

Company Note	2
Investment Thesis	5
Company Overview	5
Financial Data	7
Financial Analysis	8
Ratings History	9
Tigress Research Methodology Overview	9
Glossary of Key Terms and Measures	9
Contacts	10
Analyst Certification	10
Research Disclosures	10
Tigress Research Investment Rating Meanings and Distribution	10
Specific Disclosures for the companies that are the subject of this Report	11
Research Report Disclaimer	12
About Tigress Financial Partners LLC	12

Research
(646) 780-8880
research@tigressfp.com

Trading
(646) 780-8890
trading@tigressfp.com

Tigress Financial Partners LLC
Member of FINRA / MSRB / SIPC
40 Wall Street
New York, NY 10005
(212) 430-8700
www.tigressfinancialpartners.com

Microsoft Corporation (MSFT-US)

Software

- We reiterate our Buy rating on MSFT as Business Performance continues to accelerate driven by strong revenue growth across all key product lines.
- Azure, Office 365 and accelerating growth from LinkedIn continue to drive strong Business Performance.
- Increasing enterprise demand for secure productivity and collaboration tools is driving increasing MSFT product adoption, and customer wins.
- LinkedIn is making a greater contribution to accelerating growth as it experiences record levels of user engagement.
- MSFT's Intelligent Cloud and Intelligent Edge continue to drive its architectural advantage.
- MSFT continues to grow its gaming industry dominance and product offerings.
- MSFT strong cash flow and current cash position will continue to fund innovation and growth while enhancing shareholder returns through ongoing dividend increases and share repurchases.

Tigress Financial Partners seeks to do business with the companies that are the subject of these reports. Please refer to the last three pages of this report for important certification, disclosure and disclaimer information. © 2018 Tigress Financial Partners LLC. No part of this report may be reproduced or redistributed in any form.

Company Note
Microsoft Corporation (MSFT-US)

Software

Ivan Feinseth
 Director of Research
 (646) 780-8901 Direct
ifeinseth@tigressfp.com

Research Action:

Reiterate rating

Rating: Buy

Prior Rating: Buy

Price 02/13/2018: \$89.83

52 Week High /

Low: \$96.07 / \$63.62

Key Data: (TTM as of Dec-17)

Excess Cash per Share: \$18.39

Annual Dividend: \$1.68

Dividend Yield: 1.87%

Avg. Volume (30 Day): 38.1M

Shares Outstanding: 7,699.8M

Float: 7,562.6M

Equity MV: \$691,672.1M

Sales TTM: \$98,425.0M

Beta: 1.02

EBITDAR: \$55,471.3M

NOPAT: \$20,593.3M

Total Invested Capital: \$190,746.6M

Return on Capital: 11.87%

Cost of Capital: 6.88%

Economic Profit: \$8,662.4M

Market Value Added: \$595,678.5M

Current Operations Value: \$299,508.2M

Future Growth Value: \$486,916.8M

- We reiterate our Buy rating on MFST as Business Performance continues to accelerate driven by strong revenue growth across all key product lines.** Revenue and Economic Profit grew significantly Y/Y, driven by ongoing benefits from strategic growth, new product development, and marketing initiatives. MSFT is benefiting from growth in LinkedIn and new product introductions including new Surface tablets and Windows 10 PCs. MSFT also announced recent blockchain development partnerships with Accenture and Hapoalim using its new Coco framework. Accelerating adoption of Azure and Office 365 continue to be key catalysts and tailwinds for future growth. MSFT continues to announce new Azure adoptions and collaborations with key cloud service providers. We further believe new strategic initiatives in augmented and virtual reality along with increasing AI integration will continue to be future growth drivers. MSFT market-leading position and innovative ability will continue to generate increasing Economic Profit and greater shareholder value creation. We believe further upside exists from current levels.
- Azure, Office 365 and accelerating growth from LinkedIn continue to drive strong Business Performance.** For the LTM ending December 2017, Net Sales Revenue increased 15.43% Y/Y from \$85.27 billion to \$98.43 billion driven by ongoing acceleration in revenue growth across all key product lines, especially in Azure and LinkedIn. We forecast a further increase of 13.5% to \$111.67 billion over the NTM. Economic Operating Cash Flow (EBITDAR) increased 29.61% Y/Y from \$42.8 billion to \$55.5 billion over the LTM. We forecast a further increase of 5.5% to \$58.6 billion over the NTM. Net Operating Profit After Tax (NOPAT) increased 12.53% Y/Y from \$18.3 billion to \$20.6 billion over the LTM. We forecast a further increase of 21% to \$24.9 billion over the NTM. Return on Capital declined from 12.54% to 11.87% over the LTM as capital investment increased. We forecast an increase to 13.56% over the NTM. Economic Profit (EP) increased 1.5% Y/Y from \$8.53 billion to \$8.67 billion over the LTM. We forecast a further increase of 14.25% to \$9.9 billion over the NTM.

Tigress Financial Partners LLC - Member of FINRA / MSRB / SIPC

 Research: (646) 780-8880 research@tigressfp.com

 40 Wall Street New York NY, 10005 (212) 430-8700 www.tigressfinancialpartners.com

Tigress Financial Partners seeks to do business with the companies that are the subject of these reports. Please refer to the last three pages of this report for important certification, disclosure and disclaimer information.

© 2018 Tigress Financial Partners LLC. No part of this report may be reproduced or redistributed in any form.

- **Increasing enterprise demand for secure productivity and collaboration tools is driving increasing MSFT product adoption, and customer wins.** MSFT continues to invest in its product offerings by developing new features and greater security, along with including integrated collaboration apps like SharePoint, Teams, and Yammer. MSFT's ongoing enhancement of products like Microsoft 365 with greater AI capabilities improves its functionality and is driving increasing adoption. Excel Insights is a new service that uses machine learning to detect and highlight patterns. Translator brings 60-language translation functionality to Word. MSFT continues to expand its service offerings for users to be more productive on any platform, including mobile with real-time co-authoring capabilities in Office Apps on iOS, Android and MAC operating systems. In January, MSFT added dictation capability across multiple apps in Office 365 as it emphasizes first-class voice input for increasing productivity. MasterCard (MA-US, Strong Buy rated) recently chose Microsoft 365 as its collaboration platform across its entire workforce.
- **LinkedIn is making a greater contribution to accelerating growth as it experiences record levels of user engagement.** LinkedIn continues to exhibit strong sales execution across all its services as it is fast becoming an even greater strategic asset than originally thought at the time of its acquisition a year ago. LinkedIn just recorded its fifth consecutive quarter of greater than 20% revenue growth. Increasing engagement across the LinkedIn platform is also driving strong demand for sponsored content and marketing solutions along with the record level of job postings and engagement in its Talent Solutions. MSFT continues to enhance LinkedIn's product offering by creating new ways for members to connect and engage. LinkedIn's newest feature, Career Advice, is a helpful feature for members and is also driving greater ad posting revenue as well. MSFT continues to integrate LinkedIn within its other products including Sales Navigator, Dynamic 365 for sales and Dynamics for talent search, along with the launch of Profile Card that brings personalized LinkedIn insights directly into Office 365 and its new Resume Assistant that helps people build resumes online in LinkedIn. MSFT is also improving member experience by leveraging Microsoft and LinkedIn Graphs with similar functionality to Facebook (FB-US, Buy rated) graphs.

Tigress Financial Partners LLC - Member of FINRA / MSRB / SIPC

Research: (646) 780-8880 research@tigressfp.com

40 Wall Street New York NY, 10005 (212) 430-8700 www.tigressfinancialpartners.com

Tigress Financial Partners seeks to do business with the companies that are the subject of these reports. Please refer to the last three pages of this report for important certification, disclosure and disclaimer information.

© 2018 Tigress Financial Partners LLC. No part of this report may be reproduced or redistributed in any form.

- **MSFT's Intelligent Cloud and Intelligent Edge continue to drive its architectural advantage.** MSFT just reported a 98% increase in Azure revenue this quarter as it offers an industry-leading developer platform with enhanced AI and security capabilities. Azure Cosmos DB is the industry's first globally distributed multimodal database, supporting a new class of low latency event-based serverless applications. Azure Databricks provides leading Apache spark-based analytics, and MSFT's new SQL Server on Lenox reported more than 5 million downloads and is driving more developers to its SQL ecosystem. MSFT continues to increase its strategic partnerships with companies like Alphabet (GOOGL-US, Strong Buy Rated), Amazon (AMZN-US, Buy Rated), Oracle (ORCL-US, Non-rated), Salesforce (CRM-US, Non-rated) and others to offer hybrid cloud solutions. MSFT's partnership with infrastructure provider GoDaddy (GDDY-US, Non-rated) to focus on the small and medium-size business (SMB) market. Azure has grown to be the second largest cloud service provider after Amazon.
- **MSFT continues to grow its gaming industry dominance and product offerings.** MSFT's recently launched, Xbox One X is the most technologically advanced and powerful game console ever built and was the best-selling premium gaming console this past holiday season. MSFT continues to develop gaming console functionality in applications that drive increasing numbers of subscribers to its Game Pass service as it also integrates its gaming functionality across all platforms including console, PC, and mobile devices. MSFT grew its monthly subscribers again this quarter to 59 million, up from 53 million at the end of last quarter. MSFT recently purchased PlayFab which has over 700 million customers and offers over 1,200 games from companies like Atari, Disney, and Rovio. PlayFab is a complete backend platform for game console, mobile and PC game developers to build and launch cloud connected games which MSFT will run on its Azure platform providing a world-class cloud-based service for the gaming industry.
- **MSFT strong cash flow and current cash position will continue to fund innovation and growth while enhancing shareholder returns through ongoing dividend increases and share repurchases.** MSFT currently has over \$58 billion in Economic Operating Cash Flow (EBITDAR) along with \$142 billion or \$18 a share in excess cash. MSFT increases its dividend in the September quarter 8% from \$0.39 to \$0.42 per quarter giving it a current yield of approximately 2%. In September 2016, MSFT announced an open market purchase of \$40 billion worth of stock. MSFT repurchased \$1.8 billion worth of stock and paid out \$3.2 billion in dividends in the last quarter.

Tigress Financial Partners LLC - Member of FINRA / MSRB / SIPC

Research: (646) 780-8880 research@tigressfp.com

40 Wall Street New York NY, 10005 (212) 430-8700 www.tigressfinancialpartners.com

Tigress Financial Partners seeks to do business with the companies that are the subject of these reports. Please refer to the last three pages of this report for important certification, disclosure and disclaimer information.

© 2018 Tigress Financial Partners LLC. No part of this report may be reproduced or redistributed in any form.

Investment Thesis

MSFT continues to drive greater revenue growth through an evolving software as a service (SaaS) model with the launch of Office 365 and its Azure cloud platform. MSFT is expanding its innovative capabilities to drive greater in-home and enterprise presence. MSFT is expanding its focus and presence away from the consumer and move toward more profitable enterprise and cloud-based services. Enterprise services now account for more than half of MSFT's total revenue driven by its strong market share across cloud, database, office, and OS. MSFT continues to gain a dominant position in the enterprise space, driven by its increasingly broad and powerful line of cloud-based product offerings. MSFT is increasing margins through service-based offerings which will continue to drive greater Economic Profit and increasing shareholder value creation.

Company Overview

Microsoft Corp. (MSFT-US) develops, sells licenses and supports operating systems, server applications, business and consumer applications, software development tools and intranet and internet software. Microsoft also manufactures the Xbox video game console, the Surface line of tablets and laptops along with other computer peripherals.

Microsoft operates the industry-leading cloud computing platform Azure offering application development and management through a hosted global network of Microsoft managed data centers. Microsoft operates a number of online and media services including the MSN network, MSNBC, and Xbox 360 live with over 53 million active monthly users. Microsoft manufactures the world's leading business productivity software suite, Microsoft Office 365.

Microsoft competes and sells its products globally with 50% of its revenue coming from the United States and the other 50% coming international sales. Microsoft's customers include the world's largest corporations, global governments, small business, and consumers.

In 2016 Microsoft acquired business social network LinkedIn, increasing its capabilities to compete with relationship-oriented software by providers such as Salesforce. LinkedIn is part of Office 365 in the Windows ecosystem

Microsoft reports revenue under three operating segments: Productivity & Business Processes, Intelligent Cloud, and More Personal Computing.

Productivity & Business Processes: (31.5% of fiscal 2017 revenues) includes the Office business productivity suite and Dynamics CRM businesses.

Intelligent Cloud: (28.4% of fiscal 2017 revenues) includes server, and enterprise products and services. At the end of fiscal 2017, Microsoft's commercial cloud annualized revenue run rate exceeded \$18.9 billion.

More Personal Computing: (40.1% of fiscal 2017 revenues) includes the Windows operating system, Xbox 360 game console, and Xbox 360 live online gaming platform and its Bing search business.

Microsoft Corporation (MSFT-US)
Software
Financial Data

Report Basis	LTM	LTM	LTM	LTM	LTM	LTM	NTM	5 Yr	3 Yr	Current
Reported Period Ending	12/31/2012	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018	Average	Average	Trend
Net Sales Revenue	\$72,818.0	\$83,263.0	\$93,268.0	\$87,632.0	\$85,270.0	\$98,425.0	\$111,674.9	\$89,571.6	\$90,442.3	\$105,050.0
Sales Growth	0.76%	14.34%	12.02%	-6.04%	-2.70%	15.43%	13.46%	6.61%	2.23%	14.44%
Sales Growth Trend	4.06%	8.91%	12.95%	1.18%	-4.03%	8.18%	14.25%	5.44%	1.77%	11.21%
Operating Cash Flow (EBITDAR)	\$40,505.0	\$44,576.8	\$48,037.5	\$44,454.7	\$42,797.6	\$55,471.3	\$58,546.9	\$47,067.6	\$47,574.5	\$57,009.1
EBITDAR Margin	55.63%	53.54%	51.50%	50.73%	50.19%	56.36%	52.43%	52.46%	52.43%	54.39%
EBITDAR Growth	-1.05%	10.05%	7.76%	-7.46%	-3.73%	29.61%	5.54%	7.25%	6.14%	17.58%
Net Operating Profit Before Tax (NOPBT)	\$26,485.0	\$28,676.8	\$29,383.5	\$25,512.7	\$21,904.6	\$30,736.3	\$32,024.7	\$27,242.8	\$26,051.2	\$31,380.5
NOPBT Margin	36.37%	34.44%	31.50%	29.11%	25.69%	31.23%	28.68%	30.40%	28.68%	29.95%
NOPBT Growth	-6.19%	8.28%	2.46%	-13.17%	-14.14%	40.32%	4.19%	4.75%	4.33%	22.26%
Cash Operating Income Tax	\$6,040.0	\$5,331.5	\$7,114.3	\$7,467.6	\$3,604.7	\$10,143.0	\$7,045.4	\$6,732.2	\$7,071.8	\$8,594.2
Economic Tax Effective Rate	22.81%	18.59%	24.21%	29.27%	16.46%	33.00%	22.00%	24.31%	26.24%	27.50%
Net Operating Profit After Tax (NOPAT)	\$20,445.0	\$23,345.3	\$22,269.2	\$18,045.1	\$18,299.9	\$20,593.3	\$24,979.2	\$20,510.5	\$18,979.4	\$22,786.3
NOPAT Margin	28.08%	28.04%	23.88%	20.59%	21.46%	20.92%	22.37%	22.98%	20.99%	21.65%
NOPAT Growth	-13.95%	14.19%	-4.61%	-18.97%	1.41%	12.53%	21.30%	0.91%	-1.67%	16.92%
Cash & Equivalents	\$79,019.0	\$98,551.0	\$102,914.0	\$114,154.0	\$131,693.0	\$146,741.0	\$167,648.9	\$118,810.6	\$130,862.7	\$157,194.9
Total Assets	\$128,683.0	\$153,543.0	\$174,848.0	\$180,098.0	\$224,610.0	\$256,003.0	\$292,478.7	\$197,820.4	\$220,237.0	\$274,240.8
Non - Interest Bearing Liabilities (NIBLs)	\$37,051.0	\$39,974.0	\$48,634.0	\$52,387.0	\$62,279.0	\$76,818.0	\$87,763.1	\$56,018.4	\$63,828.0	\$82,290.6
Net Assets	\$91,632.0	\$113,569.0	\$126,214.0	\$127,711.0	\$162,331.0	\$179,185.0	\$204,715.5	\$141,802.0	\$156,409.0	\$191,950.3
Economic Asset Adjustments	\$502.9	\$3,485.5	\$5,118.3	\$6,620.3	\$8,626.0	\$11,561.6	\$13,208.9	\$7,822.3	\$8,936.0	\$12,385.2
Net Operating Assets	\$92,134.9	\$117,054.5	\$131,332.3	\$134,331.3	\$170,957.0	\$190,746.6	\$217,924.4	\$148,884.3	\$165,345.0	\$204,335.5
Debt & Debt Equivalents	\$15,993.9	\$25,145.5	\$32,291.3	\$49,104.3	\$92,161.0	\$100,142.6	\$114,411.0	\$59,768.9	\$80,469.3	\$107,276.8
Equity & Equivalents	\$72,576.0	\$85,100.0	\$91,879.0	\$76,780.0	\$68,809.0	\$78,360.0	\$89,524.8	\$80,185.6	\$74,649.7	\$83,942.4
Total Capital - Financing Sources	\$88,569.9	\$110,245.5	\$124,170.3	\$125,884.3	\$160,970.0	\$178,502.6	\$203,935.9	\$139,954.5	\$155,119.0	\$191,219.2
Capital Adjustments	(\$1,303.0)	\$1,316.0	\$1,135.0	\$1,945.0	\$2,991.0	\$4,581.0	\$5,233.7	\$2,393.6	\$3,172.3	\$4,907.4
Net Capital Financing Sources	\$87,266.9	\$111,561.5	\$125,305.3	\$127,829.3	\$163,961.0	\$183,083.6	\$209,169.6	\$142,348.1	\$158,291.3	\$196,126.6
Net Working Capital	\$393.9	\$1,456.2	(\$275.6)	(\$2,453.4)	(\$11,299.5)	(\$4,256.8)	(\$4,863.3)	(\$3,365.8)	(\$6,003.2)	(\$4,560.0)
Cost of Net Working Capital	\$143.5	\$71.2	\$40.4	(\$91.3)	(\$460.3)	(\$534.8)	(\$611.0)	(\$195.0)	(\$362.1)	(\$572.9)
% of Revenue	0.20%	0.09%	0.04%	-0.10%	-0.54%	-0.54%	-0.55%	-0.21%	-0.40%	-0.55%
Operational Capital	\$10,897.8	\$15,192.6	\$17,314.7	\$18,010.9	\$15,714.5	\$29,027.8	\$33,163.7	\$19,052.1	\$20,917.8	\$31,095.8
Cost of Operational Capital	\$854.4	\$1,004.7	\$1,112.0	\$1,181.9	\$1,128.7	\$1,538.2	\$1,757.3	\$1,193.1	\$1,282.9	\$1,647.8
% of Revenue	1.17%	1.21%	1.19%	1.35%	1.32%	1.56%	1.57%	1.33%	1.41%	1.57%
Productive Capital	\$28,965.8	\$32,817.6	\$46,468.7	\$40,065.9	\$61,239.5	\$73,416.8	\$83,877.3	\$50,801.7	\$58,240.8	\$78,647.1
Cost of Productive Capital	\$2,267.9	\$2,379.3	\$2,712.3	\$2,895.1	\$3,390.5	\$4,629.3	\$5,288.9	\$3,201.3	\$3,638.3	\$4,959.1
% of Revenue	3.11%	2.86%	2.91%	3.30%	3.98%	4.70%	4.74%	3.55%	3.99%	4.72%
Total Operating Capital	\$16,756.8	\$22,666.6	\$33,081.7	\$24,558.9	\$43,527.5	\$48,926.8	\$55,898.0	\$34,552.3	\$39,004.4	\$52,412.4
Cost of Total Operating Capital	\$1,460.9	\$1,518.2	\$1,907.1	\$1,928.4	\$2,278.7	\$3,178.4	\$3,631.3	\$2,162.2	\$2,461.9	\$3,404.9
% of Revenue	2.01%	1.82%	2.04%	2.20%	2.67%	3.23%	3.25%	2.39%	2.70%	3.24%
Non - Operating Capital	\$75,378.1	\$94,387.9	\$98,250.6	\$109,772.4	\$127,429.5	\$141,819.8	\$162,026.4	\$114,332.0	\$126,340.6	\$151,923.1
Cost of Non - Operating Capital	\$4,594.5	\$6,537.7	\$6,589.9	\$6,959.7	\$7,938.7	\$9,256.4	\$10,575.3	\$7,456.5	\$8,051.6	\$9,915.8
% of Revenue	6.31%	7.85%	7.07%	7.94%	9.31%	9.40%	9.47%	8.31%	8.89%	9.44%
Total Capital	\$92,134.9	\$117,054.5	\$131,332.3	\$134,331.3	\$170,957.0	\$190,746.6	\$217,924.4	\$148,884.3	\$165,345.0	\$204,335.5
Cost of Total Capital	\$6,055.4	\$8,055.8	\$8,496.9	\$8,888.1	\$10,217.5	\$12,434.8	\$14,206.6	\$9,618.6	\$10,513.5	\$13,320.7
% of Revenue	8.32%	9.68%	9.11%	10.14%	11.98%	12.63%	12.72%	10.71%	11.59%	12.68%
Cost of Capital (WACC)	7.01%	7.70%	6.84%	6.69%	6.69%	6.88%	6.88%	6.96%	6.75%	6.88%
Capital Structure										
Debt & Debt Equivalents	\$15,993.9	\$25,145.5	\$32,291.3	\$49,104.3	\$92,161.0	\$100,142.6	\$114,411.0	\$59,768.9	\$80,469.3	\$107,276.8
Debt & Debt Equivalents % of Market Value	6.64%	7.45%	7.78%	9.98%	16.02%	13.18%	13.18%	11.58%	13.21%	13.18%
Preferred Equity	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Preferred Equity % of Market Value	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Market Value of Common Equity	\$224,801.2	\$312,297.5	\$382,880.5	\$443,169.4	\$483,160.3	\$659,906.0	\$753,930.4	\$456,282.7	\$528,745.2	\$706,918.2
Common Equity % of Market Value	93.36%	92.55%	92.22%	90.02%	83.98%	86.82%	86.82%	86.42%	86.79%	86.82%
Total Economic Market Value (MV)	\$240,795.0	\$337,442.9	\$415,171.8	\$492,273.8	\$575,321.4	\$760,048.6	\$868,341.4	\$516,051.7	\$609,214.6	\$814,195.0
Total %	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
Excess Cash	\$75,378.1	\$94,387.9	\$98,250.6	\$109,772.4	\$127,429.5	\$141,819.8	\$162,026.4	\$114,332.0	\$126,340.6	\$151,923.1
Economic Enterprise Value	\$165,416.9	\$243,055.1	\$316,921.2	\$382,501.4	\$447,891.9	\$618,228.8	\$706,315.0	\$401,719.7	\$482,874.0	\$662,271.9
Average Capital	\$81,746.3	\$99,414.2	\$118,433.4	\$126,567.3	\$145,895.2	\$173,522.3	\$196,126.6	\$132,766.5	\$148,661.6	\$184,824.4
Capital Δ	\$11,041.0	\$24,294.6	\$13,743.8	\$2,524.0	\$36,131.7	\$19,122.5	\$26,086.0	\$19,163.3	\$19,259.4	\$22,604.3

Source: Company Data, Financial statements and Tigress Research

Tigress Financial Partners LLC - Member of FINRA / MSRB / SIPC

Research: (646) 780-8880 research@tigressfp.com

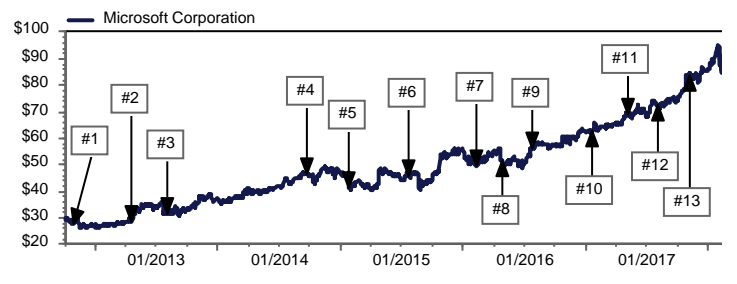
40 Wall Street New York NY, 10005 (212) 430-8700 www.tigressfinancialpartners.com

Tigress Financial Partners seeks to do business with the companies that are the subject of these reports. Please refer to the last three pages of this report for important certification, disclosure and disclaimer information.

© 2018 Tigress Financial Partners LLC. No part of this report may be reproduced or redistributed in any form.

Microsoft Corporation (MSFT-US)
Software
Ratings History

Microsoft Corporation (MSFT-US)				
Item #	Date	Research Action	Rating	Price
#13	11/07/2017	Reiterate Rating	Buy	\$84.27
#12	08/04/2017	Reiterate Rating	Buy	\$72.68
#11	05/08/2017	Reiterate Rating	Buy	\$68.94
#10	01/23/2017	Upgrade Rating	Buy	\$62.96
#9	07/22/2016	Reiterate Rating	Neutral	\$56.57
#8	04/25/2016	Reiterate Rating	Neutral	\$52.11
#7	02/09/2016	Reiterate Rating	Neutral	\$49.28
#6	07/22/2015	Reiterate Rating	Neutral	\$45.54
#5	01/28/2015	Reiterate Rating	Neutral	\$41.19
#4	09/23/2014	Reiterate Rating	Neutral	\$46.56
#3	08/02/2013	Reiterate Rating	Neutral	\$31.89
#2	04/16/2013	Reiterate Rating	Neutral	\$28.97


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.

For more information on our research methodology, please review the *Tigress Investment Research Guide to Company Valuation and Analysis*.

Glossary of Key Terms and Measures

Excess Cash per Share:	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.
EBITDAR:	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.
NOPAT:	Net Operating Profit after Tax represents a company's after-tax cash operating profit excluding financing costs.
Total Invested Capital:	Total Invested Capital the total cash investment that shareholders and debt holders have made during the life of the company.
Return on Capital:	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.
Cost of Capital:	Is the proportionately weighted cost of each category of capital – common equity, preferred equity and debt.
Economic Profit:	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.
Current Operations Value:	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.
Future Growth Value:	Future Growth Value is the portion of market value based on un-earned Economic Profit

For more information on the key terms and measures, please review the *Tigress Investment Research Guide to Company Valuation and Analysis*.

Tigress Financial Partners LLC - Member of FINRA / MSRB / SIPC

Research: (646) 780-8880 research@tigressfp.com

40 Wall Street New York NY, 10005 (212) 430-8700 www.tigressfinancialpartners.com

Tigress Financial Partners seeks to do business with the companies that are the subject of these reports. Please refer to the last three pages of this report for important certification, disclosure and disclaimer information.

© 2018 Tigress Financial Partners LLC. No part of this report may be reproduced or redistributed in any form.

Company Report – Research Update

February 14, 2018
Page 10 of 12

Contacts

Ivan Feinseth
Director of Research
(646) 780-8901 Direct
ifeinseth@tigressfp.com

Michael Naidrich
Capital Markets / Sales & Trading
(646) 780-8902 Direct
mnaidrich@tigressfp.com

Peter Bergen
Institutional Sales and Trading
(646) 780-8915 Direct
pbergen@tigressfp.com

Mario LoGrande
Institutional Sales & Trading
(646) 780-8905 Direct
mlogrande@tigressfp.com

Joseph Pisano
Institutional Sales & Trading
(646) 780-8893 Direct
jpisano@tigressfp.com

David Schiffman
Capital Markets / Sales & Trading
(646) 780-8914 Direct
dschiffman@tigressfp.com

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.

Research Disclosures

Employees, officers, directors and shareholders of Tigress Financial Partners LLC and of any of Tigress Financial Partners LLC affiliated entities that are not directly involved with the production of any Tigress Research report (s) and / or their family members may buy / sell or hold securities for their own accounts contrary to the current recommendation expressed in any report published by Tigress Research.

Tigress Financial Partners LLC, as well as affiliates of Tigress Financial Partners LLC, provide or may seek to provide investment banking, consulting and / or other services to the companies and / or the officers, directors, and employees of the companies that are the subject of research reports published by Tigress Research.

Tigress Financial Partners research personnel, including the analyst(s) responsible for the production of this report, receive compensation based upon the overall profitability of the entire firm including profits derived from investment banking revenues.

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:	Meaning:	Rating Distribution (02/13/2018)				
		Companies Under Coverage		Relationship Companies Under Coverage*		
		#	%	#	%	
Strong Buy:	Expect significant price gains in the price of the stock relative to its industry peer group and general market over the next 12 months.	15	13%	1	15%	
Buy:	Expect out-performance for the price of the stock relative to its industry peer group and general market over the next 12 months.	52	44%	5	70%	
Neutral:	Expect little or no outperformance opportunity over the next 12 months.	45	38%	1	15%	
Underperform:	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%	
Sell:	Expect price decline or significant relative market and industry underperformance over the next 12 months.	0	0%	0	0%	
Not Rated	No Current Research Rating	NA	NA	65	NA	
		Total	117	100%	72	100%

*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.

Tigress Financial Partners LLC - Member of FINRA / MSRB / SIPC

Research: (646) 780-8880 research@tigressfp.com

40 Wall Street New York NY, 10005 (212) 430-8700 www.tigressfinancialpartners.com

Tigress Financial Partners seeks to do business with the companies that are the subject of these reports. Please refer to the last three pages of this report for important certification, disclosure and disclaimer information.

© 2018 Tigress Financial Partners LLC. No part of this report may be reproduced or redistributed in any form.

Specific Disclosures for the companies that are the subject of this Report

Company:	Disclosure:
Microsoft Corporation (MSFT-US)	14

Key	Disclosure:
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.
4.	The Analyst or a household member responsible for the production of this report currently serves as an officer, director or advisory board member of the company that is the primary subject of this report.
5.	An employee of Tigress Financial Partners LLC, its affiliates or subsidiaries currently serves as an officer, director or advisory board member of the company that is the primary subject of this report.
6.	Tigress Financial Partners LLC, its affiliates or subsidiaries is acting as manager/co-manager, underwriter, selling group member, placement or sales agent regarding an offering of securities of this subject company/entity or one of its affiliates.
7.	Tigress Financial Partners LLC, its affiliates or subsidiaries has acted as manager/co-manager, underwriter, selling group member, placement or sales agent regarding an offering of securities of this subject company/entity or one of its affiliates within the past 12 months.
8.	Tigress Financial Partners LLC or an affiliated entity currently receives compensation for non-investment banking services from the company and / or employees and / or affiliated persons of the company that is the primary subject of this report.
9.	Within the last 12 months, Tigress Financial Partners LLC, or an affiliated entity has received compensation for investment banking services from the company that is the primary subject of this report.
10.	Within the last 12 months, Tigress Financial Partners LLC, or an affiliated entity has received compensation for non-investment banking services from the company that is the primary subject of this report.
11.	Within the last 12 months, Tigress Financial Partners LLC, or an affiliated entity has received compensation for non-investment banking services from employees and / or affiliated persons of the company that is the primary subject of this report.
12.	In the next 3 months, Tigress Financial Partners LLC, or an affiliated entity, expects to receive compensation for investment banking services from the company that is the primary subject of this report.
13.	In the next 3 months, Tigress Financial Partners LLC, or an affiliated entity, expects to receive compensation for non-investment banking services from the company that is the primary subject of this report.
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.

Tigress Financial Partners LLC - Member of FINRA / MSRB / SIPC

Research: (646) 780-8880 research@tigressfp.com

40 Wall Street New York NY, 10005 (212) 430-8700 www.tigressfinancialpartners.com

Tigress Financial Partners seeks to do business with the companies that are the subject of these reports. Please refer to the last three pages of this report for important certification, disclosure and disclaimer information.

© 2018 Tigress Financial Partners LLC. No part of this report may be reproduced or redistributed in any form.

Research Report Disclaimer

This report is produced for informational purposes only and is not a solicitation to buy or sell any securities or services from any companies or issuers mentioned herein or to participate in any particular trading strategy or in any jurisdiction in which such an offer or solicitation would violate applicable laws or regulations.

Tigress research is distributed in the United States by Tigress Financial Partners LLC a registered broker dealer with the Securities and Exchange Commission (SEC) and a member of the Financial Industry Regulatory Authority (FINRA).

The information contained herein has been obtained or derived from sources believed to be reliable but its accuracy and completeness is not guaranteed and should not be the sole basis for any investment decision but only to be used as a factor in the investment decision process.

This report does not provide individually tailored investment advice and has been prepared without regard to the individual financial circumstances and investment objectives of any person(s) receiving it. The analysis and conclusions herein are not a complete analysis of every material fact respecting any company, industry, or security. The opinions expressed in this report reflect the judgment of the author(s) at this date and are subject to change without further notice. Tigress Financial Partners is under no obligation to provide updates to recipients of any previously issued reports or recommendations.

The market value and expected income from any investment may vary because of changes in interest rates or foreign exchange rates, securities prices or market indexes, operational or financial conditions of the underlying companies or other factors. Past performance is not indicative of future performance. Estimates of future performance, research ratings, and target prices are based on assumptions that may not be realized. Unless otherwise stated, the cover page provides the most recently available closing price on the primary exchange for the subject company's securities/instruments.

Securities are offered through Tigress Financial Partners LLC a SEC Registered Broker Dealer and registered investment advisor and a member of FINRA/MSRB/SIPC which clears its securities transactions and provides custody of client accounts on a fully disclosed basis through Pershing LLC, a subsidiary of The Bank of New York Mellon.

Securities in your account are protected up to \$500,000 of which \$250,000 can be for claims for cash awaiting reinvestment. Please note that SIPC does not protect against loss due to market fluctuation. For additional information, please go to www.sipc.org.

In addition to SIPC protection, Pershing provides Tigress Financial Partners LLC client accounts coverage in excess of SIPC limits from Lloyd's of London, in conjunction with other insurance companies. The excess of SIPC coverage provides an aggregate loss limit of \$1 billion for eligible securities over all client accounts and a per-client loss limit of \$1.9 million for cash awaiting reinvestment within the aggregate loss limit of \$1 billion. The excess of SIPC coverage does not protect against loss due to market fluctuation. For additional information, please go to www.lloyds.com.

Pershing's excess of SIPC coverage is provided by Lloyd's of London in conjunction with XL Specialty Insurance Co., Axis Specialty Europe Ltd., Great Lakes Reinsurance (UK) PLC and Ironshore Specialty Insurance Co.

About Tigress Financial Partners LLC

Tigress Financial Partners is a specialized financial services firm providing expertise and services in investment banking, investment research, asset management, corporate advisory, and trade execution services.

Tigress Financial Partners provides its services to corporate entities, institutional investors, high-net worth individual investors, public and private pensions, federal, state and municipal governments.

Tigress Financial Partners LLC is a registered broker dealer and registered investment advisor with the Securities and Exchange Commission (SEC) and a member of the Financial Industry Regulatory Authority (FINRA), the Municipal Securities Rulemaking Board (MSRB) and a member of the Securities Investor Protection Corporation (SIPC).

Tigress Financial Partners LLC is a Woman-Owned Business Enterprise (WBE) and is nationally certified by WBENC, the Women's Business Enterprise National Council.

Tigress Financial Partners LLC is a wholly-owned subsidiary of Tigress Holdings LLC.

For further information, please go to www.tigressfinancialpartners.com.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise without prior expressed permission in writing from Tigress Financial Partners LLC.

All trademarks, service marks and logos used in this report are trademarks or service marks or registered trademarks or service of their respective owners.

© 2018 Tigress Financial Partners LLC. All Rights reserved.