

VMware, Inc.(VMW)

\$137.18 (As of 08/13/20)

Price Target (6-12 Months): **\$144.00**

Long Term: 6-12 Months

Zacks Recommendation:

Neutral

(Since: 04/28/20)

Prior Recommendation: Underperform

Short Term: 1-3 Months

Zacks Rank: (1-5)

3-Hold

Zacks Style Scores:

VGM:B

Value: C

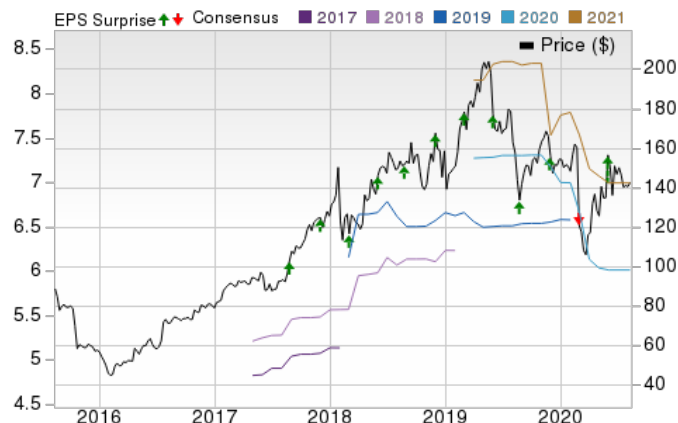
Growth: B

Momentum: B

Summary

VMware is benefiting from the ongoing cloud-based digital transformation. Apart from strong demand for its VMware Cloud on AWS solution, the company gained traction from an expanded portfolio. VMware'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 newly launched 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. VMware didn't reinstate its fiscal 2021 guidance which it withdrew in late March due to economic uncertainty over the coronavirus outbreak. Apart from an unfavorable revenue mix which hurts license revenues, margins are likely to remain under pressure due to heavy spending on hybrid cloud and SaaS portfolio.

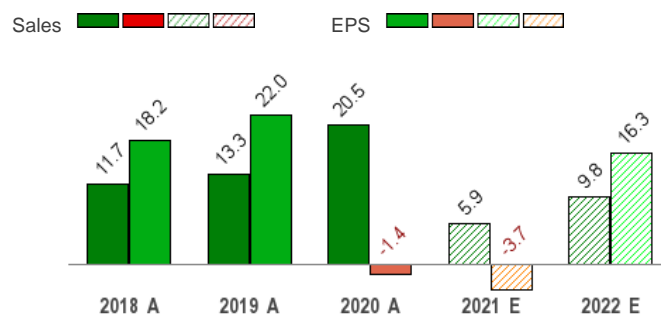
Price, Consensus & Surprise



Data Overview

52 Week High-Low	\$173.37 - \$86.00
20 Day Average Volume (sh)	962,279
Market Cap	\$57.5 B
YTD Price Change	-9.6%
Beta	0.74
Dividend / Div Yld	\$0.00 / 0.0%
Industry	Computer - Software
Zacks Industry Rank	Top 31% (78 out of 252)

Sales and EPS Growth Rates (Y/Y %)



Last EPS Surprise	27.7%
Last Sales Surprise	3.2%
EPS F1 Est- 4 week change	0.0%
Expected Report Date	08/27/2020
Earnings ESP	0.0%
P/E TTM	20.6
P/E F1	22.8
PEG F1	1.7
P/S TTM	5.4

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	2,802 E	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	\$1.45 E	\$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 08/13/2020. The reports text is as of 08/14/2020.

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).

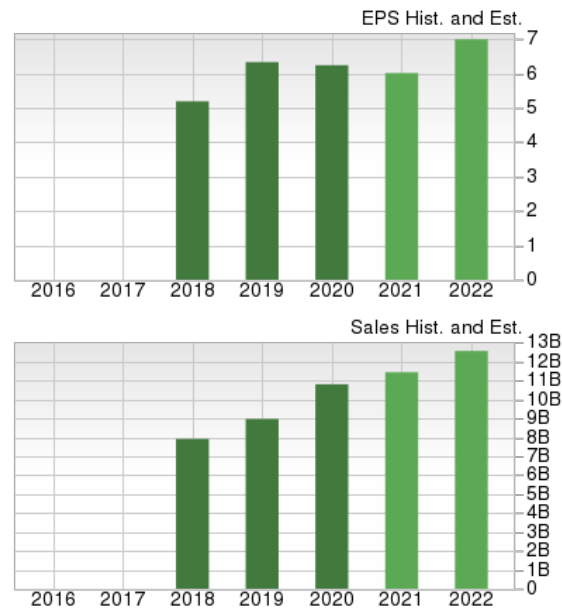
Moreover, EUC solution consists of VMware Workspace ONE, powered by Unified Endpoint Management (formerly known as AirWatch), and Horizon application and desktop virtualization.

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.



Reasons To Buy:

- ▲ 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.

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

Reasons To Sell:

- ▼ 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 May 1, 2020 was \$7.46 billion compared with cash & cash equivalents of \$5.95 billion. Total debt-to-total capital as of May 1, 2020 was 50.1% compared with 43.9% as of Jan 31, 2020.
- ▼ 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 \$10.46 billion or almost 36.8% of total assets, as of May 1, 2020.

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

Last Earnings Report

VMware Q1 Earnings Beat Estimates, Revenues Rise Y/Y

VMware's first-quarter fiscal 2021 non-GAAP earnings of \$1.52 per share beat the Zacks Consensus Estimate by 27.7% and also increased 21.6% year over year.

Moreover, revenues of \$2.73 billion surpassed the consensus mark by 3.2% and also improved 11.6% on a year-over-year basis.

Notably, VMware Cloud on AWS, reported triple-digit revenue growth year over year.

Apart from strong demand for its cloud-based solutions, VMware also gained traction from an expanded portfolio in the quarter under review. The company rolled out offerings like Tanzu and VMware Advanced Security for Cloud Foundation. Moreover, it updated its core portfolio including vSphere, NSX-T, vSAN and vRealize Operations Cloud.

Markedly, five of VMware's top 10 deal wins in the fiscal first quarter included Tanzu.

However, the company didn't reinstate its fiscal 2021 guidance, which it withdrew in March due to economic uncertainty over the coronavirus outbreak. Nevertheless, VMware expects revenue growth in the mid-single digits for fiscal 2021. As economies around the world recover, the company witnesses a more normalized double-digit growth rate in fiscal 2022.

Top-Line Details

Region-wise, U.S. revenues (49.9% of revenues) increased 14% to \$1.36 billion. International revenues (50.1%) grew 9.3% from the year-ago quarter to \$1.37 billion.

Services revenues (54.9% of revenues) rose 7.8% year over year to \$1.50 billion. Software Maintenance (82.9% of Services revenues) climbed 8.4% to \$1.25 billion. Professional Services (17.1% of Services revenues) were \$257 million, up 4.9% year over year.

Total License and Subscription & SaaS revenues (45.1% of revenues) improved 16.6% from the year-ago quarter to \$1.23 billion.

License revenues (53.6% of segment revenues) inched up 2.2% year over year to \$660 million, driven by stronger-than-expected EUC license demand.

Subscription & SaaS revenues (46.4% of segment revenues) jumped 39.2% year over year to \$572 million. Top-line growth benefited from a strong revenue performance by VMware's EUC, Carbon Black and VeloCloud offerings as well as VMware Cloud on AWS.

Robust Bookings

NSX adoption was impressive as product bookings (includes Subscription and SaaS, and license bookings equivalent to those stated in prior periods) shot up more than 20% year over year.

Further, vSAN product bookings (includes Subscription and SaaS, and license bookings equivalent to as the same stated in prior periods) increased more than 20% year over year.

Carbon Black's customer base jumped to more than 15,000. The company witnessed strong product bookings growth, particularly in Carbon Black Cloud.

VMware's modern applications business, which includes Pivotal, Heptio and Wavefront generated product bookings well ahead of expectations in the fiscal first quarter.

EUC product bookings (includes Subscription and SaaS, and license bookings equivalent to as the ones stated in prior periods) were up nearly 10% on a year-over-year basis. Notably, beginning this fiscal, VMware shifted its focus from total contract value to annual contract value (ACV) for EUC SaaS product bookings, which hurt bookings in the reported quarter. However, ACV bookings grew 20% year over year.

VMware also witnessed strong demand for its VDI solutions, which helped grow on-premises perpetual license bookings by roughly 40% year over year.

Workspace ONE too gained significant traction the reported quarter.

However, core SDDC product bookings (includes Subscription and SaaS, and license bookings equivalent to the levels stated in prior periods) decreased in the mid-single digit range year over year. Additionally, total core SDDC bookings declined 7% year over year, primarily due to the COVID-19 outbreak.

At the end of the quarter, VMware had license backlog of \$2 million and total backlog of \$4 million.

Revenue Performance Obligation (RPO) increased 19% year over year to \$10.1 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 19.8%.

Moreover, sales & marketing (S&M) expenses as a percentage of revenues decreased 20 bps on a year-over-year basis to 29.8%.

Quarter Ending **04/2020**

Report Date	May 28, 2020
Sales Surprise	3.21%
EPS Surprise	27.73%
Quarterly EPS	1.52
Annual EPS (TTM)	6.66

General & administrative (G&A) expenses as a percentage of revenues fell 100 bps to 5.7%.

Non-GAAP operating margin expanded 320 bps on a year-over-year basis to 29.9% in the reported quarter, driven by lower spending.

Balance Sheet & Cash Flow

As of May 1, 2020, cash & cash equivalents were \$5.95 billion compared with \$2.92 billion as of Jan 31, 2020. Cash includes proceeds from a \$2-billion bond offering completed in April.

Total debt as of May 1, 2020 was \$7.46 billion compared with \$5.48 billion as of Jan 31, 2020.

Operating cash flow augmented 34.6% sequentially and 26.6% year over year to \$1.37 billion.

Free cash flow dipped 2.6% sequentially but increased 26.1% year over year to \$1.29 billion.

In the reported quarter, VMware bought back 1.5 million shares. The company has approximately \$819 million remaining under its current share repurchase authorization.

Guidance

For the fiscal second quarter, total revenues are expected to be \$2.80 billion, suggesting 6% year over year growth.

Subscription & SaaS and License Revenues are expected to be \$1.30 billion, hinting at 7% growth year over year.

Non-GAAP operating margin is anticipated to be 28%.

Non-GAAP earnings are expected to be \$1.44 per share.

Recent News

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.

On May 6, VMware announced that VMware Carbon Black has been named a 2020 Gartner Peer Insights Customers' Choice for Endpoint Detection and Response (EDR) solutions. Gartner Peer Insights is a free peer-review and ratings platform designed for enterprise software and service decision-makers. VMware Carbon Black's EDR solution received a rating of 4.5 overall with more than half of respondents giving it five stars as of Apr 23, 2020.

Valuation

VMware shares are down 9.6% in the year-to-date period and 3.7% over the trailing 12-month period. Stocks in the Zacks sub-industry and the Zacks Computer & Technology sector are up 26.2% and 20.4%, in the year-to-date period, respectively. Over the past year, the Zacks sub-industry and the sector are up 43.2% and 38.8%, respectively.

The S&P 500 index is up 4.8% in the year-to-date period and 18.7% in the past year.

The stock is currently trading at 20.98X forward 12-month earnings, which compares to 32.41X for the Zacks sub-industry, 26.27X 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 40.71X and as low as 12.43X, with a 5-year median of 28.23X. Our Neutral recommendation indicates that the stock will perform in-line with the market. Our \$144 price target reflects 22.03X 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	20.98	32.41	26.27	22.91
	5-Year High	40.71	32.41	26.31	22.91
	5-Year Low	12.43	18.62	16.72	15.25
	5-Year Median	28.23	25.13	19.61	17.58
P/S F12M	Current	4.77	7.50	4.07	3.7
	5-Year High	8.17	8.00	4.07	3.7
	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	5.17	8.27	4.68	3.28
	5-Year High	8.68	8.56	4.68	3.46
	5-Year Low	1.68	3.19	2.58	2.14
	5-Year Median	5.10	5.97	3.65	2.86

As of 08/13/2020

Industry Analysis Zacks Industry Rank: Top 31% (78 out of 252)



Top Peers

Company (Ticker)	Rec	Rank
Adobe Systems Incorporated (ADBE)	Neutral	3
Amazon.com, Inc. (AMZN)	Neutral	3
Cisco Systems, Inc. (CSCO)	Neutral	2
International Business Machines Corporation (IBM)	Neutral	4
Microsoft Corporation (MSFT)	Neutral	3
Nutanix Inc. (NTNX)	Neutral	3
Oracle Corporation (ORCL)	Neutral	3
Hewlett Packard Enterprise Company (HPE)	Underperform	5

Industry Comparison Industry: Computer - Software				Industry Peers		
	VMW	X Industry	S&P 500	CSCO	IBM	NTNX
Zacks Recommendation (Long Term)	Neutral	-	-	Neutral	Neutral	Neutral
Zacks Rank (Short Term)	3	-	-	2	4	3
VGM Score	B	-	-	B	A	F
Market Cap	57.49 B	1.66 B	23.58 B	180.38 B	111.35 B	4.23 B
# of Analysts	11	4	14	12	6	11
Dividend Yield	0.00%	0.00%	1.68%	3.37%	5.21%	0.00%
Value Score	C	-	-	B	A	D
Cash/Price	0.10	0.07	0.07	0.14	0.13	0.17
EV/EBITDA	23.30	18.20	13.34	9.43	8.68	-8.10
PEG Ratio	1.71	2.50	2.99	2.54	3.44	NA
Price/Book (P/B)	7.74	6.00	3.20	4.76	5.38	NA
Price/Cash Flow (P/CF)	20.54	22.40	12.83	12.69	6.33	NA
P/E (F1)	22.77	35.41	21.99	13.69	11.29	NA
Price/Sales (P/S)	5.37	4.81	2.53	3.66	1.47	3.30
Earnings Yield	4.38%	2.73%	4.35%	7.30%	8.85%	-10.17%
Debt/Equity	0.78	0.15	0.77	0.31	2.68	-3.29
Cash Flow (\$/share)	6.68	1.17	6.94	3.37	19.75	-2.48
Growth Score	B	-	-	C	C	D
Hist. EPS Growth (3-5 yrs)	13.76%	9.26%	10.41%	9.03%	-3.28%	NA
Proj. EPS Growth (F1/F0)	-3.67%	10.00%	-6.32%	-2.80%	-13.54%	17.30%
Curr. Cash Flow Growth	0.87%	6.56%	5.20%	-2.66%	2.09%	121.11%
Hist. Cash Flow Growth (3-5 yrs)	13.69%	8.91%	8.55%	3.53%	-3.76%	NA
Current Ratio	0.87	1.56	1.33	1.72	1.04	1.54
Debt/Capital	43.71%	22.84%	44.59%	23.39%	72.83%	NA
Net Margin	58.44%	5.84%	10.13%	22.75%	10.44%	-68.91%
Return on Equity	30.45%	10.54%	14.51%	34.75%	51.06%	-1,175,319.00%
Sales/Assets	0.44	0.60	0.51	0.53	0.50	0.70
Proj. Sales Growth (F1/F0)	11.83%	2.07%	-1.43%	-1.44%	-4.43%	10.58%
Momentum Score	B	-	-	A	B	C
Daily Price Chg	-2.52%	0.00%	-0.44%	-11.19%	-1.32%	-2.69%
1 Week Price Chg	1.50%	0.84%	2.30%	0.70%	1.64%	0.11%
4 Week Price Chg	-1.92%	4.60%	4.38%	-6.68%	0.82%	6.73%
12 Week Price Chg	0.45%	15.16%	13.59%	-4.30%	4.96%	-9.54%
52 Week Price Chg	-3.63%	25.45%	5.75%	-7.63%	-5.22%	18.56%
20 Day Average Volume	962,279	116,233	1,984,154	20,933,372	4,930,312	2,852,494
(F1) EPS Est 1 week change	0.00%	0.00%	0.00%	0.00%	0.00%	-0.26%
(F1) EPS Est 4 week change	0.00%	0.00%	2.08%	0.00%	-1.66%	-0.26%
(F1) EPS Est 12 week change	3.23%	0.47%	2.66%	0.18%	-1.88%	-6.04%
(Q1) EPS Est Mthly Chg	0.00%	0.00%	0.94%	0.98%	-6.63%	-1.48%

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	C
Growth Score	B
Momentum Score	B
VGM Score	B

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

This report contains independent commentary to be used for informational purposes only. The analysts contributing to this report do not hold any shares of this stock. The analysts contributing to this report do not serve on the board of the company that issued this stock. The EPS and revenue forecasts are the Zacks Consensus estimates, unless indicated otherwise on the reports first page. Additionally, the analysts contributing to this report certify that the views expressed herein accurately reflect the analysts personal views as to the subject securities and issuers. ZIR certifies that no part of the analysts compensation was, is, or will be, directly or indirectly, related to the specific recommendation or views expressed by the analyst in the report.

Additional information on the securities mentioned in this report is available upon request. This report is based on data obtained from sources we believe to be reliable, but is not guaranteed as to accuracy and does not purport to be complete. Any opinions expressed herein are subject to change.

ZIR is not an investment advisor and the report should not be construed as advice designed to meet the particular investment needs of any investor. Prior to making any investment decision, you are advised to consult with your broker, investment advisor, or other appropriate tax or financial professional to determine the suitability of any investment. This report and others like it are published regularly and not in response to episodic market activity or events affecting the securities industry.

This report is not to be construed as an offer or the solicitation of an offer to buy or sell the securities herein mentioned. ZIR or its officers, employees or customers may have a position long or short in the securities mentioned and buy or sell the securities from time to time. ZIR is not a broker-dealer. ZIR may enter into arms-length agreements with broker-dealers to provide this research to their clients. Zacks and its staff are not involved in investment banking activities for the stock issuer covered in this report.

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

No part of this report can be reprinted, republished or transmitted electronically without the prior written authorization of ZIR.