower number is typically considered better from the value perspective.

One of the reasons why P/CF ratio is often preferred over P/E ratio is the fact that operating cash flow adds back non-cash expenses such as depreciation and amortization to net income. This feature helps valuing stocks that have positive cash flow but are not profitable because of large noncash charges.

P/FCF Ratio: The price-to-free cash flow ratio is an extension of P/CF ratio, which uses trailing-12-month (TTM) free cash flow per share instead of operating cash flow per share. This metric is considered a more exact measure than P/CF ratio, as free cash flow subtracts capital expenditures (CAPEX) from a company's total operating cash flow, thereby reflecting the actual cash flow available for funding activities that generate additional revenues.

Earnings Yield: The earnings yield is calculated as current fiscal year (F1) EPS estimate divided by the company's current share price. The ratio, which is the inverse of the P/E ratio, measures the anticipated yield (or return) from earnings for each dollar invested in a stock today.

For example, earnings yield for a stock, which is trading at $35 and expected to earn $3 per share in the current fiscal year (F1), would be 0.0857 (3/35 = 0.0857) or 8.57%. In other words, for $1 invested in the stock today, the yield from earnings is anticipated to be 8.57 cents.

Investors most commonly compare the earnings yield of a stock to that of a broad market index (such as the S&P 500) and prevailing interest rates, such as the current 10-year Treasury yield. Since bonds and stocks compete for investors' dollars, stock investors typically demand a higher yield for the extra risk they assume compared to investors of U.S. Treasury-backed securities that offer virtually risk-free returns. This additional return is referred to as the risk premium.

Debt/Equity Ratio: The debt-to-equity ratio is calculated as a company's total liabilities divided by its shareholder equity. This metric is used to gauge a company's financial leverage. In other words, it is a measure of the degree to which a company is financing its operations through debt versus its own funds. The higher the ratio, the higher the risk for shareholders.

However, this ratio is difficult to compare across industry groups where ideal amounts of debt vary. Some businesses are more capital intensive than others and typically require higher debt to finance their operations. So, a company's debt-to-equity ratio should be compared with other companies in the same industry.

Cash Flow ($/share): Cash flow per share is calculated as operating cash flow (after-tax earnings + depreciation + other non-cash charges) divided by common shares outstanding. It is used by many investors as a measure of a company's financial strength. Since cash flow per share takes into consideration a company's ability to generate cash by adding back non-cash expenses, it is regarded by some as a more accurate measure of a company's financial situation than earnings per share, which could be artificially deflated.

Current Ratio: The current ratio or liquidity ratio is a company's current assets divided by its current liabilities. It measures a company's ability to pay short-term obligations. A current ratio that is in line with the industry average or slightly higher is generally considered acceptable. A current ratio that is lower than the industry average would indicate a higher risk of distress or default. A higher number is usually better. However, a very high current ratio compared to the industry average could be an indication of inefficient use of assets by management.

Debt/Capital Ratio: Debt-to-capital ratio is a company's total debt (interest-bearing debt + both short- and long-term liabilities) divided its total capital (interest-bearing debt + shareholders' equity). It is a measure of a company's financial leverage. All else being equal, the higher the debt-to-capital ratio, the riskier the stock.

However, this ratio can vary widely from industry to industry, the ideal amount of required debt being different. Some businesses are more capital intensive than others and typically require higher debt to finance their operations. So, a company's debt-to-capital ratio should be compared with the same for its industry.

Net Margin: Net margin is calculated as net income divided by sales. It shows how much of each dollar in sales generated by a company translates into profit. For example, if a company's net margin is 15%, its net income is 15 cents for every $1 of sales it makes.

A change in margin can reflect either a change in business conditions, or a company's cost controls, or both. If a company's expenses are growing faster than sales, its net margin will decline. However, different net margin rates are considered good for different industries, so it's better to compare net margin rates of companies in the same industry group.

Return on Equity: Return on equity (ROE) is calculated as trailing-12-month net income divided by trailing-12-month average shareholder equity (including reinvested earnings). This metric is considered a measure of how effectively management is using a company's assets to generate profits. For example, if a company's ROE is 10%, it creates 10 cents profits for every $1 shareholder equity, which is basically the company's assets minus debt. A company's ROE deemed good or bad depends on what's normal for its peers or industry group.

Sales/Assets Ratio: The sales-to-assets ratio or asset utilization ratio or asset turnover ratio is calculated as a company's annual sales divided by average assets (average of assets at the beginning of the year and at the year's end). This metric helps investors understand how effectively a company is using its assets to generate sales. For example, a sales-to-assets ratio of 2.5 indicates that the company generated $2.50 in sales for every $1 of assets on its books.

The higher the sales-to-assets ratio, the better the company is performing. However, similar to many other ratios, the asset turnover ratio tends to be higher for companies in certain industries/sectors than in others. So, a company's sales-to-assets ratio should be compared with the same for its industry/sector.

Historical EPS Growth (3-5 Years): This is the average annual (trailing-12-month) EPS growth rate over the last 3-5 years. This metric helps investors see how a company's EPS has grown from a long-term perspective.

Note: There are many factors that can influence short-term numbers — a recession will reduce this number, while a recovery will inflate it. The longterm perspective helps smooth out short-term events.

Projected EPS Growth (F1/F0): This is the estimated EPS growth rate for the current financial year. It is calculated as the consensus estimate for the current fiscal year (F1) divided by the reported EPS for the last completed fiscal year (F0).

Current Cash Flow Growth: It measures the latest year-over-year change in operating cash flow. Cash flow growth tells an investor how quickly a company is generating inflows of cash from operations. A positive change in the cash flow is desired and shows that more 'cash' is coming in than going out.

Historical Cash Flow Growth (3-5 Years): This is the annualized change in cash flow over the last 3-5 years. The change in a longer period helps put the current reading into proper perspective. By looking at the rate, rather than the actual dollar value, the comparison across the industry and peers becomes easier.

Projected Sales Growth (F1/F0): This metric looks at the estimated sales growth for the current year. It is calculated as sales estimate for the current fiscal year (F1) divided by the reported sales for the last completed fiscal year (F0).

Like EPS growth, a higher rate is better for sales growth. A look at a company's projected sales growth instantly tells you what the outlook is for their products and services. However, different sales growth rates are considered good for different industries, so it's better to compare sales growth rates of companies in the same industry group.

EPS F1 Estimate 1-Week Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past week. The change in a company's consensus EPS estimate (or earnings estimate revision) has proven to be strongly correlated with the near-term price movement of its shares. It is an integral part of the Zacks Rank.

If a stock's consensus EPS estimate is $1.10 now versus $1.00 a week ago, that will be reflected as a 10% upward revision. If, on the other hand, it went from $1.00 to 90 cents, that would be a 10% downward revision.

EPS F1 Estimate 4-Week Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past four weeks.

A stock's earnings estimate revision in a 1-week period is important. But it's more meaningful to look at the longer-term revision. And, of course, the 4-week change helps put the 1-week change into proper perspective.

EPS F1 Estimate 12-Week Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal year over the past 12 weeks.

This metric essentially shows how the consensus EPS estimate has changed over a period longer than 1 week or 4 weeks.

EPS Q1 Estimate Monthly Change: The percentage change in the Zacks Consensus EPS estimate for the current fiscal quarter over the past four weeks.

While the revision in consensus EPS estimate for the current fiscal year is strongly correlated with the near-term price movement of its shares, the estimate revision for the current fiscal quarter is an important metric as well, especially over the short term, and particularly as a stock approaches its earnings date. If a stock's Q1 EPS estimate decreases ahead of its earnings release, it's usually a negative sign, whereas an increase is a positive sign.