Microsoft Corporation

Recommendation	Price	12-Mo. Target Price	Report Currency	Investment Style
STRONG BUY ★★★★★	USD 280.74 (as of market close Jul 29, 2022)	USD 376.00	USD	Large-Cap Growth

Equity Analyst John Freeman

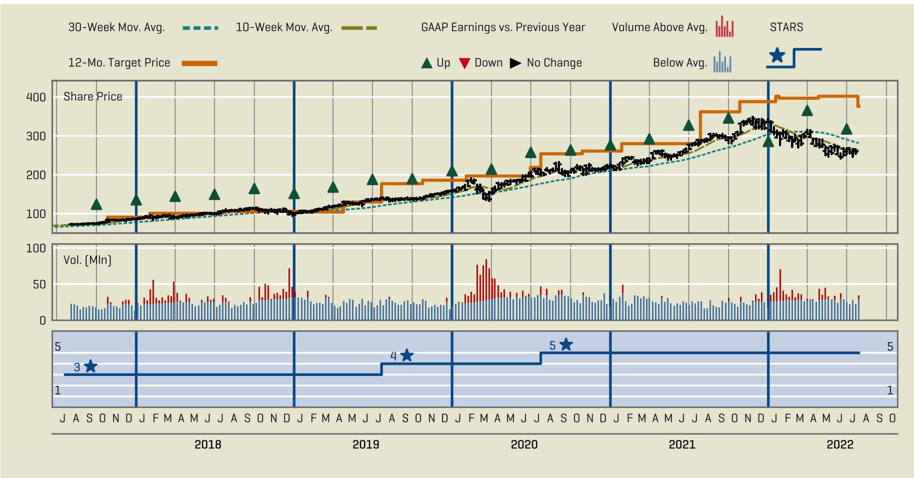
GICS Sector Information Technology
Sub-Industry Systems Software

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	**USD 349.67 - 241.51**	Oper.EPS2023**E**	**USD 10.98**	Market Capitalization[B]	**USD 2095.44**	Beta	**0.93**
Trailing 12-Month EPS	**USD 9.2**	Oper.EPS2024**E**	**USD 12.82**	Yield [%]	**0.88**	3-yr Proj. EPS CAGR[%]	**18**
Trailing 12-Month P/E	**30.52**	P/E on Oper.EPS2023**E**	**25.57**	Dividend Rate/Share	**USD 2.48**	SPGMI's Quality Ranking	**A**
USD 10K Invested 5 Yrs Ago	**41,036.0**	Common Shares Outstg.[M]	**7,464.00**	Trailing 12-Month Dividend	**USD 2.48**	Institutional Ownership [%]	**71.0**

Price Performance



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 **John Freeman** on Jul 27, 2022 08:43 AM ET, when the stock traded at **USD 251.92**.

Highlights

- We forecast a 3-year revenue CAGR of 17% (15% ex. ATVI acquisition), driven by: 1) Azure, which grew 40%+ in FY 4Q22 and 46% in 3Q and 2Q to what we estimate to be ~19% of revenue and is set to grow 35%+ annually through '24 as more legacy apps move to the cloud, especially those first built on .NET; 2) Office, ~20% of revenue, benefiting from a cloud shift tailwind kicking in now that Office 365 cloud subscriptions are 2x+ license/support revenue; 3) strong momentum for LinkedIn, ~7% of revenue, which grew 28% in 4Q and we project to grow 20%+ through '23; and 4) Xbox and game content/services, ~10% of revenue, following a growth acceleration due to higher engagement and demand due to Covid-19-related sheltering-at-home and refreshed consoles, we now see flat growth for 1H23 before accelerating again in 2H23, in our view.
- We see gross and operating margins improving to 76% and 52%, respectively, in '24, as loss leading Xbox hardware decreases as a percentage of revenue and cloud services continue to gain scale efficiencies.
- Our EPS forecasts are $10.98 for '23, $12.82 for '24, and $15.03 for '25. We also expect continued steady increases over time to the dividend, which presently yields ~1.0%.

Investment Rationale/Risk

- Our Strong Buy is primarily based on MSFT's ongoing and, so far, very successful cloud transition, with strong traction for cloud versions of Office (i.e., "365"), Dynamics, Teams, and, of course, Azure cloud services. Revenue from cloud-based businesses also includes LinkedIn, Bing, and Xbox-Live and is now ~65% of total. As MSFT reaps greater scale efficiencies, we forecast operating margin to hit 50% in '23, up from 42% in '21, 45% in 1Q '22. We assume no revenue growth for Windows (we estimate ~12% of '21 revenue) through '23 but still expect higher contribution to net income from the Windows cash cow. We note tremendous upside potential in AR/VR, both for gaming and a growing number of industrial use cases well-suited to MSFT's Hololens goggles and development platform.
- We see lower downside risk – both probability and magnitude – for MSFT vs. many of its faster growing peers, especially given its very strong balance sheet providing more downside cushion than most large cap stocks in any sector, in our view.
- Our target is a product of our $12.82 EPS forecast for '24, down $1.12 and pulled forward from '23, and a 29.3x P/E (6-month mean, +6% due to consistently FCF and a 1.0% dividend yield).

Analyst's Risk Assessment

LOW | **MEDIUM** | HIGH

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
2025	**E** 67,492	**E** 75,981	**E** 75,268	**E** 83,052	**E** 301,793
2024	**E** 59,017	**E** 66,788	**E** 66,010	**E** 72,452	**E** 264,267
2023	**E** 51,110	**E** 58,321	**E** 57,189	**E** 62,778	**E** 229,398
2022	45,317	51,728	49,360	51,865	198,270
2021	37,154	43,076	41,706	46,152	168,088
2020	33,055	36,906	35,021	38,033	143,015

Earnings Per Share (USD)

	1Q	2Q	3Q	4Q	Year
2025	**E** 3.42	**E** 3.95	**E** 3.55	**E** 4.11	**E** 15.03
2024	**E** 2.85	**E** 3.35	**E** 3.11	**E** 3.51	**E** 12.82
2023	**E** 2.47	**E** 2.84	**E** 2.64	**E** 3.03	**E** 10.98
2022	2.27	2.48	2.22	2.23	9.21
2021	1.82	2.03	1.95	2.17	7.97
2020	1.38	1.51	1.40	1.46	5.76

Fiscal Year ended Jun 30. EPS Estimates based on CFRA's Operating Earnings; historical earnings are adjusted. In periods where a different currency has been reported, this has been adjusted to match the current quoted currency.

Dividend Data

Amount (USD)	Date Decl.	Ex-Div. Date	Stk. of Record	Payment Date
0.6200	Jun 14	Aug 17	Aug 18	Sep 08 '22
0.6200	Mar 14	May 18	May 19	Jun 09 '22
0.6200	Dec 07	Feb 16	Feb 17	Mar 10 '22
0.6200	Sep 14	Nov 17	Nov 18	Dec 09 '21

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 a reliable indicator of future performance.
Dividends paid in currencies other than the Trading currency have been accordingly converted for display purposes.

Business Summary Oct 27, 2021

CORPORATE OVERVIEW. Microsoft (MSFT) was co-founded by Bill Gates and Paul Allen in 1975 and initially built and sold meta-software, specifically apps and tools used to develop software running on an emerging class of "microprocessors". While MSFT has remained active in meta-software (e.g., development kits, emulators, compilers, debuggers, etc.), the journey to becoming the world's largest software company really took off when Gates inked two key deals back-to-back in 1981. The first was with IBM making MSFT the exclusive operating system (OS) supplier for IBM's initial line of personal computers (PC's). The second was its purchase of the PC operating system it supplied to IBM called "DOS", on which MSFT cultivated an entire eco-system of developers and thousands of 3rd party applications.

CORPORATE STRATEGY. MSFT successfully extended its initial lead in PC operating systems with DOS into the next era of graphical or "GUI" operating systems similar to the Apple Macintosh – so similar, in fact, it prompted a lawsuit Apple famously lost, establishing that software's "look and feel" was too abstract for copyright protection. At the same time, Intel, which supplied the PC microprocessor, now called a Central Processing Unit (CPU), standardized the PC motherboard in the late 80's that, by the early 90's, started a wave of companies building "IBM compatible" PC's, ranging from IBM archrivals, NEC and DEC, to Michael Dell assembling made-to-order PC's in his Austin, TX dorm room. With Windows 3.1 in 1992, MSFT and Intel solidified their control over most of the PC market and cemented their mutually beneficial WinTel duopoly. WinTel quickly expanded from "client-side" PC's into an emerging server OS market with Windows NT, which included built-in networking and support for multi-user, shared file access, making stand-alone network OS's redundant, most notably rival Novel's Netware, effectively absorbing the market segment.

MSFT also parlayed the WinTel duopoly to selectively pick off the most broadly used Windows applications: word processor, spreadsheet, and e-mail and, later, category-defining, PowerPoint. With these four apps bundled and discounted, MS Office Suite quickly replaced leading incumbents in three major functional areas – Word for WordPerfect, Excel for Louts 123, Outlook for Lotus Notes, with PowerPoint coming along for the ride. MSFT also expanded into databases, though progress there has been slower. Yet, by the late '00's, MSFT moved ahead of IBM into the #2 share position with Access and SQL Server products, though still well behind Oracle, which dominates the mid-to-high end of the market. Through internal development in the '00's, MSFT also expanded into video game consoles with Xbox, now in a duopoly with Sony.

GOVERNMENT REGULATION. Yet, even at the peak of its market influence, not everything went MSFT's way. It was slow to react to the Internet, which exploded in popularity once navigation was made easy due to the graphical orientation of the Web. Gates rallied the troops with a now famous 1995 e-mail turning MSFT's strategic focus to the web browser and competitive attention to Netscape. MSFT once again went to its bundling playbook by integrating Internet Explorer with Windows. This move, however, pushed the U.S. government to sue MSFT in 1997 for abusing its PC OS monopoly. With heightened scrutiny, MSFT was unable to expand via large-scale M&A. From 1997, MSFT's first large scale acquisition was its moderately successful $8.5B purchase of Skype in 2011, followed by its unsuccessful $7B deal for Nokia's mobile phone unit in 2014 and its very successful social media entre with its $26B LinkedIn acquisition.

LEADERSHIP. In 2014, Satya Nadella became MSFT's third CEO, taking over from Steve Ballmer. Nadella articulated a company mantra of "mobile-first, cloud-first", though it appears now that he only meant the second part. Soon after taking over, he restructured and wrote down the mobile phone business MSFT just bought and mothballed most of MSFT's mobile businesses, products, and projects. He then began to turn MSFT into a cloud computing giant, moving quickly away from its traditional model of selling user/seat software licenses, upgrades, and maintenance contracts. He invested more heavily in Azure, which evolved quickly to be competitive with Amazon AWS in both Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS) categories, finding many large enterprises eager to support a viable competitor to the dominant AWS. MSFT does not break out Azure specifically, but we estimate it grew from $8B in '18, 7% of total, to $30B in '21, 18% of our projected '21 total. We expect Azure, now MSFT's 2nd largest revenue source, to grow 40%+ Y/Y through '22 and 25%+ through '23. MSFT's largest revenue source, Office at ~20% of total, has grown in line with total revenue since '18, as 30%+ Y/Y growth in cloud-based Office 365 subscriptions were partially offset by declines in sales of legacy Office license/support. Now that the shift to Office 365 is largely complete for MSFT, we see Office 365 growing 20%+ Y/Y through '23, benefitting from a cloud-shift tailwind and higher monetization of non-paying users and supporting our overall 3-year revenue CAGR forecast of 15%.

FINANCIAL TRENDS. The impact of MSFT's cloud transition on overall revenue started with annual revenue growth rates of 7.8% (2015), -1.7% (2016), and 5.1% (2017), reflecting the initial headwind usually encountered in the shift from a legacy model with large up-front sales of software installed and operated on the customer's premises to one base on cloud delivery and subscription billing. Revenue growth hit 14%/ year in each of the next three years, accelerating further to 18% in '21, due to a cloud shift tailwind that kicks in when subscriptions exceed ~50% to 65% of total. We see MSFT also benefitting from an accelerated migration of apps to the cloud as enterprises strive for greater operational agility and streamlining in reaction to the global pandemic. With ongoing gross margin improvement as cloud delivery scales and the overall operating leverage of MSFT's model, we expect EPS growth to moderately exceed revenue growth through 2025.

Corporate information

Investor contact
B. Iversen (425 882 8080)

Office
One Microsoft Way, Redmond, Washington, 98052-6399

Telephone
425 882 8080

Fax
425 706 7329

Website
www.microsoft.com

Officers

Executive VP & CFO
A. E. Hood

Chairman & CEO
S. Nadella

Chairman & CEO
S. Nadella

Corporate VP & Chief Accounting Officer
A. L. Jolla

President & Vice Chairman
B. L. Smith

Board Members

A. C. Nygart	P. S. Pritzker
C. A. Rodriguez	P. Warrior
C. W. Scharf	R. G. Hoffman
E. N. Walmsley	S. E. Peterson
H. F. Johnston	S. Nadella
J. W. Stanton	T. L. List-Stoll
J. W. Thompson	

Domicile
Washington

Auditor
N/A

Founded
1975

Employees
181,000

Stockholders
N/A

Quantitative Evaluations

Fair Value Rank		1 | 2 | **3** | 4 | 5 LOWEST ... HIGHEST Based on CFRA's proprietary quantitative model, stocks are ranked from most overvalued (1) to most undervalued (5).
Fair Value Calculation	**USD 274.74**	Analysis of the stock's current worth, based on CFRA's proprietary quantitative model suggests that MSFT is overvalued by USD 6.00 or 2.14%
Volatility		**LOW** | AVERAGE | HIGH
Technical Evaluation	**NEUTRAL**	Since October, 2021, the technical indicators for MSFT have been NEUTRAL"
Insider Activity		UNFAVORABLE | NEUTRAL | **FAVORABLE**

Expanded Ratio Analysis

	2022	2021	2020	2019
Price/Sales	9.77	12.26	10.93	8.25
Price/EBITDA	19.79	25.50	23.89	19.04
Price/Pretax Income	23.13	28.99	29.48	23.77
P/E Ratio	27.89	33.99	35.33	28.20
Avg. Diluted Shares Outstg. (M)	7,540.00	7,608.00	7,683.00	7,753.00

Figures based on fiscal year-end price

Key Growth Rates and Averages

Past Growth Rate (%)	**1 Year**	**3 Years**	**5 Years**
Net Income	18.72	22.84	23.33
Sales	17.96	16.36	15.47
Ratio Analysis (Annual Avg.)			
Net Margin (%)	36.69	34.70	30.06
% LT Debt to Capitalization	19.33	23.79	29.83
Return on Equity (%)	47.15	44.79	39.25

Company Financials Fiscal year ending Jun 30

Per Share Data (USD)	**2022**	**2021**	**2020**	**2019**	**2018**	**2017**	**2016**	**2015**	**2014**	**2013**
Tangible Book Value	11.75	11.24	8.97	6.88	5.08	5.51	6.45	7.26	7.61	7.35
Free Cash Flow	8.69	7.44	5.94	4.99	4.19	4.05	3.15	2.90	3.26	2.93
Earnings	9.65	8.05	5.76	5.06	2.13	3.25	2.56	1.48	2.63	2.58
Earnings (Normalized)	9.21	7.97	5.76	4.75	3.88	3.31	2.79	2.63	2.63	2.65
Dividends	2.48	2.24	2.04	1.84	1.68	1.56	1.44	1.24	1.12	0.92
Payout Ratio (%)	24.93	26.96	34.18	35.20	76.63	46.47	53.59	81.05	40.22	34.10
Prices: High	349.67	271.65	204.40	138.40	102.69	72.89	56.85	50.04	42.29	35.78
Prices: Low	241.51	196.25	130.78	93.96	68.02	50.39	39.72	40.12	30.84	26.26
P/E Ratio: High	38.00	34.10	35.50	29.10	26.50	22.00	20.40	19.00	16.10	13.50
P/E Ratio: Low	26.20	24.60	22.70	19.80	17.50	15.20	14.20	15.30	11.70	9.90
Income Statement Analysis (Million USD)										
Revenue	198,270	168,088	143,015	125,843	110,360	96,571	91,154	93,580	86,833	77,849
Operating Income	83,383	69,916	53,145	42,959	35,058	29,331	27,188	28,172	27,886	27,497
Depreciation + Amortization	14,460	10,900	12,300	11,600	9,900	7,800	5,878	5,400	4,245	3,339
Interest Expense	N/A	2,330	2,591	2,686	2,733	2,222	1,243	781.00	597.00	429.00
Pretax Income	83,716	71,102	53,036	43,688	36,474	29,901	25,639	18,507	27,820	27,052
Effective Tax Rate	13.10	13.80	16.50	10.20	54.60	14.80	19.90	34.10	20.70	19.20
Net Income	72,738	61,271	44,281	39,240	16,571	25,489	20,539	12,193	22,074	21,863
Net Income (Normalized)	52,067	43,669	33,244	26,900	21,247	17,386	16,320	17,388	17,239	17,283
Balance Sheet and Other Financial Data (Million USD)										
Cash	104,757	130,256	136,492	133,832	133,664	132,901	113,041	96,391	85,146	76,410
Current Assets	169,684	184,406	181,915	175,552	169,662	162,696	139,660	122,797	114,246	101,466
Total Assets	364,840	333,779	301,311	286,556	258,848	250,312	193,468	174,472	172,384	142,431
Current Liabilities	95,082	88,657	72,310	69,420	58,488	55,745	59,357	49,647	45,625	37,417
Long Term Debt	47,032	50,074	59,578	66,662	72,242	76,073	40,557	27,808	20,645	12,601
Total Capital	243,338	224,266	200,414	188,785	170,226	183,238	126,538	115,467	112,987	95,234
Capital Expenditures	23,886	20,622	15,441	13,925	11,632	8,129	8,343	5,944	5,485	4,257
Cash from Operations	89,035	76,740	60,675	52,185	43,884	39,507	33,325	29,668	32,502	28,833
Current Ratio	1.78	2.08	2.52	2.53	2.90	2.92	2.35	2.47	2.50	2.71
% Long Term Debt of Capitalization	19.30	22.30	29.70	35.30	42.40	41.50	32.10	24.10	18.30	13.20
% Net Income of Revenue	36.70	36.50	31.00	31.20	15.00	26.40	22.50	13.00	25.40	28.10
% Return on Assets	14.92	13.76	11.30	9.85	8.61	8.26	9.24	10.15	11.07	13.03
% Return on Equity	47.20	47.10	40.10	42.40	19.40	31.90	27.00	14.40	26.20	30.10

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.

Sub-Industry Outlook

CFRA has a positive fundamental outlook for the S&P 500 Systems Software sub-industry, as we also have for the S&P 500 Application Software sub-industry. In an increasingly "cloud world", the distinction between application and systems software becomes fuzzier and less relevant from an investor's perspective, as the client-server era's clear demarcations dissolve into an increasingly distributed and functionally federated micro-services architecture. Not to mention the fact that Microsoft and Oracle, which together make up 95% of the S&P 500 System Software sub-industry by market cap, generate less than 50% of their revenue from what would be considered "systems software".

Now including results from 4Q21, TTM revenue for the S&P 500 Software Industry constituents was $459B, +19.9% Y/Y, accelerating from 19.2% growth in 3Q21 and 17.5% Y/Y growth in 2Q. Software industry growth has been accelerating since 2H20 as many enterprises delayed projects and cut spending due to the initial uncertainty at the start of the Covid-19 pandemic. We continue to forecast S&P 500 Software Industry revenue for 2022 to grow 16% Y/Y, primarily driven by cloud migration and Covid-19-related digital transformation projects and partially hindered by declining revenue from sales of legacy client-server software licenses and maintenance and support, decelerating only modestly to 14% in 2023.

Compared to the S&P 500 Software Industry, the larger overall global software industry, which grew 2.3% Y/Y in 2020 to $571B, contains many smaller, niche-oriented, or country-specific vendors more dependent on legacy maintenance revenue from the client-server era (and even from lingering mainframe software). We project the overall global software industry to grow 10.7% in 2021 to $632B (IDC's numbers for 2021 are expected to be published later in 2022) and 9.1% in 2022 to $690. In August 2020, we formalized CFRA's "Four Key Trends in Enterprise Software," which we see as crucial to understanding the software industry and distilling investment-relevant insights as it evolves: Cloud Migration, Digital Transformation, The Rise of Meta-Software, and Artificial Intelligence (AI). While the lingo has changed, the investment-relevant impact of these trends has been building for over a decade, though, in our view, only cloud migration is now hitting "peak impact." Similar to the financial crisis of 2008, Covid-19's impact on the overall economy, especially on energy, travel, restaurants, and many brick-and-mortar retailers, led to a dip in IT spending growth in 2020. Yet, like 2008, Covid-19 has accelerated these trends as enterprises reacted with aggressive cost-cutting and streamlining for greater operational agility. On top of that, the massive surge in remote workers and the sudden need to serve customers while minimizing physical contact catalyzed faster cloud adoption and greater investment in digital transformation projects, a.k.a. substituting software for labor and capital in the means of production (e.g., Uber's software substitutes for taxi dispatch systems and dispatchers).

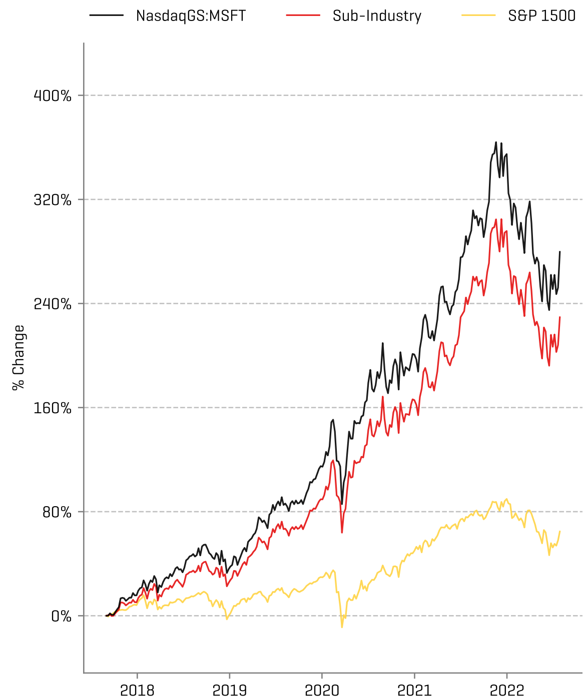
Despite the sharp tech sell-off in the first week of 2022, the S&P 500 Systems Software sub-industry is still up 28.0% TTM vs. 14.8% for the overall S&P 500. At a P/E of 32.7x vs. the overall S&P 500 P/E of 22.3x, the relative valuation for this sub-industry is roughly in line with history, though it is on the high-side historically on an absolute basis.

/ John Freeman

Industry Performance

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

Based on S&P 1500 Indexes
Five-Year market price performance through Jul 30, 2022



NOTE: A sector chart appears when the sub-industry does not have sufficient historical index data.

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: CFRA, 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 (%)
Microsoft Corporation	**MSFT**	**NasdaqGS**	**USD**	**276.41**	**2,063,124.0**	**7.8**	**-3.4**	**30.0**	**274.74**	**0.9**	**47.2**	**19.3**
Check Point Software Technologies Ltd.	CHKP	NasdaqGS	USD	126.18	15,824.0	3.7	1.7	18.0	107.85	N/A	24.6	N/A
CrowdStrike Holdings, Inc.	CRWD	NasdaqGS	USD	182.09	42,258.0	4.5	-30.9	NM	N/A	N/A	-18.3	39.2
Fortinet, Inc.	FTNT	NasdaqGS	USD	59.40	47,677.0	3.7	9.3	72.0	32.89	N/A	105.1	80.9
NortonLifeLock Inc.	NLOK	NasdaqGS	USD	24.57	14,039.0	10.3	-2.8	14.0	N/A	2.0	-282.0	73.2
Oracle Corporation	ORCL	NYSE	USD	77.04	205,306.0	12.3	-11.6	16.0	50.12	1.7	7301.1	97.8
Palo Alto Networks, Inc.	PANW	NasdaqGS	USD	492.21	49,042.0	0.1	23.2	73.0	N/A	N/A	-58.4	N/A
ServiceNow, Inc.	NOW	NYSE	USD	436.50	88,005.0	-7.8	-25.2	69.0	223.33	N/A	4.9	23.4
UiPath Inc.	PATH	NYSE	USD	18.62	10,143.0	-7.0	-70.5	NM	N/A	N/A	-21.6	N/A
VMware, Inc.	VMW	NYSE	USD	116.36	49,039.0	0.1	-25.2	17.0	94.74	N/A	36.2	94.4
Zscaler, Inc.	ZS	NasdaqGS	USD	153.06	21,714.0	-1.2	-35.4	264.0	N/A	N/A	-71.9	62.1

*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.

Analyst Research Notes and other Company News

July 27, 2022
12:28 AM ET... CFRA Maintains Strong Buy Rating on Shares of Microsoft Corporation (MSFT 251.90*****):
We cut our target by $26 to $376 due to: 1) disappointing Q4 FY 22 (Jun.-Q) results, with Y/Y revenue growth of 12%, down from 18% in Q3; 2) 40% Y/Y growth for Azure cloud, now ~20% of total, vs. legacy server products that declined 2% Y/Y, and device-related revenue, e.g., Windows and Xbox, also down single digits, a harbinger of an accelerated cloud migration now hitting the legacy software installed base hard; 3) impressive Y/Y growth again for both LinkedIn (+28%) and Bing (+18%), despite a soft ad market, together ~15% of total revenue. We note attractive valuation, in our view, with fwd. P/E now ~24x, well below its 28.4x 5-year mean. Our target is a product of our $12.82 EPS forecast for '24, down $1.12 and pulled forward from '23, and a 29.3x P/E (6-month mean, +6% due to consistently FCF and a 0.8% dividend yield). Q4 revenue of $51.9B +12% Y/Y, missed consensus by $463m; EPS of $2.23, +$0.05 Y/Y, missed by $0.06. We cut our EPS forecast for '23 by $0.65 to $10.98 and initiates '25 at $15.03. / John Freeman

April 27, 2022
04:40 AM ET... CFRA Maintains Strong Buy Rating on Shares of Microsoft Corporation (MSFT 282.41*****):
We increase our target by $5 to $402 after strong FY 3Q22 results, with Y/Y revenue growth of 18% Y/Y, continuing to benefit from Azure cloud growth (+46% Y/Y), an ongoing cloud shift tailwind for Office 365 and Dynamics 365, and impressive Y/Y growth for both LinkedIn (+34%) and Bing (+23%). Our $402 target is the product of our EPS forecast for '23 of $11.63, now $0.06 higher, and a 34.6x P/E (2-year mean, +6% due to solid balance sheet, consistently healthy FCF, and a 0.8% dividend yield). 3Q revenue grew 18% Y/Y to $49.4B, $312m above consensus, while EPS of $2.22 was +14% Y/Y and beat by $0.02. Our EPS forecast for '22 remains $9.66, and we raise our forecast for '24 by $0.10 to $13.94. RPO, a good leading indicator for cloud subscriptions, now the majority of software revenue was up 32% Y/Y to $155b. Guidance implies 15% Y/Y growth for 4Q and 19% for FY 22 overall. The Windows OEM revenue, which carries 90%+ gross margin, grew 11% Y/Y, belying component supply chain delays. / John Freeman

January 26, 2022
01:59 AM ET... CFRA Keeps Strong Buy Rating on Shares of Microsoft Corporation (MSFT 288.49*****):
We trim our target by $5 to $397 after impressive FY 2Q 22 results that exceeded already elevated expectations, especially on the bottom line, benefitting not only from three quarters in a row of 20%+ Y/Y growth, the highest organic growth in a decade, but also modest 100bps Y/Y operating margin expansion. Our $397 target is the product of our EPS forecast for '23 of $11.57, $0.08 higher, and a 34.3x P/E (2-year mean, +5% due to solid balance sheet, consistently healthy FCF, and a 0.8% dividend yield). 2Q revenue grew 20% Y/Y to $51.7B, about in line with consensus, while EPS of $2.48 grew 22% Y/Y and beat by $0.16. We also raise our EPS forecasts for '22 by $0.34 to $9.66 and for '24 by $0.17 to $13.84. Growth was led by Intelligent Cloud (+26% Y/Y to 35% of 2Q total), driven mostly by Azure, +46% Y/Y, though LinkedIn revenue grew a very impressive 37% Y/Y to ~9% of total and Dynamics 365 was up 45% to ~2% of total. Investors were also likely heartened by guidance implying 15% Y/Y revenue growth in 3Q. / John Freeman

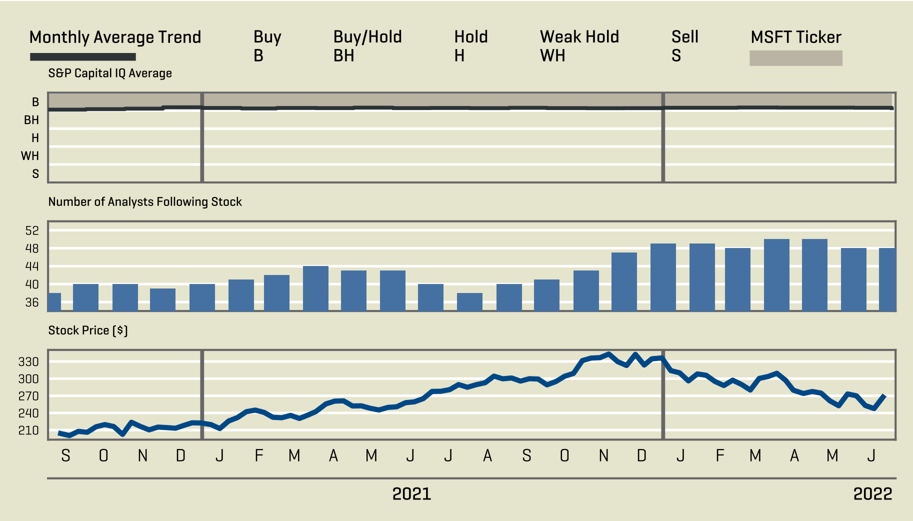
January 18, 2022
04:01 PM ET... CFRA Maintains Strong Buy Rating on Shares of Microsoft Corporation (MSFT 304.22*****):
We raise our target by $14 to $402 after MSFT announced a $68B, all-cash plan to buy Activision Blizzard (ATVI) ($62B given ATVI's $6B in net cash), the leading video game publisher in what we see as a brilliant, bold move -- MSFT's largest by far (LinkedIn is now second at $26B in 2016) and one we expect to be materially accretive to EPS. Our $402 target is the product of our EPS forecast for '23 of $11.49, now $0.37 higher, and a 35.0x P/E (2-year mean, +8% due to historically strong balance sheet, consistently strong FCF generation, and a 0.8% dividend yield). We leave '22 at $9.32 but raise our EPS forecast for '24 by $0.40 to $13.67. We are concerned MSFT may jeopardize its Xbox platform as developers may not want to compete on a platform against the platform owner. However, in our view, the architectural similarity between the semi-custom AMD processors in both the Sony PS5 and Xbox Series X consoles encourages developers to make games for both, given the lower incremental effort of doing so. / John Freeman

December 07, 2021
09:36 AM ET... CFRA Raises Opinion on Information Technology to Overweight from Marketweight (MSFT 326.19*****):
We raised our recommended exposure to the S&P 500 Information Technology sector to overweight from marketweight. We think cyclical sectors will be boosted now that the Omicron-induced sell-off has likely run its course. The pullback in prices resulted in an adjustment in multiples for decelerating tech sector growth in 2022, making the group more attractive relative to other sectors; secular drivers for the tech sector also remain very much intact. Finally, while the sector carries a neutral count of component companies with favorable CFRA STARS rankings versus all stocks in the S&P 500, it sports above-average cap-weighted aggregate CFRA STARS and market-leading relative strength. / Sam Stovall

October 27, 2021
12:13 AM ET... CFRA Maintains Strong Buy Rating on Shares of Microsoft Corporation (MSFT 310.12*****):
We raise our target by $26 to $388 based on: 1) another quarter of outstanding results with Sep-Q ('21) revenue growth accelerating again to 22% Y/Y as MSFT's large subscription shift tailwind (+6 to 8% in Y/Y growth by our estimate) begins to hit peak impact, which we expect to last through FY 23 with a residual tailwind of +2% to 4% higher Y/Y growth likely lasting through FY 25; 2) another quarter of 50% Y/Y growth for Azure cloud, which is completely additive to total growth, driving 31% Y/Y higher Intelligent Cloud revenue to 37% of total; 3) continued strong operating margin expansion, up 200 bps Y/Y to 45%, despite gross margin declining 100bps Y/Y. Our $388 target is the product of our '23 EPS forecast of $11.12, now $0.21 higher, and a 34.9x P/E (2-year mean, +10% due to $67B in net cash and a 0.8% dividend yield). Revenue of $45.3B grew 22% Y/Y and beat consensus by $1.33B; EPS of $2.27, +25% Y/Y, beat by $0.19. We also raise our EPS forecasts for '22 by $0.14 to $9.32 and for '24 by $0.27 to $13.27. / John Freeman

July 28, 2021
12:04 PM ET... CFRA Maintains Strong Buy on Shares of Microsoft Corporation (MSFT 286.54*****):
We raise our target $60 to $362 based on 1) impressive Jun-Q ('21) results with revenue growth accelerating to 21% Y/Y, driven primarily by a large cloud shift tailwind now gaining momentum (Commercial Office 365 +25% Y/Y; Dynamics 365, 2%-3% of total revenue, +49%), 51% Y/Y growth for the Azure cloud platform (closing in on 20% of total revenue) and secondarily by the return of ad spend for LinkedIn and Bing; and 2) continued strong operating margin expansion, up 600 bps Y/Y to 41%, boosted by 200 bps gross margin expansion to 70%, as cloud scales, partially offset by 162% Y/Y growth in low-margin, recently upgraded Xbox hardware. Our $362 target is the product of our '23 EPS forecast of $10.91, rolled forward from '22 and $0.48 higher, and a 33.2x P/E (2-year mean, +10% due to $63B in net cash and a 1% dividend yield). 4Q revenue of $46.2B was 21% Y/Y and beat consensus by $1.85B; EPS of $2.17, +49% Y/Y, beating by $0.25. We also raise our EPS forecasts for '22 by $0.08 to $9.18 and initiate '24's at $13.00. / John Freeman

Analysts Recommendations



	No. of Recommendations	% of Total	1 Mo.Prior	3 Mos.Prior
Buy	32	65	32	33
Buy/Hold	15	31	14	14
Hold	1	2	1	1
Weak hold	0	0	0	0
Sell	0	0	0	0
No Opinion	1	2	1	2
Total	49	100	48	50

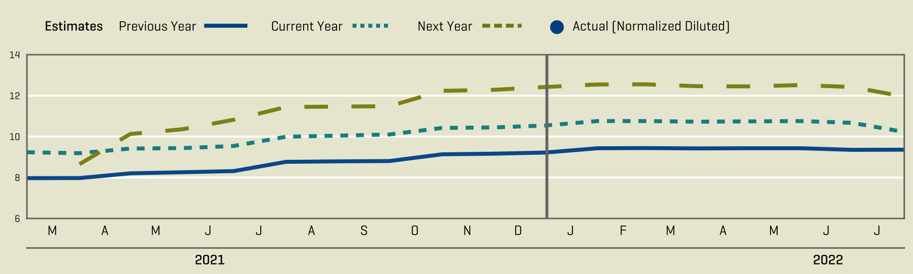
Wall Street Consensus Opinion

Buy

Wall Street Consensus vs. Performance

For fiscal year 2023, analysts estimate that MSFT will earn USD 10.16. For fiscal year 2024, analysts estimate that MSFT's earnings per share will grow by 17.72% to USD 11.96.

Wall Street Consensus Estimates



Fiscal Year	Avg Est.	High Est.	Low Est.	# of Est.	Est. P/E
2024	11.96	12.99	10.88	32	23.10
2023	10.16	10.64	9.93	34	27.20
2024 vs. 2023	**▲ 18%**	**▲ 22%**	**▲ 10%**	**▼ -6%**	**▼ -15%**
Q1'24	2.72	2.90	2.58	19	101.55
Q1'23	2.31	2.43	2.25	27	119.41
Q1'24 vs. Q1'23	**▲ 18%**	**▲ 19%**	**▲ 15%**	**▼ -30%**	**▼ -15%**

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.

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 (MSCI AC Asia Pacific Index, MSCI AC Europe Index or S&P 500® Index)), based on a 12-month time horizon. STARS was designed to help 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 S&P Capital IQ Earnings & Dividend Rankings 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 capsulize 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	C	Lowest
B+	Average	D	In Reorganization
NC	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.

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 Depository Receipts (ADRs) and American Depository 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.

★★★☆☆ **3-STARS (Hold):**
Total return is expected to closely approximate the total return of a relevant benchmark over the coming 12 months.

★★☆☆☆ **2-STARS (Sell):**
Total return is expected to underperform the total return of a relevant benchmark over the coming 12 months.

★☆☆☆☆ **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 MSCI AC Europe Index and the MSCI AC Asia Pacific Index, respectively.

Microsoft Corporation

Disclosures

Stocks are ranked in accordance with the following ranking methodologies:

STARS Stock Reports:

Qualitative STARS rankings are determined and assigned by equity analysts. For reports containing STARS rankings refer to the Glossary section of the report for detailed methodology and the definition of STARS rankings.

Quantitative Stock Reports:

Quantitative rankings 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 rankings refer to the Glossary section seof the report for detailed methodology and the definition of Quantitative rankings.

STARS Stock Reports and Quantitative Stock Reports:

The methodologies used in STARS Stock Reports and Quantitative Stock Reports (collectively, the "Research Reports") reflect different criteria, assumptions and analytical methods and may have differing rankings. The methodologies and data used to generate the different types of Research Reports are believed by the author and distributor reasonable and appropriate. Generally, CFRA does not generate reports with different ranking methodologies for the same issuer. However, in the event that different methodologies or data are used on the analysis of an issuer, the methodologies may lead to different views on the issuer, which may at times result in contradicting assessments of an issuer. CFRA reserves the right to alter, replace or vary models, methodologies or assumptions from time to time and without notice to clients.

STARS Stock Reports:

Global STARS Distribution as of June 30, 2022

Ranking	North America	Europe	Asia	Global
Buy	42.0%	43.9%	48.4%	43.5%
Hold	51.4%	50.9%	42.2%	49.7%
Sell	6.6%	5.2%	9.5%	6.8%
Total	100.0%	100.0%	100.0%	100.0%

Analyst Certification:

STARS Stock Reports are prepared by the equity research analysts of CFRA and its affiliates and subsidiaries. Quantitative Stock Reports are prepared by CFRA. All of the views expressed in STARS Stock Reports accurately reflect the research analyst's personal views regarding any and all of the subject securities or issuers; all of the views expressed in the Quantitative Stock Reports accurately reflect the output of CFRA's algorithms and programs. Analysts generally update STARS Stock Reports at least four times each year. Quantitative Stock Reports are generally updated weekly. No part of analysts' or CFRA's compensation was, is, or will be directly or indirectly related to the specific rankings or views expressed in any Stock Report.

About CFRA Equity Research:

This Research Report is published and originally distributed by Accounting Research & Analytics, LLC d/b/a CFRA ("CFRA US"), with the following exceptions: In the UK/EU/EEA, it is published and originally distributed by CFRA UK Limited ("CFRA UK"), which is regulated by the Financial Conduct Authority (No. 775151), and in Malaysia by CFRA MY Sdn Bhd (Company No. 683377-A) ("CFRA Malaysia"), which is regulated by Securities Commission Malaysia, (No. CMSL/A0181/2007) under license from CFRA US. These parties and their subsidiaries maintain no responsibility for reports redistributed by third parties such as brokers or financial advisors.

General Disclosure

Notice to all jurisdictions:

Where Research Reports are made available in a language other than English and in the case of inconsistencies between the English and translated versions of a Research Report, the English version will control and supersede any ambiguities between such versions. Neither CFRA nor its affiliates guarantee the accuracy of any translation.

The content of this report and the opinions expressed herein are those of CFRA based upon publicly-available information that CFRA believes to be reliable and the opinions are subject to change without notice. This analysis has not been submitted to, nor received approval from, the United States Securities and Exchange Commission or any other regulatory body. CFRA AND ALL RELATED ENTITIES SPECIFICALLY DISCLAIM ALL WARRANTIES, EXPRESS OR IMPLIED, to the full extent permitted by law, regarding the accuracy, completeness, or usefulness of this information and assumes no liability with respect to the consequences of relying on this information for investment or other purposes.

No content in this Research Report may be modified, reverse engineered, reproduced or distributed in any form by any means, or stored in a database or retrieval system, without the prior written permission of CFRA, or used for any unlawful or unauthorized purposes. Neither CFRA nor its third-party providers, as well as its/their directors, officers, shareholders, employees or agents, guarantee the accuracy, completeness, timeliness or availability of the content herein

Past performance is not necessarily indicative of future results.

This document may contain forward-looking statements or forecasts; such forecasts are not a reliable indicator of future performance.

This report is not intended to, and does not, constitute an offer or solicitation to buy and sell securities or engage in any investment activity. This report is for informational purposes only. Statements in this report are not made with respect to any particular investor or type of investor. Securities, financial instruments or strategies mentioned herein may not be suitable for all investors and this material is not intended for any specific investor and does not take into account an investor's particular investment objectives, financial situations or needs. Before acting on anything in this report, you should consider whether it is suitable for your particular circumstances and, if necessary, seek professional advice. CFRA may license certain intellectual property or provide services to, or otherwise have a business relationship with, certain issuers of securities that are the subject of CFRA research reports, including exchange-traded investments whose investment objective is to substantially replicate the returns of a proprietary index of CFRA. In cases where CFRA is paid fees that are tied to the amount of assets invested in a fund or the volume of trading activity in a fund, investment in the fund may result in CFRA receiving compensation in addition to the subscription fees or other compensation for services rendered by CFRA, however, no part of CFRA's compensation for services is tied to any particular viewpoint or rating. Additional information on a subject company may be available upon request.

CFRA's financial data provider is S&P Global Market Intelligence. THIS DOCUMENT CONTAINS COPYRIGHTED AND TRADE SECRET MATERIAL DISTRIBUTED UNDER LICENSE FROM S&P GLOBAL MARKET INTELLIGENCE. FOR RECIPIENT'S INTERNAL USE ONLY.

The Global Industry Classification Standard (GICS®) was developed by and/or is the exclusive property of MSCI, Inc. and S&P Global Market Intelligence. GICS is a service mark of MSCI and S&P Global Market Intelligence and has been licensed for use by CFRA.

Other Disclaimers and Notices

Certain information in this report is provided by S&P Global, Inc. and/or its affiliates and subsidiaries (collectively "S&P Global"). Such information is subject to the following disclaimers and notices: "Copyright © 2018, S&P Global Market Intelligence (and its affiliates as applicable). All rights reserved. Nothing contained herein is investment advice and a reference to a particular investment or security, a credit rating or any observation concerning a security or investment provided by S&P Global is not a recommendation to buy, sell or hold such investment or security or make any other investment decisions. This may contain information obtained from third parties, including ratings from credit ratings agencies. Reproduction and distribution of S&P Global's information and third party content in any form is prohibited except with the prior written permission of S&P Global or the related third party, as applicable. Neither S&P Global nor its third party providers guarantee the accuracy, completeness, timeliness or availability of any information, including ratings, and are not responsible for any errors or omissions (negligent or otherwise), regardless of the cause, or for the results obtained from the use of such information or content. S&P GLOBAL AND ITS THIRD PARTY CONTENT PROVIDERS GIVE NO EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR USE AND ALL S&P INFORMATION IS PROVIDED ON AN AS-IS BASIS. S&P GLOBAL AND ITS THIRD PARTY CONTENT PROVIDERS SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, EXEMPLARY, COMPENSATORY, PUNITIVE, SPECIAL OR CONSEQUENTIAL DAMAGES, COSTS, EXPENSES, LEGAL FEES, OR LOSSES (INCLUDING LOST INCOME OR PROFITS AND OPPORTUNITY COSTS OR LOSSES CAUSED BY NEGLIGENCE) IN CONNECTION WITH ANY USE OF THEIR INFORMATION OR CONTENT, INCLUDING RATINGS. Credit ratings are statements of opinions and are not statements of fact or recommendations to purchase, hold or sell securities. They do not address the suitability of securities or the suitability of securities for investment purposes, and should not be relied on as investment advice."

CFRA's Research Reports may be distributed in certain localities, countries and/or jurisdictions by independent third parties or independent intermediaries and/or distributors ("Intermediaries"). Intermediaries are not acting as agents or representatives of CFRA. In territories where an Intermediary distributes CFRA's Research Reports, the Intermediary, and not CFRA, is solely responsible for complying with all applicable regulations, laws, rules, circulars, codes and guidelines established by local and/or regional regulatory authorities, including laws in connection with the distribution of third party research reports, licensing requirements, supervisory and record keeping obligations that the Intermediary may have under the applicable laws and regulations of the territories where it distributes the Research Reports.

For residents of the European Union/European Economic Area:
Research reports are originally distributed by CFRA UK Limited (company number 08456139 registered in England & Wales with its registered office address at New Derwent House, 69-73 Theobalds Road, London, WC1X 8TA, United Kingdom). CFRA UK Limited is regulated by the UK Financial Conduct Authority (No. 775151).

For residents of Malaysia:
Research reports are originally produced and distributed by CFRA MY Sdn Bhd (Company No. 683377-A) ("CFRA Malaysia"), a wholly-owned subsidiary of CFRA US. CFRA Malaysia is regulated by Securities Commission Malaysia (License No. CMSL/A0181/2007).

For Recipients in Canada:
This report is not prepared subject to Canadian disclosure requirements and may not be suitable for Canadian investors.

For residents of Singapore:
Recipients of the Research reports in Singapore should contact the Intermediary of the Research Reports in respect to any matters arising from, or in connection with, the analysis of the report. Where the recipient is not an accredited, expert or institutional investor as defined by the Securities and Futures Act, the Intermediary accepts legal responsibility for the contents of Research Reports in respect of such recipient in accordance with applicable law. When reports are distributed by Intermediaries in Singapore, the Intermediary, and not CFRA, is solely responsible for ensuring that the recipients of the Research Reports understand the information contained in the Research Reports and that such information is suitable based on the customer's profile and investment objectives.

For residents of all other countries:
Research reports are originally distributed Accounting Research & Analytics, LLC d/b/a CFRA.