



Microsoft

Valuation Date: 10/28/2019
Current Price: \$140.73
Ticker: MSFT

Recommendation: BUY
Target Price: \$167.21
Sector: Information Technology

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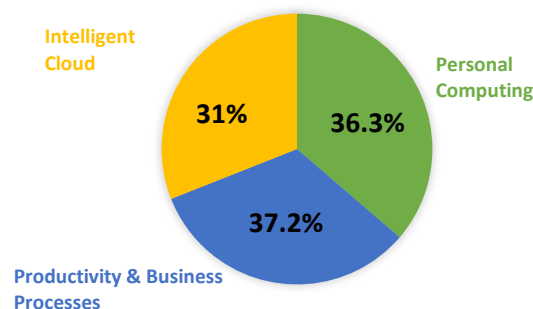
Introduction

Microsoft Corporation (MSFT) develops and supports software, services, devices, and solutions that add new value for their customers. The company was founded in 1975 by Bill Gates and is currently headquartered in Redmond, Washington. The company went public on March 13th, 1986. Since then, Microsoft has grown to be one of the top technology companies, operating over 600 offices worldwide. The company has a market cap of \$1.1 trillion dollars; this is the second largest market cap in the world behind Apple, Inc.

Microsoft generates revenue from 3 different business segments:

1. **Productivity and Business Processes** – Workplace and networking software
 - Products: Microsoft Dynamics, Office 365, Skype, Microsoft Outlook and LinkedIn
2. **Intelligent Cloud** – Cloud products and services
 - Products: Microsoft Azure
3. **Personal Computing** – Personal products and services for end users
 - Products: Windows operating system, PC devices, Xbox gaming and the search engine Bing

% REVENUE PER SEGMENT



Investment Thesis

WELL DIVERSIFIED:

Microsoft operates in many different industries including personal computing, gaming, cloud technology, and software. With Microsoft owning a large majority of the market in every industry they compete in, they are continually challenged to stay ahead of competitors. By the end of 2020 Microsoft will be releasing their new Xbox console called "Project Scarlett." This new hardware upgrade will set the standard for speed, performance and power. Personal computing continues to be a key emphasis for Microsoft. The Surface Laptop 3 and the Surface Pro 7 have recently been released to the market and are expected to continue to be a top laptop of choice. Microsoft Azure has been making large strides to continue to increase cloud revenue. Over the last two quarters, Azure revenue grew 64% and 59% respectively. Azure is a top priority as trends all lead to the possibilities of the cloud. Microsoft is confident that Azure can compete with AWS (Amazon Web Services) in the future.

INNOVATION:

Microsoft's R&D spending accounted for 13% of their total revenue for fiscal year 2019 which is primarily due to investments in AI and cloud research. The company knows that investments in R&D are necessary to stay competitive in the Information Technology sector, so they employ 33% of their entire staff to R&D related roles. They also operate R&D facilities all over the world. They take this global approach to help them remain competitive in local markets and attract the best tech talent from across the world, not just in the US. CEO Satya Nadella has changed the company culture which has allowed employees to be driven by innovation rather than internal competition. In recent years, Microsoft has invested heavily in cloud innovation which has led them to develop Azure – the 2nd largest cloud market share holder after AWS. Azure's success has led Microsoft to grow the number of 10-million-dollar cloud contracts with each passing year.

SUCCESSFUL ACQUISITIONS:

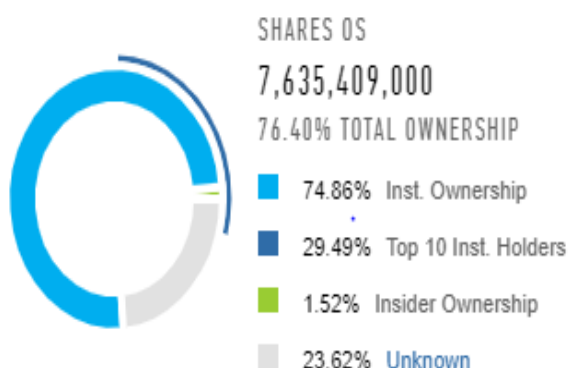
Microsoft has a strong history of acquiring companies that contribute to the company's growth. In the last three years Microsoft has purchased many smaller companies, and two larger companies. In 2016 Microsoft purchased LinkedIn and has had great success, increasing revenue and subscription growth year over year. The company purchased GitHub in 2018 for \$7.5 billion in stock. GitHub's user base has increased by more than 40% since the acquisition.

MANAGEMENT:

Microsoft's management has had a large influence on the success of the company in the last 5 years. Christopher Capossela has served as Chief Marketing Officer since March 2014. He has been working at the company for more than 25 years and has held a variety of marketing leadership roles. Amy Hood was appointed CFO in July 2013 and has over 17 years of experience working at Microsoft. Satya Nadella became the CEO of Microsoft in February 2014 and has been with the company for 27 years. Prior to becoming CEO, he was the VP of the Microsoft Cloud Group and was responsible for leading major projects to move the company to cloud computing. He drove change in the company culture starting in 2014 by stressing empathy, collaboration, and innovation between all Microsoft employees. With the guidance of this strong executive team, Microsoft's stock price has more than tripled since 2014.

Ownership of Shares

Ownership Statistics



Holder	%OS
The Vanguard Group, Inc.	7.8856
BlackRock Fund Advisors	4.4438
SSgA Funds Management, Inc.	4.1006
Fidelity Management & Research Co.	2.9997
T. Rowe Price Associates, Inc.	2.5415

Risks

Competition:

Microsoft's top competitors include Apple, Oracle, and Amazon. Microsoft has a competitive advantage over Apple because Apple focuses on personal products (iPhone, iPad) while Microsoft focuses on consumers and businesses. Microsoft Office 365 consistently attracts new businesses and consumers because of the ability to innovate and keep up with consumer trends. Microsoft has the largest market share in application software. Amazon is Microsoft's largest competitor in the cloud industry having the largest market share. This is because AWS started in 2006 compared to Azure (Microsoft) which started in 2014. Microsoft is investing a significant amount of time and resources in the cloud industry to compete with Amazon. Microsoft's main competitor for software is Oracle. Over the past five years Microsoft has been largely outperforming Oracle. Oracle is growing but at a slower rate than Azure.

Regulation:

Microsoft is aware of the possible effects that regulations can cause. Trade regulations, regulations about how they design and market products, and personal security all pose risks that Microsoft must prioritize. If Microsoft fails to abide by these regulations, it could result in fines, reputational damage, and increased costs for the company.

Breach in Cyber Security:

The largest risk that Microsoft faces is cyberattacks. Large cyberattacks or other security breaches could lead to major decreases in revenue, increases in costs, liability allegations, competitive ranking, and, most importantly, company reputation. As technology improves, hackers are also improving their methods, which makes cyberthreats difficult to detect and defend against.

Valuations

To determine our target price of \$167.21 we chose to combine two methods of valuation: a two-stage dividend discount model (DDM) and a discounted cash flow model (DCF).

DDM: For the two stage DDM model, we used a dividend growth rate of 8.5% for 5 years and 8% for the dividend growth rate in perpetuity. In the last 3 years, Microsoft's average dividend growth rate was 8.5% and this rate is expected to continue increasing. We chose 9.1% as our cost of equity. After calculations we came up with a target price of \$184.91.

DCF: For the DCF model, we used a WACC of 9%. We chose to take a more conservative approach with a WACC of 9% compared to Microsoft's current WACC of 8.5% based from Bloomberg data. We chose a perpetuity growth rate of 5% to be slightly more conservative as well. We chose to be slightly more conservative when choosing our growth rates with the potential of a recession in the near future. The model resulted in a target price of \$161.31. Little changes in both the WACC and growth rate have extreme impacts on the target price. See the sensitivity analysis below to explore the impacts of changing these rates.

Perpetuity Growth					
WACC		4.5%	5.0%	5.5%	6.0%
	8.5%	163.99	183.55	209.64	246.16
	9.0%	146.37	161.31	180.52	206.13
	9.5%	132.29	144.03	158.70	177.56

We weighted the DDM model at 25% and DCF model at 75% since we believe the DCF gave us a more accurate valuation of Microsoft's stock. A target price of \$167.21 compared to the current stock price of \$140.73 results in an upside of 19%. This is a very conservative valuation taking into consideration the US recession fears. Microsoft stock price has increased 38.37% from January 2019 to now.

Peer Analysis

Financial Analysis:

Microsoft has historically had great financials. Comparing the financial ratios to its three main competitors the dividend yield for Microsoft is something that top management makes a priority. Just last month Microsoft announced a \$40 billion share buyback and a focus on increasing the quarterly dividend. Financially it is difficult to compare these companies because Microsoft operates in many industries, making the ratios inconsistent.

	Market Cap (B)	P/E	Dividend Yield	ROE	EPS
Microsoft	1065.3	28.2	1.5%	42.8	5.3
Apple	1086.9	19	1.3%	54.7	11.8
Amazon	883.3	78.1	0%	23.7	22.6
Oracle	177.6	17.7	1.72%	38.1	3.1

Performance Analysis:

Microsoft differentiates itself in many ways starting with their culture. We researched the companies on Glassdoor and found information regarding the overall employee rating from 1-5. Microsoft was on top with the highest rating. This is significant because it attracts better candidates to join the company. The CEO has mentioned that he wants employees to push each other and encourage innovation over competition. Their return on invested capital (ROIC) shows that Microsoft is making better investments over its peers. CSR/ESG ranking measures the corporate social responsibility. With trends pushing large companies to give back, Microsoft ranks in the 99th percentile – well above their competitors.

	Employee Review	ROIC	CSR/ ESG Ranking
Microsoft	4.2	17.5%	99%
Apple	3.5	16.7%	91%
Amazon	3.8	10.7%	60%
Oracle	4	14.7%	87%

Recommendation

Microsoft has proven to be one of the top companies in the world. Over the last five years the stock has tripled. The top management knows where the future is going and is making large investments in cloud technology. Last week Microsoft was awarded the Joint Enterprise Defense Infrastructure (JEDI) contract worth \$10 billion over the next 10 years. Microsoft is well diversified with the three main segments of their revenue (Business Processes, Intelligent Cloud, Personal Computing). Each segment accounts for 30%-40% of revenue which reinforces strong diversification. In addition, Microsoft's geographic revenue breakdown is 51% domestic and 49% international. With the fears of a recession, we believe Microsoft is a strong investment in varying market conditions.