

# Microsoft Corporation

**Recommendation** **BUY** ★ ★ ★ ★ ★

**Price**  
USD 145.96 (as of Nov 08, 2019 4:00 PM ET)

**12-Mo. Target Price**  
USD 186.00

**Report Currency**  
USD

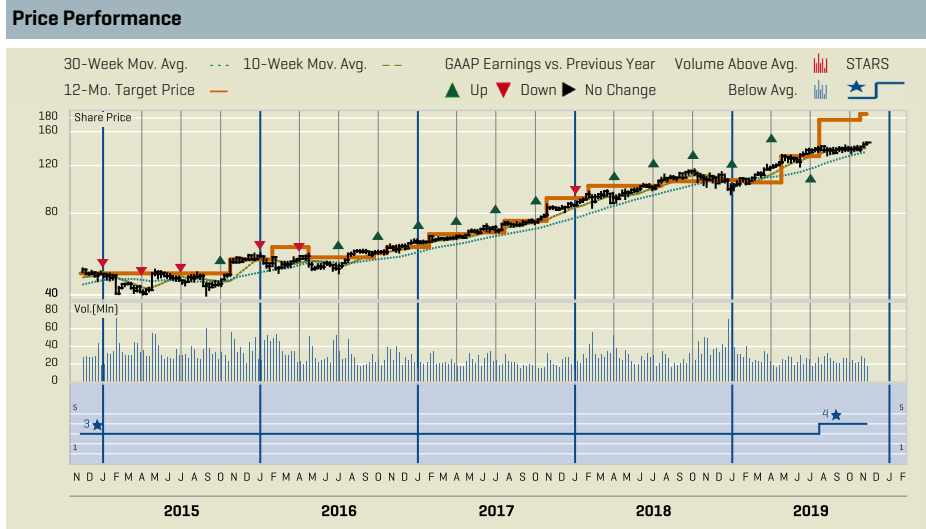
**Investment Style**  
Large-Cap Growth

**Equity Analyst John Freeman**

**GICS Sector** Information Technology  
**Sub-Industry** Systems Software

**Summary** Microsoft is the world's largest software company. It is best known for Windows and Office and is rapidly expanding into cloud services such as Azure.

Key Stock Statistics (Source: CFRA, S&P Global Market Intelligence (SPGMI), Company Reports)							
52-Wk Range	<b>USD 145.99 - 93.96</b>	Oper. EPS 2020E	<b>USD 5.56</b>	Market Capitalization(B)	<b>USD 1,114</b>	Beta	<b>1.23</b>
Trailing 12-Month EPS	<b>USD 5.30</b>	Oper. EPS 2021E	<b>USD 6.54</b>	Yield (%)	<b>1.40</b>	3-Yr Proj. EPS CAGR(%)	<b>19</b>
Trailing 12-Month P/E	<b>27.22</b>	P/E on Oper. EPS 2020E	<b>25.95</b>	Dividend Rate/Share	<b>USD 2.04</b>	SPGMI's Quality Ranking	<b>B+</b>
\$10K Invested 5 Yrs Ago	<b>\$33,495</b>	Common Shares Outstg.(M)	<b>7,628.8</b>	Institutional Ownership (%)	<b>74</b>		



Source: CFRA, S&P Global Market Intelligence  
Past performance is not an indication of future performance and should not be relied upon as such.  
Analysis prepared by Equity Analyst **John Freeman** on Oct 25, 2019 10:41 AM, when the stock traded at **USD 139.94**.

## Highlights

- We forecast a 3-year revenue CAGR of 14.5% through FY 22, driven primarily by three parts of MSFT's business: 1) Azure Platform-as-a-Service (PaaS) - we estimate at 11% of total FY 19 revenue and set to still grow at 45%+ through FY 21 as more legacy enterprise applications, especially those built with MSFT's .NET framework, move to the cloud; 2) Office -- we estimate at 22% of total FY 19 revenue -- benefiting from the higher monetization tailwind that typically kicks in after crossing a 2/1 threshold of SaaS (Office 365) to license revenue (management stated that, for Office, SaaS subscription revenue surpassed license revenue in FY 4Q 17); 3) LinkedIn - we estimate at 7% of FY 19 revenue -- continuing to grow in the high teens through FY 22 with new services and new monetization strategies beyond job search/listings.
- We see gross and operating margins improving to 70% and 42%, respectively, by FY 22, as hardware decreases as a percentage of revenue and cloud services continue to gain scale efficiencies.
- We forecast FY 20 EPS of \$5.56 and FY 21 EPS of \$6.54 and expect continued steady increases to the dividend as well over time.

## Investment Rationale/Risk

- Our Buy rating is based primarily on MSFT's continued success in its various cloud-based services, the revenue from which, by our estimate, hit 50% of total revenue in FY 4Q 19. This estimate is a sum of revenue from Software-as-a-Service (SaaS) versions of Office, Dynamics, etc.; Azure PaaS; LinkedIn; Bing and Xbox-Live. As these services grow, MSFT is likely to benefit increasingly from scale efficiencies so operating margin will likely continue expanding at a healthy clip after hitting the 40% we forecast for FY 21. Our Buy rating is secondarily based on what we view as a stable cash cow in its Windows franchise we project to grow by about 2%-6% over the next three years. We also note MSFT's strong early position in emerging areas such as AI/cognitive computing and augmented and/or virtual reality.
- Risks include the possibility of a high-profile data breach or prolonged outage, especially for Azure. MSFT is not immune to a macroeconomic slowdown, but its very strong balance sheet should offer some downside protection.
- Our \$186 target is the product of our FY 21 EPS estimate of \$6.54 and a 28.5x forward multiple (three-year trend extrapolation).

## Analyst's Risk Assessment

<b>LOW</b>	<b>MEDIUM</b>	<b>HIGH</b>
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Our risk assessment balances our view of the company's leading global franchises, Windows, Office, SQL-Server, X-Box, and LinkedIn, considerable growth and success in cloud with "365" applications and Azure, and balance-sheet strength, with challenges related to PC growth, disruption from mobile computing, and MSFT's sheer size and the "law of large numbers problem".

## Revenue/Earnings Data

Revenue (Million USD)					
	1Q	2Q	3Q	4Q	Year
2020	33,055	--	--	--	--
2019	29,084	32,471	30,571	33,717	125,843
2018	24,538	28,918	26,819	30,085	110,360
2017	21,928	25,826	23,212	25,605	96,571
2016	20,379	23,796	20,531	20,614	91,154
2015	23,201	26,470	21,729	22,180	93,580

## Earnings Per Share (USD)

	1Q	2Q	3Q	4Q	Year
2021	<b>E 1.56</b>	<b>E 1.65</b>	<b>E 1.60</b>	<b>E 1.73</b>	<b>E 6.54</b>
2020	1.38	<b>E 1.40</b>	<b>E 1.33</b>	<b>E 1.45</b>	<b>E 5.56</b>
2019	1.14	1.08	1.14	1.70	5.06
2018	0.84	-0.82	0.95	1.14	2.13
2017	0.72	0.80	0.70	1.03	3.25
2016	0.61	0.62	0.47	0.40	2.56

Fiscal year ended Jun 30. EPS Estimates based on CFRA's Operating Earnings; historical GAAP earnings are as reported in Company reports.

## Dividend Data

Amount (USD)	Date Decl.	Ex-Div. Date	Stk. of Record	Payment Date
0.51	Sep 18	Nov 20	Nov 21	Dec 12 '19
0.46	Jun 12	Aug 14	Aug 15	Sep 12 '19
0.46	Mar 11	May 15	May 16	Jun 13 '19
0.46	Nov 28	Feb 20	Feb 21	Mar 14 '19
0.46	Sep 18	Nov 14	Nov 15	Dec 13 '18

Dividends have been paid since 2003. Source: Company reports.

**Past performance is not an indication of future performance and should not be relied upon as such.**  
Forecasts are not reliable indicator of future performance.

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# Microsoft Corporation

## Business Summary October 25, 2019

**CORPORATE OVERVIEW.** Microsoft is the world's largest software maker, primarily as a result of its near-monopoly position in desktop operating systems and its Office productivity suite. The combination of these two strongholds poses a formidable barrier to entry for competitors, in our opinion. MSFT has used the strong cash flows from these businesses to fund research and development of other markets, including enterprise servers, home entertainment consoles and Internet online advertising.

In July 2013, MSFT announced a restructuring to better integrate its offerings and to focus on its new mission of Devices and Services. In September 2013, the company announced its intent to purchase Nokia's (NOK) Devices and Services business for \$7.2 billion. The deal closed in April 2014.

The company has three operating segments: Productivity and Business Processes (which accounted for 33% of FY 18 (Jun.) revenues), Intelligent Cloud (29%), and More Personal Computing (38%). We think it is noteworthy that in FY 15, the More Personal Computing segment accounted for 46% of revenues.

Productivity and Business Processes includes Office, LinkedIn, and Dynamic CRM offerings. Intelligent Cloud includes server and cloud offerings like Azure. More Personal Computing includes Windows, gaming, Surface and digital advertising products and services.

**CORPORATE STRATEGY.** With the purchase of NOK's device business and intellectual property, we saw MSFT getting further into the device market than it had been in the past. The company had been slowly shifting its business strategy from a PC-centric computing environments to a platform in which diverse devices will access information via the Internet and mobile devices.

Businesses and their users have continued to be MSFT's stronghold. We see this in the dominance of Office productivity applications and penetration of Windows in companies. We also see the focus on productivity in its tablets.

However, after Satya Nadella became CEO in February 2014, he articulated a company mantra of "mobile-first, cloud-first." We have seen Nadella restructure and write down MSFT's mobile phone hardware operations and assets and buy LinkedIn for \$26 billion in December 2016. In June 2018, MSFT announced the proposed acquisition of software developer platform company GitHub for \$7.5 billion. MSFT's M&A strategy has been focused on market and product enhancements and growth. Nadella's changes have helped MSFT notable revenue growth and contributed to significant stock appreciation.

**FINANCIAL TRENDS.** MSFT's revenues grew from \$78 billion in FY 13 to \$110 billion in FY 18. Over the same period, earnings before taxes (excluding unusual items) increased from \$27 billion to \$36 billion.

MSFT closed FY 18 with \$134 billion in cash and short-term investments, with debt of \$82 billion.

Dividends have been increased consistently over the past decade or so. MSFT also announced \$40 billion share repurchase plans in September 2008, September 2013, and September 2016.

## Corporate Information

### Investor Contact

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### Fax

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### Website

www.microsoft.com

### Officers

#### CTO & Executive VP

J. K. Scott

**Executive VP and President of Microsoft Global Sales, Marketing & Operations**  
J. Courtois

#### CEO & Director

S. Nadella

#### Independent Chairman

J. W. Thompson

#### Executive VP & CFO

A. E. Hood

#### Chief Technology Officer

N. Coleman

#### Corporate VP of Finance & Administration and Chief Accounting Officer

F. H. Brod

#### President & Chief Legal Officer

B. L. Smith

### Board Members

A. M. Sorenson

C. H. Noski

C. W. Scharf

H. F. Johnston

H. W. Panke

J. W. Stanton

J. W. Thompson

P. S. Pritzker

P. Warrior

R. G. Hoffman

S. E. Peterson

S. Nadella

T. L. List-Stoll

W. H. Gates

### Domicile

Washington

### Auditor

Deloitte & Touche LLP

### Founded

1975

### Employees

144,000

### Stockholders

94,069

# Microsoft Corporation

Quantitative Evaluations						
<b>Fair Value Rank</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
		LOWEST				HIGHEST
		Based on CFRA's proprietary quantitative model, stocks are ranked from most overvalued [1] to most undervalued [5].				
<b>Fair Value Calculation</b>	<b>USD 133.85</b>	Analysis of the stock's current worth, based on CFRA's proprietary quantitative model suggests that MSFT is slightly overvalued by USD 12.11 or 8.3%.				
<b>Volatility</b>		<b>LOW</b>	<b>AVERAGE</b>	<b>HIGH</b>		
<b>Technical Evaluation</b>	<b>BULLISH</b>	Since October, 2019, the technical indicators for MSFT have been BULLISH.				
<b>Insider Activity</b>		<b>UNFAVORABLE</b>	<b>NEUTRAL</b>	<b>FAVORABLE</b>		

Expanded Ratio Analysis				
	2019	2018	2017	2016
Price/Sales	8.25	6.96	5.59	4.50
Price/EBITDA	19.04	17.10	14.54	12.40
Price/Pretax Income	23.77	21.07	18.05	15.99
P/E Ratio	26.47	46.30	21.21	19.99
Avg. Diluted Shares Outsg. (M)	7753	7794	7832	8013

Figures based on fiscal year-end price

Key Growth Rates and Averages				
Past Growth Rate [%]	1 Year	3 Years	5 Years	
Sales	14.03	11.35	7.70	
Net Income	NM	24.08	12.19	
Ratio Analysis [Annual Avg.]				
Net Margin [%]		NM	NM	NM
% LT Debt to Capitalization	35.31	NA	NA	NA
Return on Equity [%]	42.41	NA	NA	NA

## Company Financials Fiscal year ending Jun. 30

Per Share Data [USD]	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Tangible Book Value	6.88	5.08	5.51	6.45	7.26	7.61	7.35	5.93	5.22	3.76
Free Cash Flow	4.99	4.19	4.05	3.15	2.90	3.26	2.93	3.49	2.90	2.51
Earnings	5.06	2.13	3.25	2.56	1.48	2.63	2.58	2.00	2.69	2.10
Earnings (Normalized)	3.47	2.73	2.22	2.04	2.11	2.05	2.04	2.06	2.01	1.73
Dividends	1.84	1.68	1.56	1.44	1.24	1.12	0.92	0.80	0.64	0.52
Payout Ratio [%]	35	77	46	54	81	40	34	38	22	24
Prices: High	138.40	102.69	72.89	56.85	50.05	42.29	35.78	32.95	29.46	31.58
Prices: Low	93.96	68.02	50.39	39.72	40.12	30.84	26.26	23.79	22.73	22.00
P/E Ratio: High	71.6	78.7	41.5	42.9	20.4	18.7	18.4	11.9	13.2	20.4
P/E Ratio: Low	23.8	26.4	25.3	18.4	15.6	12.1	10.5	8.8	9.4	11.9

Income Statement Analysis (Million USD)										
Revenue	125,843	110,360	96,571	91,154	93,580	86,833	77,849	73,723	69,943	62,484
Operating Income	42,959	35,058	29,331	27,188	28,172	27,886	27,497	27,956	27,161	24,098
Depreciation + Amortization	11,600	9,900	7,800	5,878	5,400	4,245	3,339	2,758	2,537	2,507
Interest Expense	2,686	2,733	2,222	1,243	781	597	429	380	295	151
Pretax Income	43,688	36,474	29,901	25,639	18,507	27,820	27,052	22,267	28,071	25,013
Effective Tax Rate	10.2	54.6	14.8	19.9	34.1	20.7	19.2	23.8	17.5	25.0
Net Income	39,240	16,571	25,489	20,539	12,193	22,074	21,863	16,978	23,150	18,760
Net Income (Normalized)	26,898	21,301	17,386	16,320	17,388	17,239	17,283	17,488	17,248	15,408

Balance Sheet and Other Financial Data (Million USD)										
Cash	133,832	133,664	132,901	113,041	96,391	85,146	76,410	62,044	51,371	36,559
Current Assets	175,552	169,662	162,696	139,660	122,797	114,246	101,466	85,084	74,918	55,676
Total Assets	286,556	258,848	250,312	193,468	174,472	172,384	142,431	121,271	108,704	86,113
Current Liabilities	69,420	58,488	55,745	59,357	49,647	45,625	37,417	32,688	28,774	26,147
Long Term Debt	66,662	72,242	76,073	40,557	27,808	20,645	12,601	10,713	11,921	4,939
Total Capital	188,785	170,226	183,238	126,538	115,467	112,987	95,234	79,138	70,221	52,329
Capital Expenditures	13,925	11,632	8,129	8,343	5,944	5,485	4,257	2,305	2,355	1,977
Cash from Operations	52,185	43,884	39,507	33,325	29,668	32,502	28,833	31,626	26,994	24,073
Current Ratio	2.53	2.90	2.92	2.35	2.47	2.50	2.71	2.60	2.60	2.13
% Long Term Debt of Capitalization	35.3	42.4	41.5	32.1	24.1	18.3	13.2	13.5	17.0	9.4
% Net Income of Revenue	31.2	15.0	26.4	22.5	13.0	25.4	28.1	23.0	33.1	30.0
% Return on Assets	9.85	8.61	8.26	9.24	10.15	11.07	13.03	15.20	17.43	18.37
% Return on Equity	42.4	19.4	31.9	27.0	14.4	26.2	30.1	27.5	44.8	43.8

Source: S&P Global Market Intelligence. Data may be preliminary or restated; before results of discontinued operations/special items. Per share data adjusted for stock dividends; EPS diluted. E-Estimated. NA-Not Available. NM-Not Meaningful. NR-Not Ranked. UR-Under Review.

# Microsoft Corporation

## Sub-Industry Outlook

Our fundamental outlook for the Systems Software sub-industry for the next 12 months is neutral. We expect revenues to increase at a modest pace in the coming quarters, in line with the overall information technology (IT) industry. IDC projected a compound annual growth rate (CAGR) in software revenue of 7% from 2016 to 2021, reflecting a strong 18% gain from subscriptions (reflecting a shift to cloud offerings), a modest 2% increase from maintenance, and a decline of 2% from licenses.

We see growth coming from enterprises, as companies upgrade/spend on data center infrastructure. We think systems software spending will be impacted by more interest in cloud computing, where we see related opportunities (e.g., new revenues) and risks (e.g., execution in light of multiple distribution and pricing models). We note that many major software companies have completed or made significant progress on transitions to cloud offerings, and as a result, we think pricing has been stable to higher.

We see slow PC unit sales at best, reflecting the category's weakness and challenges related to mobile. We think sales of operating systems for servers will increase at a single-digit rate during the next 12 months. We also see moderate growth in virtualization software, as companies seek ways to reduce rising operational costs for their data centers caused by the proliferation of servers. We project that the virtualization software market will continue to experience stable, yet somewhat uninspiring, growth. We think the systems software sub-industry will benefit from increased merger and acquisition activity in the IT industry, as many enterprise IT companies have been positioning themselves as "one-stop shops" that provide comprehensive solutions.

We think these companies will try to strengthen

their offerings in cloud and security software, given the growing interest in broad and flexible functionality. In addition, many software companies have strong balance sheets with significant amounts of cash, in our view, and many have been buying back shares. Tax reform enacted in the U.S. in December 2017 has supported stock repurchase efforts from the companies themselves, as well as technology spending and investment by corporations.

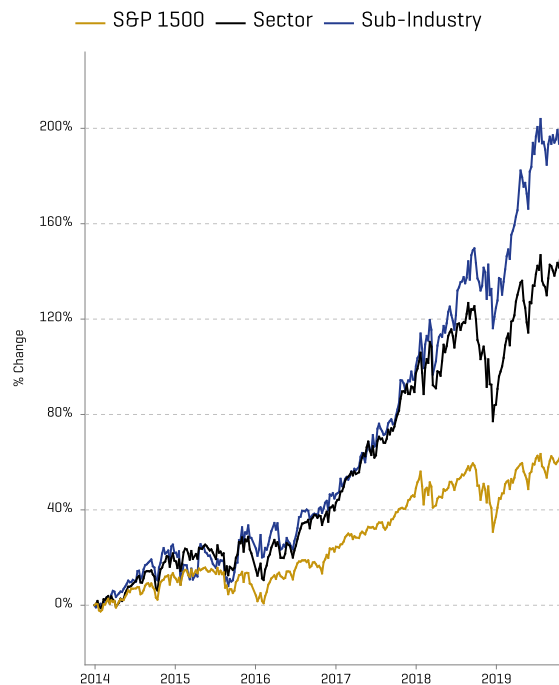
The S&P 1500 Systems Software sub-industry index has risen 34.0% year-to-date through October 11, 2019, outperforming the overall S&P 1500 by 15.9% over the same period, driven primarily by the outperformance of the largest constituent in the overall S&P 1500 index, Microsoft (MSFT). In 2018, the Systems Software index rose 14.8% vs. the S&P 1500's decline of 6.8%, a 21.6% outperformance, again, largely driven by MSFT. The trailing 5-year return CAGR for Systems Software is 20.5% vs. 7.9% of the S&P 1500.

**/John Freeman**

## Industry Performance

### GICS Sector: Information Technology Sub-Industry: Systems Software

Based on S&P 1500 Indexes  
Five-Year market price performance through Nov 09, 2019



NOTE: All Sector & Sub-Industry information is based on the Global Industry Classification Standard (GICS).

Past performance is not an indication of future performance and should not be relied upon as such.

Source: S&P Global Market Intelligence

## Sub-Industry: Systems Software Peer Group\*: Systems Software

Peer Group	Stock Symbol	Exchange	Currency	Recent Stock Price	Stk. Mkt. Cap. [M]	30-Day Price Chg. [%]	1-Year Price Chg. [%]	P/E Ratio	Fair Value Calc.	Yield [%]	Return on Equity [%]	LTD to Cap [%]
<b>Microsoft Corporation</b>	<b>MSFT</b>	<b>NasdaqGS</b>	<b>USD</b>	<b>145.96</b>	<b>1,113,500</b>	<b>5.6</b>	<b>30.6</b>	<b>28</b>	<b>133.85</b>	<b>1.4</b>	<b>42.4</b>	<b>35.3</b>
Check Point Software Technologies Ltd.	CHKP	NasdaqGS	USD	115.42	17,571	4.8	3.4	22	105.73	Nil	22.3	NA
Fortinet, Inc.	FTNT	NasdaqGS	USD	96.23	16,459	23.5	23.5	43	83.56	Nil	41.5	NA
NortonLifeLock Inc.	NLOK	NasdaqGS	USD	24.83	15,475	5.6	10.9	NM	NA	1.2	0.3	38.9
Oracle Corporation	ORCL	NYSE	USD	56.49	185,429	3.6	12.0	18	49.41	1.7	32.0	65.9
Palo Alto Networks, Inc.	PANW	NYSE	USD	236.93	22,979	13.1	25.7	NM	NA	Nil	-6.0	47.4
Proofpoint, Inc.	PFPT	NasdaqGM	USD	116.20	6,560	-8.7	25.2	NM	NA	Nil	-25.6	NA
ServiceNow, Inc.	NOW	NYSE	USD	248.45	46,848	-5.2	33.5	NM	139.94	Nil	-2.8	37.3
SolarWinds Corporation	SWI	NYSE	USD	19.43	5,966	6.5	29.9	9	22.86	Nil	-10.8	41.9
Trend Micro Incorporated	TMIC.Y	OTCPK	USD	52.13	7,247	7.7	-12.1	28	NA	2.8	15.5	NA
VMware, Inc.	VMW	NYSE	USD	164.95	67,404	8.4	8.8	11	313.38	Nil	52.8	88.5

\*For Peer Groups with more than 10 companies or stocks, selection of issues is based on market capitalization.

NA-Not Available NM-Not Meaningful.

Note: Peers are selected based on Global Industry Classification Standards and market capitalization. The peer group list includes companies with similar characteristics, but may not include all the companies within the same industry and/or that engage in the same line of business.

**Microsoft Corporation****Analyst Research Notes and other Company News****October 25, 2019**

09:41 am ET... CFRA Maintains Buy Rating on Shares of Microsoft, Inc. [139.6\*\*\*]: We maintain our Buy rating and increase our target to \$186 from \$177 given the strengthening fundamentals that produced very strong September-quarter results and demonstrated more evidence that, even at its present size and \$140b+ annual revenue run rate, MSFT will continue to benefit from its cloud transition tailwind for revenue growth and operating leverage and is innovating at a faster pace than it has in decades, in our view. Our new \$186 target is the product of our now higher FY 21 EPS forecast of \$6.54 [up from \$6.19] and a 28.5x forward multiple [three-year trend extrapolation]. September-quarter revenue of \$33.06b [vs. consensus at \$32.2b] was up 14% y/y, and EPS of \$1.38 was up 21% y/y, beating consensus by \$0.14. We increase our FY 20 EPS forecast to \$5.56 from \$5.45, and we initiate our FY 22 EPS estimate at \$7.91. Our projected three-year revenue and EPS CAGRs are now 14.5% and 19%, respectively, up from 12% and 15% previously. /John Freeman

**July 22, 2019**

08:14 am ET... CFRA Upgrades Opinion on Shares of Microsoft Corporation to Buy from Hold [136\*\*\*]: We increase our target to \$177 from \$130 based on increasing cloud migration success and greater realization of the operational leverage inherent in its cloud businesses, as demonstrated by its FY 4Q 19 results, which beat consensus EPS (\$1.37 vs. \$1.21) and revenue [\$33.7B vs. \$32.8B]. We now forecast FY 20 EPS of \$5.45 (up from \$5.06) and FY 21 EPS of \$6.19 (up from \$5.83), to which we apply a 28.6x forward multiple [three-year trend extrapolation], resulting in our \$177 target. We estimate that FY 4Q 19 was the first time MSFT generated as much revenue from running software in its own data centers, including cloud offerings like Azure and Office 365, as well as LinkedIn, Bing, GitHub and Xbox-Live, as it did from software licenses and upgrades, hardware and professional services. As revenue from these faster-growing cloud businesses begin swamping non-cloud revenue, margins will continue to improve, driving a three-year EPS CAGR of 15% on a three-year revenue CAGR of 13%. /John Freeman

**April 25, 2019**

08:56 am ET... CFRA Reiterates Hold Opinion on Shares of Microsoft Corporation [125.01\*\*\*]: We raise our 12-month target to \$130 from \$104. Peers have an average forward P/E of 31.5x and a P/E-to-growth (PEG) ratio of 2.1. Applying these metrics to MSFT and averaging the outputs results in our target. We raise our EPS estimates for FY 19 (Jun.) to \$4.59 from \$4.43, FY 20 to \$5.06 from \$4.99, and FY 21 to \$5.83 from \$5.78. MSFT posts non-GAAP March-quarter EPS of \$1.14 vs. \$0.95, compared with our estimate and the S&P Capital IQ consensus of \$1.00. Revenues rose 14% [16% with constant currency], well above our expectations, paced by Intelligent Cloud up 22% [24%], paced by server products and cloud services up 27% [29%], and with increases of 14% [15%] from Productivity and Business Processes and 8% [9%] from More Personal Computing. We note margins were restrained by a shift to cloud-oriented revenues and investments in cloud engineering and artificial intelligence. Nonetheless, MSFT delivered another solid quarter, but we think it is fully valued at 27x our FY 19 estimate. /Scott Kessler

**January 31, 2019**

09:35 am ET... CFRA Reiterates Hold Opinion on Shares of Microsoft Corporation [106.38\*\*\*]: We trim our 12-month target price by \$2 to \$104. Peers have a median forward P/E of 24.5x and a P/E-to-growth rate of 1.9. Applying these metrics to MSFT and averaging the outputs results in our target. We slightly reduce our EPS estimate for FY 19 (Jun.) by \$0.01 to \$4.43 and FY 20 by \$0.03 to \$4.99, and set a FY 21 forecast of \$5.78. MSFT posts non-GAAP December-quarter EPS of \$1.10 vs. \$0.96, in line with our estimate and \$0.01 above the S&P Capital IQ consensus. Revenues rose 12%, slightly below our expectations, with Productivity and Business Processes up 13%, Intelligent Cloud up 20%, and More Personal Computing up 7%. Cloud offerings continued to lead growth, with Azure up 76%; however, growth mostly decelerated on a sequential basis [we point to Office products/services and Windows OEM, in particular, we think reflecting PC-related weakness]. We think expectations had perhaps become overly elevated. At around 24x our FY 19 EPS estimate, we see the stock as reasonably valued. /Scott Kessler

**January 15, 2019**

11:38 am ET... CFRA Reiterates Hold Opinion on Shares of Microsoft Corporation

Note: Research notes reflect CFRA's published opinions and analysis on the stock at the time the note was published. The note reflects the views of the equity analyst as of the date and time indicated in the note, and may not reflect CFRA's current view on the company.

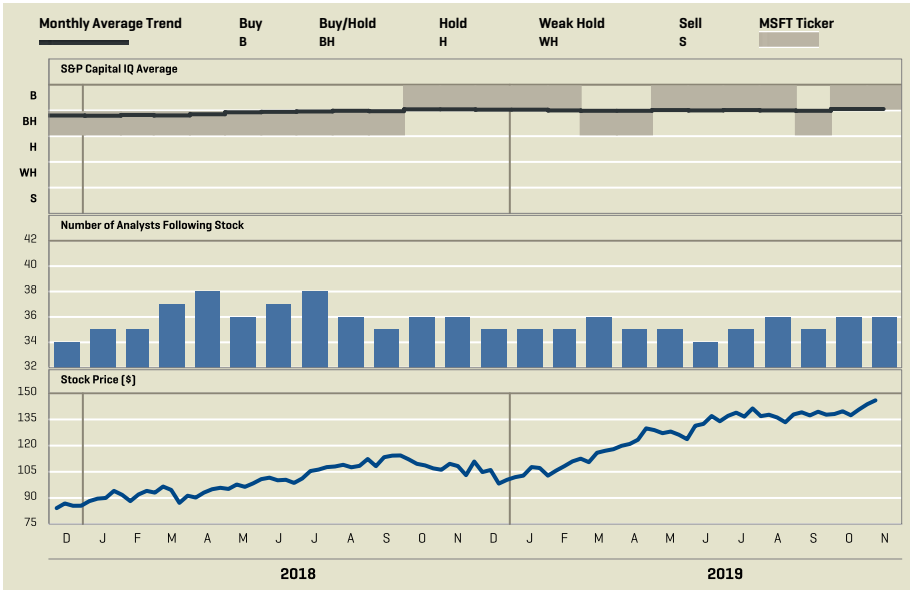
[104.28\*\*\*]: MSFT announces a partnership with Walgreens Boots Alliance (WBA 72 \*\*\*) to "develop new health care delivery models, technology and retail innovations." Perhaps most notably, MSFT becomes WBA's strategic cloud provider, and WBA plans to migrate most of its IT infrastructure to MSFT's Azure. WBA will also deploy Microsoft 365 to more than 380,000 employees and stores. This follows similar MSFT announcements with Kroger earlier this month and Walmart in July 2018, and we note these "retail" partners are also competitors of cloud leader Amazon. MSFT's Azure [cloud platform], health care investments, and new retail solutions will align with WBA's customer reach, numerous locations, outpatient services and industry expertise. MSFT and WBA have committed to multiple years of R&D investment to build health care solutions, improve outcomes and lower the cost of care. Also, WBA will "pilot up to 12 store-in-store 'digital health corners'" to help sell health care-related hardware/devices. /Scott Kessler

**October 25, 2018**

10:02 am ET... CFRA REITERATES HOLD OPINION ON SHARES OF MICROSOFT CORPORATION [108.83\*\*\*]: We raise our 12-month target by \$1 to \$106. Peers have a median forward P/E of 24.7X and a P/E-to-growth of 1.9. Applying these multiples to MSFT and averaging the outputs resulted in our target. We raise our EPS estimates for FY 19 (Jun.) to \$4.44 from \$4.03 and FY 20 to \$5.02 from \$4.69. MSFT posts non-GAAP September-quarter EPS of \$1.14 vs. \$0.84, well above the S&P Capital IQ consensus of \$0.96. Revenues rose 19%, well above our estimate, with strong growth across MSFT's three primary operating units. Notably, Intelligent Cloud revenues rose 24% and accounted for 29% of total revenues, with Azure again being a stand-out -- up 76%. However, strength came from many sources including Office, LinkedIn, Dynamics and Gaming/Xbox. MSFT's effective tax rate of 14% benefited from the U.S. tax law enacted late last year and the company "returned" \$6.1 billion to shareholders, up 27%. This was a very strong quarter for MSFT, but we see the stock as fully valued at 25X our FY 19 EPS estimate. /Scott Kessler

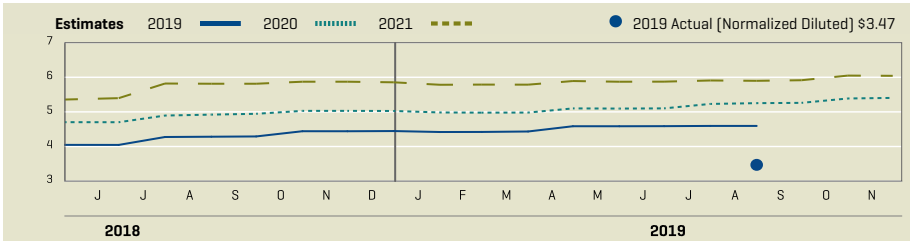
# Microsoft Corporation

## Analysts' Recommendations



	No. of Recommendations	% of Total	1 Mo. Prior	3 Mos. Prior
Buy	23	64	23	23
Buy/Hold	10	28	10	10
Hold	3	8	3	2
Weak Hold	0	0	0	0
Sell	0	0	0	1
No Opinion	0	0	0	0
<b>Total</b>	<b>36</b>	<b>100</b>	<b>36</b>	<b>36</b>

## Wall Street Consensus Estimates



Fiscal Years	Avg Est.	High Est.	Low Est.	# of Est.	Est. P/E
2021	6.04	6.72	5.59	28	24.2
2020	5.40	6.04	5.23	30	27.0
<b>2021 vs. 2020</b>	<b>▲12%</b>	<b>▲11%</b>	<b>▲7%</b>	<b>▼-7%</b>	<b>▼-10%</b>
Q2'21	1.45	1.53	1.36	22	NM
Q2'20	1.32	1.41	1.27	27	NM
<b>Q2'21 vs. Q2'20</b>	<b>▲10%</b>	<b>▲9%</b>	<b>▲7%</b>	<b>▼-19%</b>	<b>NA</b>

Forecasts are not reliable indicator of future performance.

Note: A company's earnings outlook plays a major part in any investment decision. S&P Global Market Intelligence organizes the earnings estimates of over 2,300 Wall Street analysts, and provides their consensus of earnings over the next two years, as well as how those earnings estimates have changed over time. Note that the information provided in relation to consensus estimates is not intended to predict actual results and should not be taken as a reliable indicator of future performance.

**Note: For all tables, graphs and charts in this report that do not cite any reference or source, the source is S&P Global Market Intelligence.**

## Wall Street Consensus Opinion

### BUY

#### Wall Street Consensus vs. Performance

For fiscal year 2020, analysts estimate that MSFT will earn USD \$5.40. For the 1st quarter of fiscal year 2020, MSFT announced earnings per share of USD \$1.38, representing 25.6% of the total revenue estimate. For fiscal year 2021, analysts estimate that MSFT's earnings per share will grow by 12% to USD \$6.04.

**Microsoft Corporation****Glossary****STARS**

Since January 1, 1987, CFRA Equity and Fund Research Services, and its predecessor S&P Capital IQ Equity Research has ranked a universe of U.S. common stocks, ADRs (American Depositary Receipts), and ADSs (American Depositary Shares) based on a given equity's potential for future performance. Similarly, we have ranked Asian and European equities since June 30, 2002. Under proprietary STARS (Stock Appreciation Ranking System), equity analysts rank equities according to their individual forecast of an equity's future total return potential versus the expected total return of a relevant benchmark (e.g., a regional index [S&P Asia 50 Index, S&P Europe 350® Index or S&P 500® Index]), based on a 12-month time horizon. STARS was designed to meet the needs of investors looking to put their investment decisions in perspective. Data used to assist in determining the STARS ranking may be the result of the analyst's own models as well as internal proprietary models resulting from dynamic data inputs.

**S&P Global Market Intelligence's Quality Ranking**

[also known as **S&P Capital IQ Earnings & Dividend Rankings**] - Growth and stability of earnings and dividends are deemed key elements in establishing S&P Global Market Intelligence's earnings and dividend rankings for common stocks, which are designed to encapsulate the nature of this record in a single symbol. It should be noted, however, that the process also takes into consideration certain adjustments and modifications deemed desirable in establishing such rankings. The final score for each stock is measured against a scoring matrix determined by analysis of the scores of a large and representative sample of stocks. The range of scores in the array of this sample has been aligned with the following ladder of rankings:

A+	Highest	B	Below Average
A	High	B-	Lower
A-	Above Average	C	Lowest
B+	Average	D	In Reorganization
NR	Not Ranked		

**EPS Estimates**

CFRA's earnings per share (EPS) estimates reflect analyst projections of future EPS from continuing operations, and generally exclude various items that are viewed as special, non-recurring, or extraordinary. Also, EPS estimates reflect either forecasts of equity analysts; or, the consensus (average) EPS estimate, which are independently compiled by S&P Global Market Intelligence, a data provider to CFRA. Among the items typically excluded from EPS estimates are asset sale gains; impairment, restructuring or merger-related charges; legal and insurance settlements; in process research and development expenses; gains or losses on the extinguishment of debt; the cumulative effect of accounting changes; and earnings related to operations that have been classified by the company as discontinued. The inclusion of some items, such as stock option expense and recurring types of other charges, may vary, and depend on such factors as industry practice, analyst judgment, and the extent to which some types of data is disclosed by companies.

**12-Month Target Price**

The equity analyst's projection of the market price a given security will command 12 months hence, based on a combination of intrinsic, relative, and private market valuation metrics, including Fair Value.

**CFRA Equity Research**

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**Abbreviations Used in Equity Research Reports**

CAGR - Compound Annual Growth Rate  
 CAPEX - Capital Expenditures  
 CY - Calendar Year  
 DCF - Discounted Cash Flow  
 DDM - Dividend Discount Model  
 EBIT - Earnings Before Interest and Taxes  
 EBITDA - Earnings Before Interest, Taxes, Depreciation & Amortization  
 EPS - Earnings Per Share  
 EV - Enterprise Value  
 FCF - Free Cash Flow  
 FFO - Funds From Operations

FY - Fiscal Year  
 P/E - Price/Earnings  
 P/NAV - Price to Net Asset Value PEG Ratio - P/E-to-Growth Ratio PV - Present Value  
 R&D - Research & Development ROCE - Return on Capital Employed ROE - Return on Equity  
 ROI - Return on Investment  
 ROIC - Return on Invested Capital  
 ROA - Return on Assets  
 SG&A - Selling, General & Administrative Expenses  
 SOTP - Sum-of-The-Parts  
 WACC - Weighted Average Cost of Capital

**Dividends on American Depositary Receipts (ADRs) and American Depositary Shares (ADSs) are net of taxes (paid in the country of origin).**

**Qualitative Risk Assessment**

Reflects an equity analyst's view of a given company's operational risk, or the risk of a firm's ability to continue as an ongoing concern. The Qualitative Risk Assessment is a relative ranking to the U.S. STARS universe, and should be reflective of risk factors related to a company's operations, as opposed to risk and volatility measures associated with share prices. For an ETF this reflects on a capitalization-weighted basis, the average qualitative risk assessment assigned to holdings of the fund.

**STARS Ranking system and definition:****★★★★★ 5-STARs (Strong Buy):**

Total return is expected to outperform the total return of a relevant benchmark, by a notable margin over the coming 12 months, with shares rising in price on an absolute basis.

**★★★★★ 4-STARs (Buy):**

Total return is expected to outperform the total return of a relevant benchmark over the coming 12 months, with shares rising in price on an absolute basis.

**★★★★★ 3-STARs (Hold):**

Total return is expected to closely approximate the total return of a relevant benchmark over the coming 12 months, with shares generally rising in price on an absolute basis.

**★★★★★ 2-STARs (Sell):**

Total return is expected to underperform the total return of a relevant benchmark over the coming 12 months, and the share price is not anticipated to show a gain.

**★★★★★ 1-STAR (Strong Sell):**

Total return is expected to underperform the total return of a relevant benchmark by a notable margin over the coming 12 months, with shares falling in price on an absolute basis.

**Relevant benchmarks:**

In North America, the relevant benchmark is the S&P 500 Index, in Europe and in Asia, the relevant benchmarks are the S&P Europe 350 Index and the S&P Asia 50 Index, respectively.

# Microsoft Corporation

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Quantitative recommendations are determined by ranking a universe of common stocks based on 5 measures or model categories: Valuation, Quality, Growth, Street Sentiment, and Price Momentum. In the U.S., a sixth sub-category for Financial Health will also be displayed. Percentile scores are used to compare each company to all other companies in the same universe for each model category. The five (six) model category scores are then weighted and rolled up into a single percentile ranking for that company. For reports containing quantitative recommendations refer to the Glossary section of the report for detailed methodology and the definition of Quantitative rankings.

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### STARS Stock Reports:

Global STARS Distribution as of March 31, 2019

Ranking	North America	Europe	Asia	Global
Buy	35.5%	32.4%	39.4%	35.4%
Hold	54.8%	54.4%	41.7%	53.2%
Sell	9.7%	13.2%	18.9%	11.3%
Total	100.0%	100.0%	100.0%	100.0%

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