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**VMware, Inc. Class A (VMW-US)**  
Software

- We reiterate our Strong Buy rating as VMW's new product successes will drive accelerating post-COVID-19 growth.
- Business Performance will accelerate driven by the launch of its new product portfolio enhanced by the recent integration of last year's Carbon Black and Pivotal Software acquisitions.
- VMW's new Tanzu product portfolio will transform enterprise IT infrastructures.
- VMW's strong balance sheet and cash flow will continue to fund growth through ongoing new product development and strategic acquisitions along with ongoing share repurchases.
- VMW is on our Research Focus List and in our Focused Opportunity Portfolio.

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**Company Note**
**VMware, Inc. Class A (VMW-US)**  
 Software

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**Research Action:**

Reiterate rating

**Rating: Strong Buy**
**Prior Rating: Strong Buy**
**Price 06/19/2020: \$150.69**
**52 Week High / Low: \$183.50 / \$86.00**
**Key Data: (TTM as of Apr-20)**
**Excess Cash per Share: 13.23**
**Annual Dividend: \$0.00**
**Dividend Yield: 0.00%**
**Avg. Volume (30 Day): 1.7M**
**Shares Outstanding: 419.0M**
**Float: 77.5M**
**Short Interest: 7.4M**
**SI % / Float 9.58%**
**Equity MV: \$63,146.6M**
**Sales TTM: \$10,702.0M**
**Beta: 1.34**
**EBITDAR: \$5,092.9M**
**NOPAT: \$6,766.9M**
**Total Invested Capital: \$11,462.4M**
**Return on Capital: 13.83%**
**Cost of Capital: 4.15%**
**Economic Profit: \$6,403.1M**
**Market Value Added: \$13,465.1M**
**Current Operations Value: \$29,260.1M**
**Future Growth Value: (\$4,332.6)M**

- We reiterate our Strong Buy rating as VMW's new product successes will drive accelerating post-COVID-19 growth.** VMW reported recently strong Q1 FY 21 results driven by its large installed base of legacy IT infrastructure clients increasingly adopting its next generation of products. Security services acquired through its recent Carbon Black acquisition is set to drive the increasing demand. VMW is one of the few companies with a differentiated hybrid cloud strategy and also incorporates security and ease of data transfer and onboarding. VMW's cloud growth is dependent on workflow growth, and workloads are expected to grow up to 15% annually for at least the next two years as companies implement VMW's application development for hybrid cloud infrastructures into more applications. VMW's NSX software-defined network virtualization and security platform is in its early stages of growth and continues to experience accelerating adoption. VMW continues to benefit from its dominant position in cloud-based virtual server and desktop technology and product offerings. Ongoing cloud-based VMW's increasing revenue growth driven by the ongoing cloud-based digital transformation and a recent boost from the current COVID-19 pandemic lockdown, which has created increasing virtual server and desktop demand from a distributed workforce. VMW's cloud partnership with Amazon's (AMZN-US, Buy Rated) saw triple-digit Y/Y revenue growth. Strategic partnerships with all major cloud and IT service providers are driving the continued growth in VMW's customer base. The integration of its recent acquisitions of Carbon Black and Pivotal Software, together with its newly launched Tanzu product portfolio, will drive further growth acceleration. VMW is benefiting from the increasing demand for its industry-leading products NSX, VeloCloud, and vSAN that will continue to drive an increasing Return on Capital, further Economic Profit growth, and greater shareholder value creation. We believe further upside exists from current levels and continue to recommend purchase.

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- **Business Performance will accelerate driven by the launch of its new product portfolio enhanced by the recent integration of last year's Carbon Black and Pivotal Software acquisitions.** For the 12 months ending April 2020, Net Sales Revenue increased 15.94% Y/Y from \$9.23 billion to \$10.70 billion. We forecast a further increase of 10.19% to \$11.79 billion over the NTM. Economic Operating Cash Flow (EBITDAR) declined 3.82% Y/Y from \$5.30 billion to \$5.09 billion over the LTM. We forecast an increase of 22% to \$6.21 billion over the NTM. Net Operating Profit After Tax (NOPAT) declined 38.74% Y/Y from \$1.98 billion to \$1.21 billion over the LTM. We forecast an increase of 68.87% to \$2.05 billion over the NTM. Return on Capital (ROC) declined from 19.18% to 13.84% over the LTM. We forecast an increase to 16.84% over the NTM. Economic Profit declined 165.81% Y/Y from \$746.0 million to \$-480.90 million over the LTM. We forecast an increase of 12.5% to 106.2 million over the NTM. VMW's key metrics all declined with the increase in capital investment for the acquisitions that it made in 2019. As revenue generation ramps up, we will see a resumption in Business Performance acceleration that will continue to drive an increasing Return on Capital, positive growth in Economic Profit, and further gains in shareholder value creation.
- **VMW's new Tanzu product portfolio will transform enterprise IT infrastructures.** The integration of its recent acquisitions, including Heptio and Pivotal Software, is being combined with its cloud-native product offerings to launch VMW's Tanzu, a portfolio of products and services designed to transform the way enterprises create, operate, and manage application software. Tanzu creates the ability to use Kubernetes in a multi-cloud environment, enabling developers and operators to create a more efficient, cost-effective, and faster-time-to-innovation enterprise IT infrastructure with increased security, stability, and governance. VMW's recent Nyansa acquisition enables it to deliver an end-to-end network visibility monitoring and remediation solution within VMware SD-WAN as well. The addition of Nyansa's AI (Artificial Intelligence) and ML (Machine Learning) capabilities as part of VMW's current network and security portfolio will further enhance its ability to enable self-healing networks. The launch of Tanzu will drive accelerating revenue growth throughout FY 2021 and beyond.

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- **VMW's strong balance sheet and cash flow will continue to fund growth through ongoing new product development and strategic acquisitions along with ongoing share repurchases.** As of April 2020, VMW had \$5.54 billion, or 13.23 cents a share, in excess cash. The cash, along with an expected \$6.21 billion in Economic Operating Cash Flow (EBITDAR), will enable it to continue to fund new growth initiatives, including product innovation, strategic acquisitions, and ongoing return of cash to shareholders through share repurchases. In 2020, VMW continues to make several strategic acquisitions focused on security following an extensive series of acquisitions in 2019. Earlier this month, VMW announced the acquisition of network security provider Lastline. In May, VMW acquired server virtualization software security provider Octarine. In January, VMW acquired Nyansa, which further expands its data analytics and machine learning capabilities. In 2019, VMW made two major acquisitions, including Carbon Black, which provides enhanced endpoint security solutions, and Pivotal Software, which enhances its cloud-native application portfolio, for a total of \$4.8 billion, further differentiating its SDDC and virtualization capabilities. VMW continues to enhance shareholder returns with ongoing share repurchases and repurchased just under \$400 million worth of stock in FY 2019 but significantly increased its repurchases buying \$1.87 billion in FY 2020. In the most recent quarter, VMW repurchased \$296 million worth of shares.
- **VMW is on our Research Focus List and in our Focused Opportunity Portfolio.** VMW offers investors one of the best ways to play the growth in cloud migration, and server and desktop virtualization. VMW's virtualization platforms play an integral role in our cloud investment theme.

#### **Investment Thesis**

VMW will continue experiencing strong revenue growth as companies continue to update IT infrastructures and continue to move greater workloads to hosted and hybrid cloud environments. VMW's growth will also come from new product offerings that focus on network and storage virtualization and increased mobile connectivity. VMW is one of the best ways to play the massive growth of hybrid cloud computing environments and ongoing cloud migration trends. VMW's industry-leading SDDC (Software-Defined Data Center) will further drive its growth acceleration. VMW benefits from the increasing demand for its industry-leading products NSX, VeloCloud, and vSAN that will continue to drive an increasing Return on Capital, further Economic Profit growth, and greater shareholder value creation.

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**Company Overview**

**VMware, Inc. (VMW-US)** is the world's leading provider of server and desktop virtualization solutions. VMware provides virtual cloud infrastructure processing platforms and empowers business mobility connectivity. Its products include Virtual Server Management, Hybrid Cloud Computing Environments, Software-Defined Data Centers, and Virtual Desktop Management. VMware empowers the modern datacenter, integrated public clouds, and digital workspaces, along with adding increased security. VMware helps drive lower IT service costs and improve operational efficiencies as well as provide business continuity and remote access management, along with software lifecycle management and virtual desktop management.

**VMware's SDDC architecture platform consists of four main product categories:**

**Compute:** vSphere, its flagship data center platform.

**Cloud Management:** Includes vRealize Automation, vRealize Operations, Wavefront, and CloudHealth.

**Networking:** NSX, VeloCloud, Network Insight, VMware NSX Advanced Load Balancer by Avi Networks.

**Storage & Availability:** Including vSAN and VxRail.

VMware develops and markets its services offerings within three main product groups: Software-Defined Data Center (SDDC), End-User Computing (EUC), and Hybrid Cloud Computing (HCC). VMware has partnership and marketing relationships with every top computer hardware vendor and cloud service provider, including Amazon (AMZN-US) Web Services, Google (GOOGL-US) Cloud, IBM (IBM-US) Cloud, and Microsoft (MSFT-US) Azure. VMware sells its products through its own direct sales force in close to 120 offices globally and through a network of distributors, which in turn sell to end resellers and end-users.

VMware was acquired by EMC in 2004 for \$625 million and then brought public in an IPO in 2007. In September 2016, VMware's parent company EMC was acquired by Dell Technologies (DELL-US) for \$67 billion.

In 2019, VMware made several acquisitions, further enhancing and expanding its product line, including acquired Dell subsidiary Pivotal Software enhancing its cloud-native application portfolio, and Carbon Black, providing enhanced endpoint security solutions. Software-Defined Data Center (SDDC) developer Avi Networks. Security solution provider Intrinsic/US. Infrastructure software developer Bitfusion.io. Cloud application developer Bitrock and computer services and consulting company Aetherpal.

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**VMware operates and reports revenue in four Business Segments:**

**Software Maintenance:** (44% of revenue) includes Software as a Service (SaaS) subscriptions, and Software implementation and maintenance.

**License:** (29% of revenue) provides licensing of Software to end-users.

**Subscriptions & Software as a Service:** (17% of revenue) annual subscription services revenue.

**Professional Services:** (8% of revenue) provides software implementation and training.

**VMware reports revenue in two Geographic Segments:** the United States (50% of revenue) and International (50% of revenue).

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Company Report – Research Update

VMware, Inc. Class A (VMW-US)

Software

Financial Analysis

Table with columns: Report Basis, Reported Period Ending, LTM (03/31/2015 to 05/03/2019), NTM (04/30/2021), 5 Yr Average, 3 Yr Average, Current Trend. Rows include Return on Market Value, Economic Profit, Performance Drivers, Risk Factors, and Valuation Measures.

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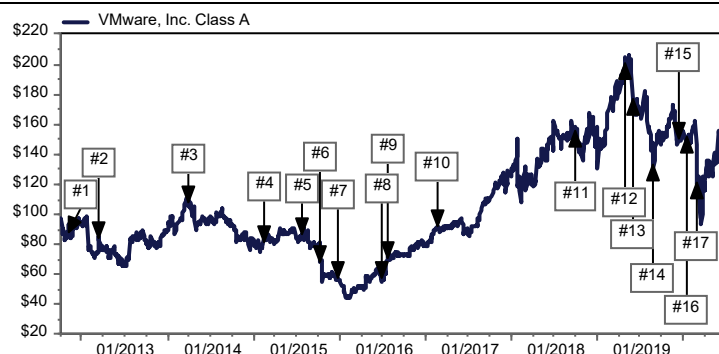
# Company Report – Research Update

## VMware, Inc. Class A (VMW-US)

## Software

### Ratings History

VMware, Inc. Class A (VMW-US)				
Item #	Date	Research Action	Rating	Price
#17	03/02/2020	Reiterate Rating	Strong Buy	\$121.74
#16	01/13/2020	Reiterate Rating	Strong Buy	\$152.00
#15	12/11/2019	Reiterate Rating	Strong Buy	\$148.68
#14	08/23/2019	Reiterate Rating	Strong Buy	\$133.42
#13	05/31/2019	Reiterate Rating	Strong Buy	\$176.51
#12	04/29/2019	Reiterate Rating	Strong Buy	\$201.38
#11	09/27/2018	Reiterate Rating	Strong Buy	\$155.83
#10	02.22.2017	Reiterate Rating	Strong Buy	\$91.76
#9	07/21/2016	Reiterate Rating	Strong Buy	\$70.69
#8	06/30/2016	Reiterate Rating	Strong Buy	\$57.22
#7	10/23/2015	Reiterate Rating	Strong Buy	\$58.18
#6	10/14/2015	Reiterate Rating	Strong Buy	\$67.97
#5	07/24/2015	Reiterate Rating	Strong Buy	\$86.18
#4	02/11/2015	Reiterate Rating	Strong Buy	\$81.65
#3	03/31/2014	Reiterate Rating	Strong Buy	\$108.02
#2	03/15/2013	Reiterate Rating	Strong Buy	\$83.85
#1	11/02/2012	Initiation of Coverage	Strong Buy	\$88.74



### Tigress Research Investment Rating Meanings and Distribution

Tigress Research employs a five-tier rating system for evaluating the investment opportunity and potential return associated with owning the common equity of rated firms within our research universe. The potential return is measured on a relative basis to the general market which is represented by the S&P 500 and to the subject company's industry peer group as indicated.

#### Rating Distribution (06/19/2020)

Rating:	Meaning:	Companies Under Coverage		Relationship Companies Under Coverage*	
		#	%	#	%
<b>Strong Buy:</b>	Expect significant price gains in the price of the stock relative to its industry peer group and general market over the next 12 months.	17	14%	2	25%
<b>Buy:</b>	Expect out-performance for the price of the stock relative to its industry peer group and general market over the next 12 months.	56	46%	5	63%
<b>Neutral:</b>	Expect little or no outperformance opportunity over the next 12 months.	44	36%	1	12%
<b>Underperform:</b>	Expect underperformance for the price of the stock relative to its industry peer group and general market over the next 12 months.	5	4%	0	0%
<b>Sell:</b>	Expect price decline or significant relative market and industry underperformance over the next 12 months.	0	0%	0	0%
<b>Not Rated</b>	No Current Research Rating	NA	NA	65	NA

\*Relationship Companies under research coverage are companies in which Tigress Financial Partners LLC or one of its affiliates has received compensation for investment banking or non-investment banking services from the company, affiliated entities and/or its employees within the past twelve months or expects to do so within the next three months.

Total	122	100%	72	100%
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**Analyst Certification**

I, Ivan Feinseth, hereby certify that the views expressed herein accurately reflect my personal views about the subject company and their securities and that I have not been and will not be directly or indirectly compensated for expressing specific recommendations or views in the report.

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**Tigress Research Methodology Overview**

We employ proprietary quantitative valuation models combined with dynamic fundamental analysis based on the principles of Economic Profit to formulate timely and insightful investment ratings, analysis, strategies, and recommendations.

We make key adjustments to reported financial data eliminating GAAP-based accounting distortions and measuring all companies on a cash operating basis.

Our proprietary research framework is a multi-factor model that scores and ranks companies based on their risk-adjusted ability to create Economic Profit relative to their current market value focusing on three key components:

**Business Performance:** Measuring economic profitability, growth, and operating efficiency.

**Risk:** Measuring business sustainability, volatility, strength, and consistency.

**Valuation:** Linking business performance to market value. Measuring value created relative to capital employed and enterprise multiples of economic profit and cash flow.

We score and rank 24 key measurements of performance, risk, and value into relative market and industry investment recommendations.

**Glossary of Key Terms and Measures**

<b>Excess Cash per Share:</b>	Excess Cash per Share is the amount of excess cash divided by basic shares outstanding. Excess Cash consists of all cash and short-term securities less operating cash needed to run the business. Operating Cash is 5% of TTM net sales revenue.
<b>EBITDAR:</b>	Earnings Before Interest, Taxes, Depreciation, Amortization, and Restructuring, and Rent Costs. This is especially important when comparing companies that use a significant amount of leased assets like restaurants and retailers.
<b>NOPAT:</b>	Net Operating Profit After Tax represents a company's after-tax cash operating profit, excluding financing costs.
<b>Total Invested Capital:</b>	Total Invested Capital the total cash investment that shareholders and debt holders have made during the life of the company.
<b>Return on Capital:</b>	Return on Capital equals NOPAT divided by Total Invested Capital. It is a key measure of operating efficiency. ROC quantifies how well a company generates cash flow relative to the capital invested in its business.
<b>Cost of Capital:</b>	Is the proportionately weighted cost of each category of capital – common equity, preferred equity, and debt.
<b>Economic Profit:</b>	Economic Profit is the net operating income after tax less the opportunity cost of the total capital invested. It is the most important driver of shareholder value.
<b>Current Operations Value:</b>	Current Operations Value is the portion of market value based on the discounted present value of the current earnings stream, assuming it remains constant forever.
<b>Future Growth Value:</b>	Future Growth Value is the portion of market value based on un-earned Economic Profit

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<b>Company:</b>	<b>Disclosure:</b>
VMware, Inc. Class A (VMW-US)	14

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1. The Analyst or a household member responsible for the production of this report currently holds a position in securities of the company that is the primary subject of this report in a personal, related, or beneficial account.
2. The Analyst or a household member responsible for the production of this report beneficially owns one percent or more in securities of the company that is the primary subject of this report in a personal, related, or beneficial account.
3. Tigress Financial Partners LLC, together with its affiliates beneficially owns one percent or more of the security that is the primary subject of this report.
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14. Accounts managed by Tigress Financial Partners LLC, and / or an employee or an affiliated entity currently hold a position in the security that is the primary subject of this report.
15. Tigress Financial Partners LLC and / or an affiliated entity currently has contracted the products and / or services of the company that is the primary subject of this report.

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