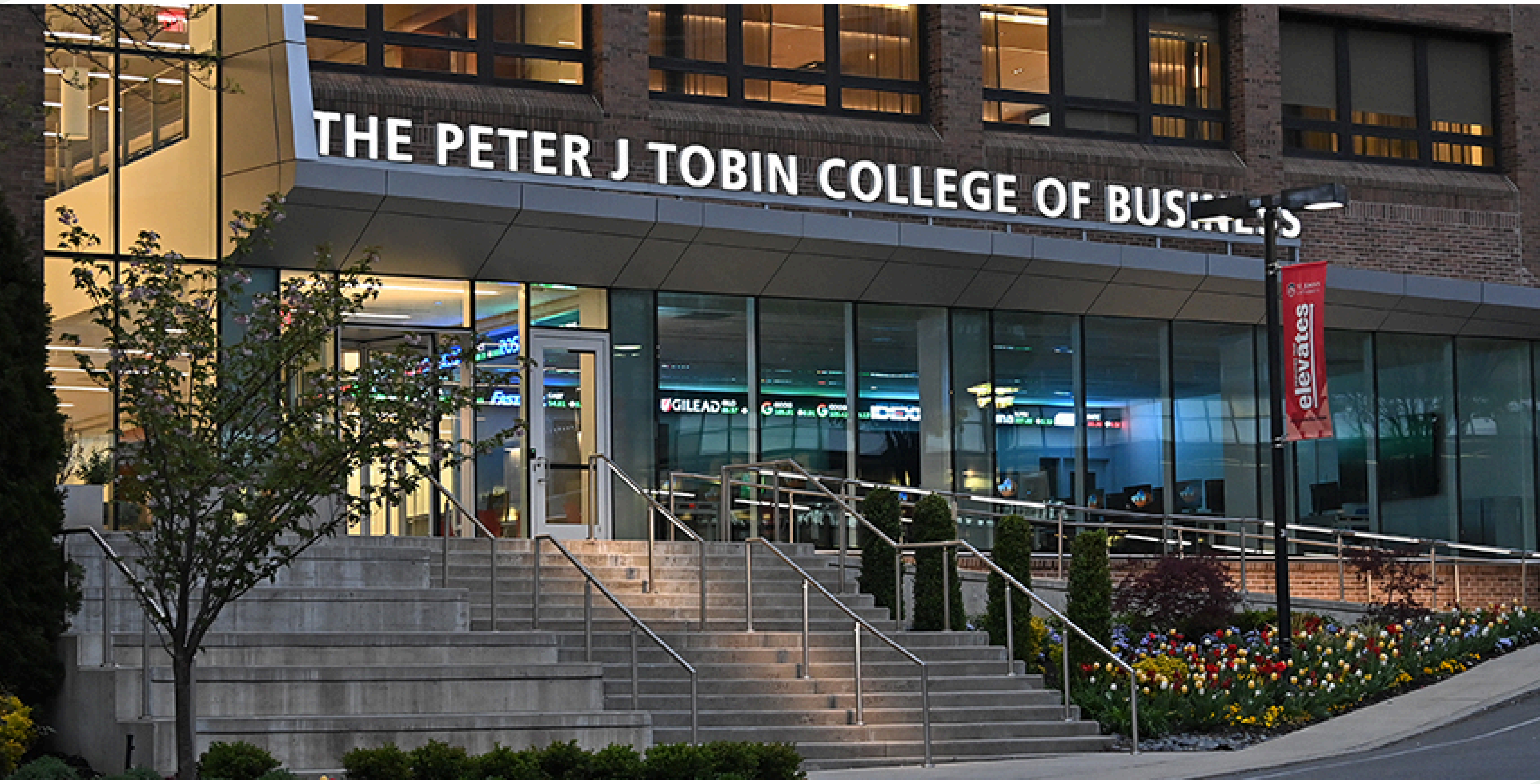
St. John's University

The Peter J. Tobin College of Business

Nathaniel Coulter



April 29, 2025

Microsoft

Profile:

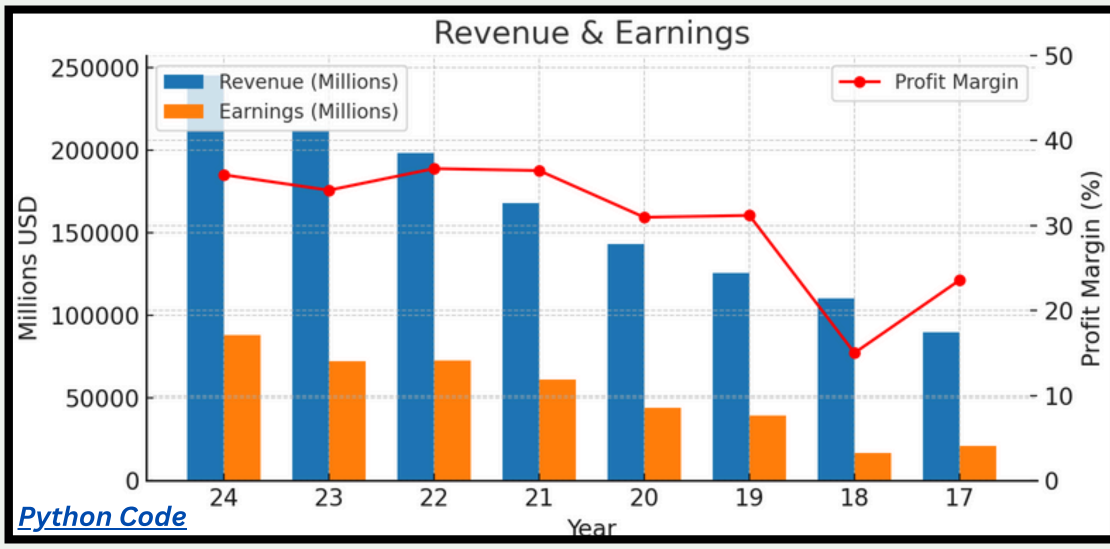
Founded in 1975 by Bill Gates and Paul Allen, Microsoft Corporation (NASDAQ: MSFT) is a global leader in software, cloud computing, and artificial intelligence. Headquartered in Redmond, Washington, the company has evolved from its initial focus on personal computers and Windows software into to a diversified tech sector spanning powerhouse. Under the leadership of current CEO Satya Nadella (since 2014), Microsoft has expanded its product offerings to include the Azure cloud platform, Microsoft 365 productivity suite, made acquisitions including LinkedIn, GitHub, and the continued to build on the Xbox gaming ecosystem. In fiscal year 2024, Microsoft reported revenue of $245.1 billion, a 16% increase year-over-year, with operating income reaching $109.4 billion, up 24% . The Intelligent Cloud segment, which includes Azure, generated $26.8 billion in revenue in Q3 FY2025, marking a 21% year-over-year growth . Azure alone reported a 33% increase in revenue during the same period, mostly driven by strong demand for AI and cloud computing services sought after by increased “big data” adoption.

Analyst Rating:

As of May 7, 2025, Microsoft shares are trading at approximately $434.99. Analysts maintain a bullish outlook on the stock, with a consensus rating of "Buy" and an average price target of $506.31, suggesting a potential upside of around 16.4% . This positive sentiment is fueled by Microsoft's robust performance in cloud computing and AI, as well as its strategic investments in infrastructure and innovation.

Microsoft Corporation				
Ticker	GICS	Industry	Market Cap	Shares Outstanding
MSFT	45103010	Tech	$3.22T	7.434B

Recommendation			
Rating	Last Price	Target Price	Implied Upside
Strong Buy	$435.47	$506.03	16.20%



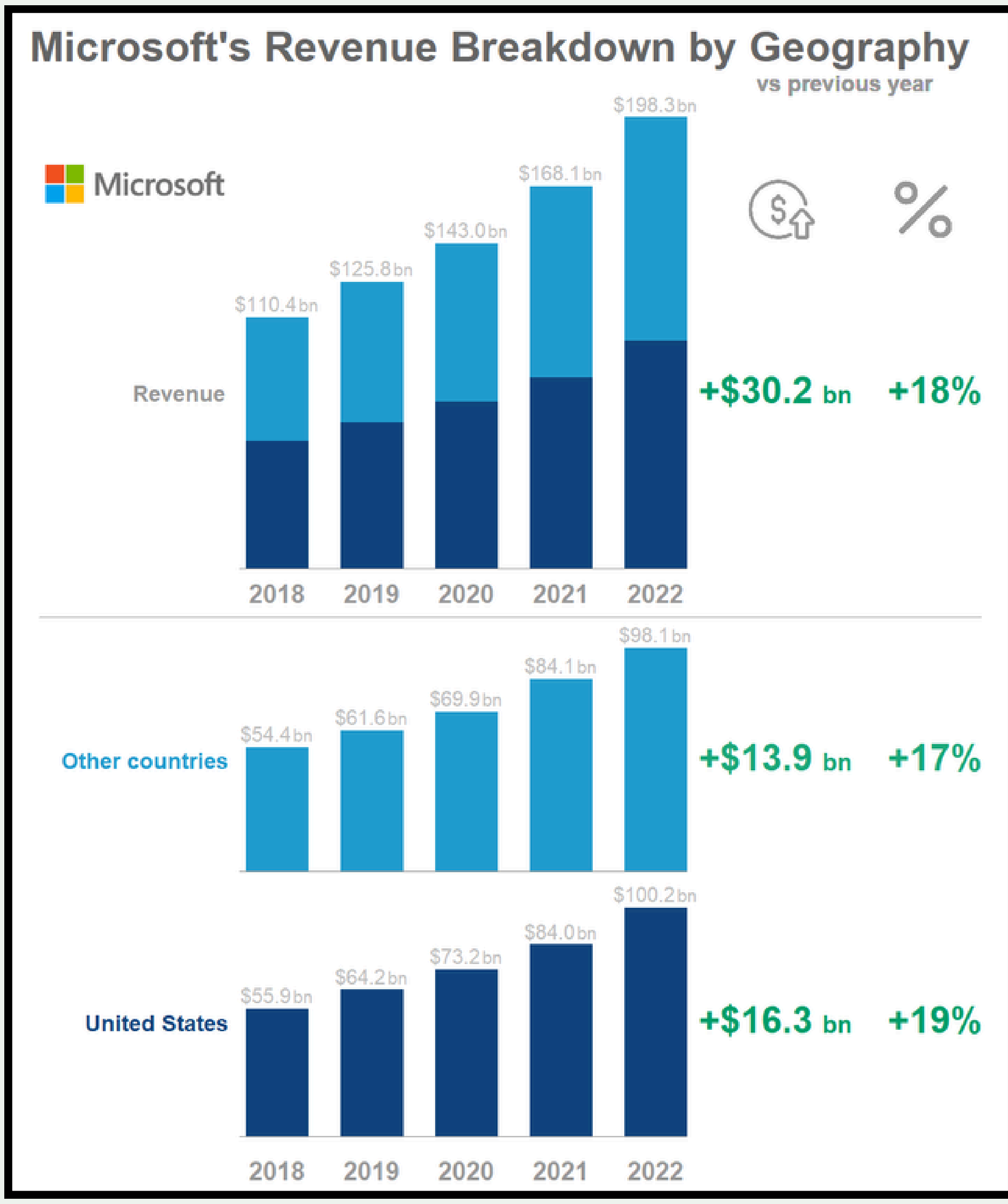
Key Metrics				
Dividend Yield	Average Daily Vol.	52-Week High	52-Week Average	52-Week Low
0.77%	26.35	$468.35	$418.75	$344.79

Historic Performance				
YTD	1-Yr	3-Yr	5-Yr	10-Yr
3.02%	6.67%	68.03%	146.59%	975.15%

Table of Contents:

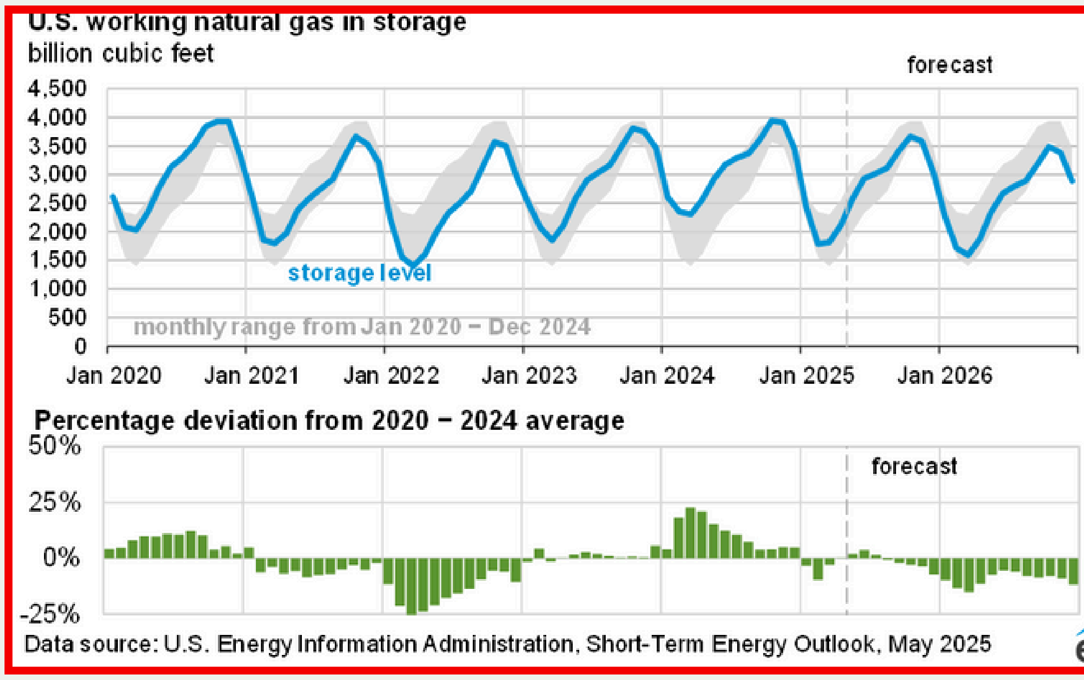
Visual Overviews:

Company: Microsoft
Ticker: MSFT
GICS Code: 45103010 **Sector:** Information Technology (Code 45) **Industry Group:** Software & Services (Code 4510) **Industry:** Software (Code 4513) **Sub-Industry:** Systems Software (Code 45103010)
Annual Report Date (10-K): FY 2025 expected late july / early August 2025
Quarterly Report Dates (10-Q): **Q1** - January 29th **Q2** - April 29th **Q3** - July 29th **Q4** - October 29th
Total Revenue 2024: 245.122B
Total Revenue 2023: 211.915B
Total Revenue YOY: 15.67% increase



Macroeconomic Analysis:

With the current administration seemingly being committed to carrying our a trade war, and imposing 140% Tariffs on Chinese goods; forecasting economic conditions has become a tricky endeavor. As of May 7th, 2025 with the Fed keeping interest rates unchanged, our initial pre-inauguration thesis of the Federal Reserve remaining cautious amid the unpredictability of a new administration's foreign stance on foreign policy is seeming accurate.



We're facing economic variables that are relatively unprecedented — certainly within the last century regaring Tariffs. Interest rates remained below 2% for over a decade following TARP, and an extended period of quantitative easing. My investors on the street don't believe we'll return to an era of easy money, and soaring tech stocks. The 2010s were unique — you could borrow at 2–4%, invest in virtually any stock, earn 8%, and pocket the spread. A golden age for hedge funds, to be sure.We also don't anticipate a return to Paul Volcker-era interest rates. The Fed has signaled a desire to lower rates — targeting, if I recall, around 2.5% — though whether they'll actually maintain that target; espcially amongst the developing trae war, remains uncertain. Oak Tree Capital's Howard Marks, known as "the vulture" on wallstreet for his Fixed Income and Distresse Debt investing strategies touched on this in his 2023 and 2024 memos. In sum stating that banks need a real incentive to lend, which entails being properly compensated for risk. If inflation ever reverts to pre-pandemic levels across all sectors, then perhaps lower rates would be justified. However, with both supply chains and market capitalization now having been disrupted by tariffs, and commodity prices still struggling to revert the distortion caused by the recently ended conflict in Ukraine. All signs continue to point to elevated rates persisting longer than expected prior to President Trump's Inauguration on January 20th.

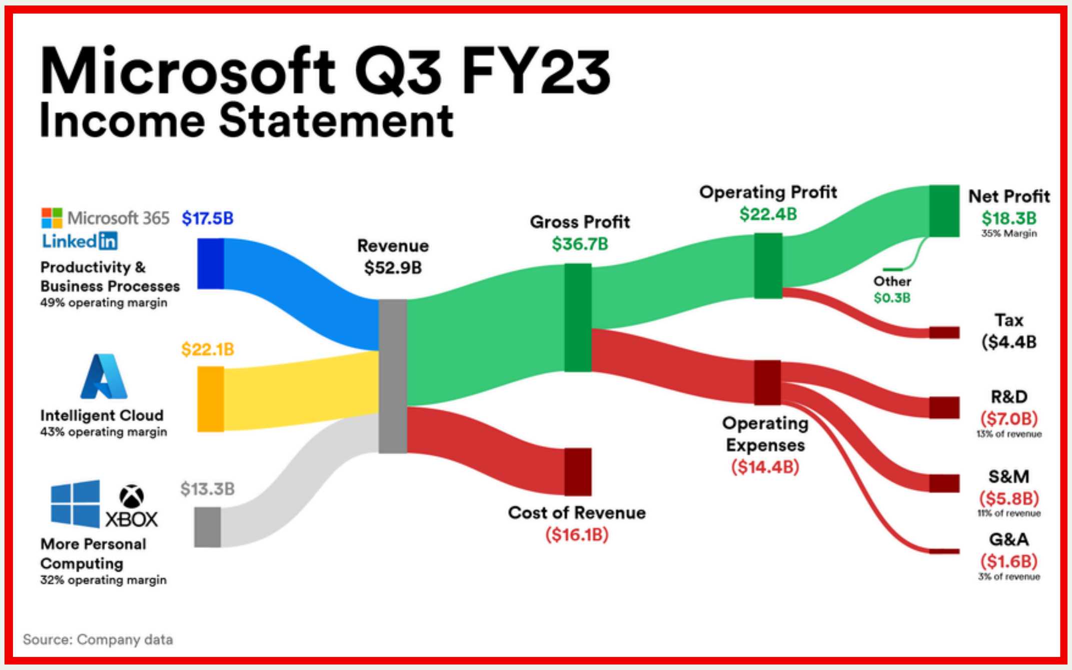
Finally, while markets have held out hope of a reversal in Trump's Trade war policy, there are still some underlying indicators that strongly suggest a recession could come. We're not treating them with the usual gravity, likely because of the post-COVID market rebound during his first term. Although, recessions have been triggered by the market — we've never experienced a capital influx and consumer stimulus like we did during COVID. Jobs market data suggests we may be worse off than anticipated. Specifically, turnover and new grad employment, paints a misleading picture when half of Harvard MBAs are still seeking employment six months after graduation, and only 40% of graduates from the world's top business school are working in their intended field.

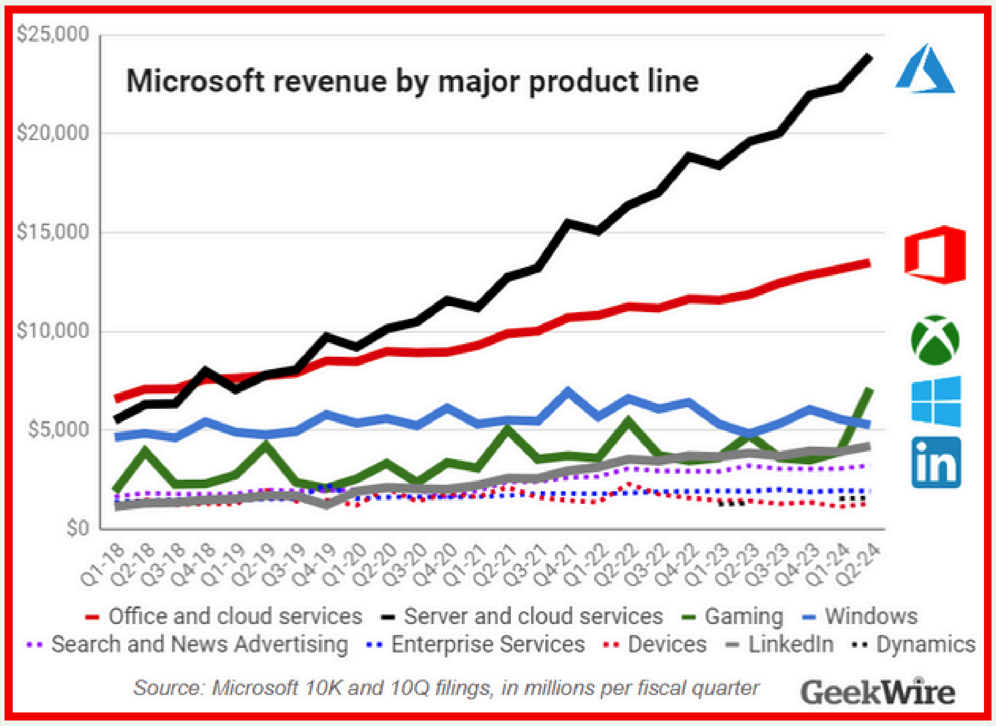
Macroeconomic effects:

Microsoft Corp: With the reemergence of Tariffs for the first time in nealry a century, MSFT faces signficant macro risk and disruption to multiple of it's core business's supply chains. Hardware costs for PC's and gaming consoles could rise, even if assembly is brought back to the US with many hardware components being sourced overseas. In addition, retaliatory tariffs may weaken global demand across all hardware product segments. In cloud computing and AI, market volatility could result in less capital investment from other corporations and investors. Even MSFT's core enterprise software sales could be negatively effected with international licensing costs being included in retaliatory policy. The job market also has the potential to decrease profits from the amount of new sales of windows OS and Microsoft office software,. Overall, having less jobs in the global economy would trickle down to effect other professional services that MSFT owns such as Linkedin. Whilst Microsoft's fundamentals remain strong, their exposure to global supply chains and multinational clients is certainly sensative to escalading tensions over trade policy.

Effects on S&P 500 Sectors:

1.) Technology: The era of high-flying, unprofitable growth tech stocks has come to an end. Profitability and meaningful market share are now essential. Regardless, the tech sector as a whole is in a down period with Microsoft (MSFT) experiencing a significant selloff since Trump took office. Alphabet missing earnings in its cloud computing segment and, despite a modest revenue beat, still fell short of projections — resulting in a sharp market reaction. Microsoft also operates a cloud division, and while both companies remain relevant in the age of AI, neither has made sufficient advancements to dominate the space. Thus, the market has responded accordingly. Although we believe Microsoft remains fundamentally strong and undervalued (which we will touch on shortly), this selloff may potentially underscore shifting investor sentiment. Performance and profitability now outweigh "hype". Market share in AI, microchips, and cloud infrastructure remains attractive, but broadly, the sector is likely to underperform relative to past years. **Conclusion: The vast majority of tech stocks will underperform compared to prior year benchmarks.**





2.) Health Care: In a prior corporate finance project, we analyzed Pfizer among a basket of five healthcare companies. Disclaimer, we are currently / personally holding Eli Lilly. Despite this, we're not broadly bullish on the healthcare sector as a whole. Perhaps if a company like Northwell were to go public, we'd take interest given its growing dominance in the NYC metropolitan area, but otherwise, we would only consider large-cap, blue-chip healthcare stocks for portfolio diversification. In the past, we frequently executed call-selling and put-buying strategies on biotech names in clinical trials — always a high-risk, high-reward play. This strategy may still remain viable if one were to account for the inherent political risk now present in the market as a result of the new administration, and factors realted to DOGE, government spending cuts and economic factors we touched upon earlier. **Conclusion: Demand for healthcare is constant, and insurance providers will continue to reimburse services. This sector should perform slightly above average.**

3.) Financials: Currently, the financial sector feels largely dormant. Outside of working in the industry, the primary reason to hold financial stocks in 2025 is for portfolio balance and relative stability. We could see owning names like American Express, which has shown strong performance over recent years. However, the sector doesn't currently offer risk-adjusted returns that stand out compared to other areas. **Conclusion: Financials are unlikely to underperform, but they also won't outperform relative to their risk profile.**

4.) Real Estate: The real estate sector would stand to benefit from lower interest rates, but affordability remains a significant issue. A notable Wall Street Journal article from the weekend of September 28–29 highlighted that most prospective buyers acted during the COVID-era rate trough. Those who secured 2% mortgages are not likely to sell five years later in a higher-rate environment. Meanwhile, housing inventory remains tight. While commercial office space in San Francisco has finally rebounded to pre-pandemic levels, major players like BNY and Blackstone face billions in commercial debt maturities in New York — debt postponed during the pandemic that is now underwater. The sector's trajectory is difficult to call, but markets tend to move on expectations rather than results. **Conclusion: Real estate could be a buy now, ahead of any significant unwinding.**

5.) Energy: Potential Buy. Although fracking became uneconomical and we currently lack sufficient infrastructure to process our own natural gas cost-effectively, this doesn't preclude the U.S. from thriving as a crude oil exporter. Developments in Guyana — which recently discovered the largest oil deposits in decades — and BP's refinery expansion plans create a compelling growth story. Especially notable is Guyana's public statement that it does not plan to join OPEC, which could further enhance export flexibility. **Conclusion: Potential buy. Outlook based on Political Policy / incentive of new administration as well as geopolitically favorable production and export scenarios in developing nations.**

6.) Materials: Corporations such as, DuPont, Celanese, and Sherwin-Williams remain fundamentally solid, and therefore, should continue to offer relative stability, even in uncertain market conditions. **Conclusion: Sector remains relatively stable fundamentally, and aside from potential Tariff impacts, could likley expect moderate performance expectations.**

7.) Consumer Discretionary: We believe this to be a mixed sector, and approach investments with caution. In short, the product or service will be almost totally responsible for a companies performance, and this sector could have the highest variance between said performances' for the fiscal year. Taking a step back, we've observed consistent post-pandemic spending on retail and discretionary goods, but individual company performance varies. Starbucks and Nike are experiencing issues unique to their operations — Nike, for instance, lost market share after withdrawing from key retail locations. This sector should generally perform well, but it will produce both clear winners and losers. **Conclusion: Mixed performance, and product / service / company selection is critical.**

8.) Industrials: Potential Buy. Companies like Honeywell and 3M provide essential services and products. Should we enter a renewed real estate development cycle, industrials are well-positioned to benefit. **Conclusion: Sector outlook is positive, particularly in a development-heavy economic cycle.**

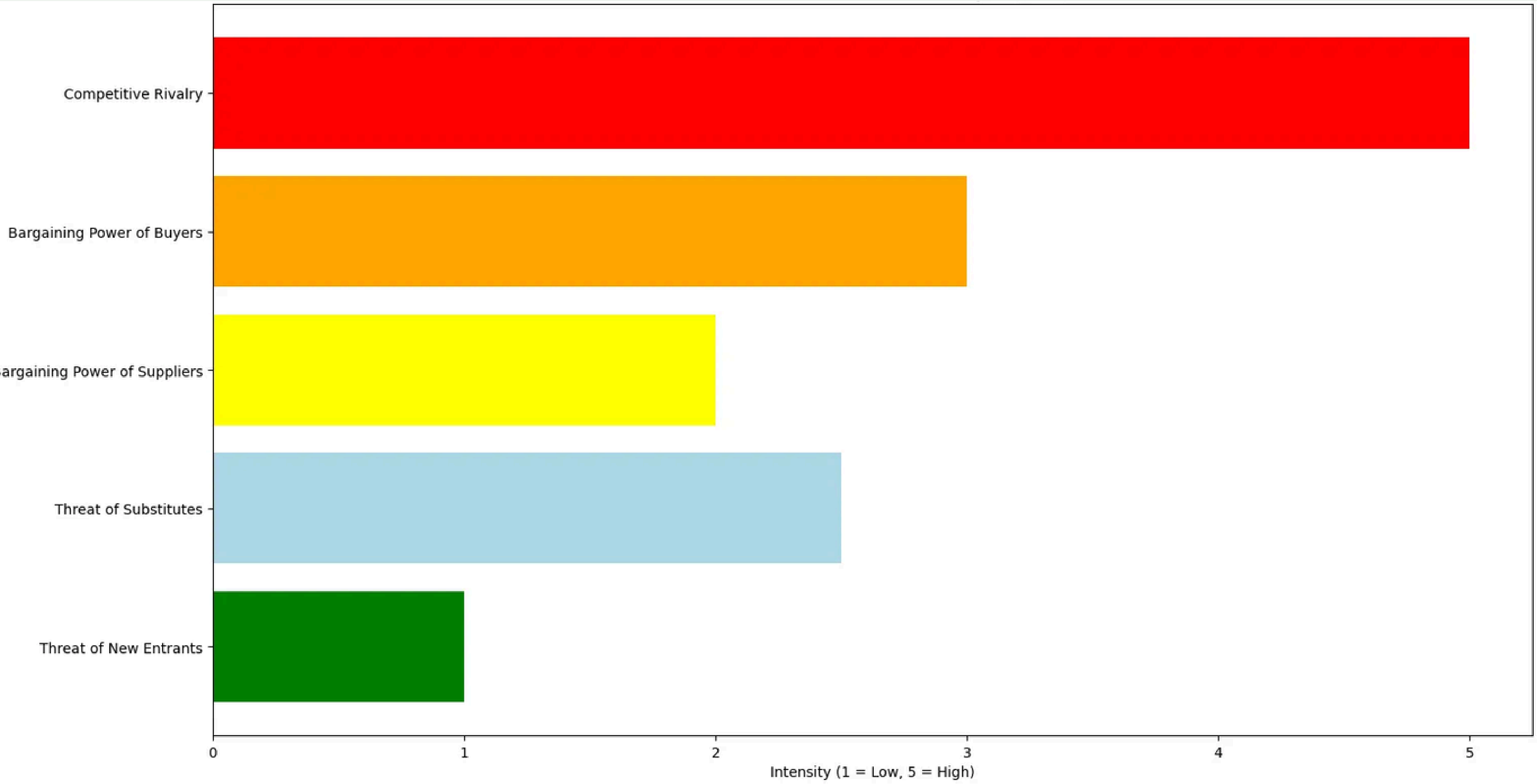
9.) Utilities: We believe that caution is warranted here. NextEra Energy (NEE), one of the nation's largest providers, has seen share prices decline in recent years. Its subsidiary, NEP, received significant investor attention in 2022 but has since underperformed. Many green energy investments have not delivered returns as expected. Still, utilities serve a critical, recession-resistant function. **Conclusion: (usually) a defensive sector with dependable, moderate returns, but selectivity matters.**

10.) Consumer Staples: Names like Hormel and Procter & Gamble are go-to defensive holdings. In economic downturns, demand for consumer staples remains strong, and volumes of affordable, processed foods typically increase. Household essentials such as toiletries maintain steady demand regardless of market cycles. **Conclusion: First sector we'd turn to in a recession. Stable and reliable.**

11.) Communications: With Comcast releasing better than expected earnings recently. We maintain interest in telecommunications and LTE providers, though traditional cable TV has been increasingly cannibalized by streaming services. The core services a majority of the companies in this secotr provide are core neccessities in our digital economy. Even if certain individual networks are struggling to retain value, and resorting to sports broadcasting deals to stay relevant — as blackout restrictions are driving consumers further toward streaming. Core services including, broadband and LTE infrastructure remains essential until alternative technologies like Starlink improve. **Conclusion: Solid long-term outlook, especially for connectivity providers.**

Porter's Five Forces Model : (Tech Sector)

[Python Code]



Preface & Inputs:

The following analysis examines the tech industry's competitive landscape within the sector utilizing the perspective of Porter's Five Forces model. Based on industry metrics from fiscal year 2024, and the five categories shown in fig 2.

In analyzing Microsoft's industry, we can better understand it's strategic positioning, and identify trends within the broader technology sector. As well as popular subsectors growing in products and services offered. Doing so will help us to assess how the dynamics of industry competition may influence our company's future stock performance.

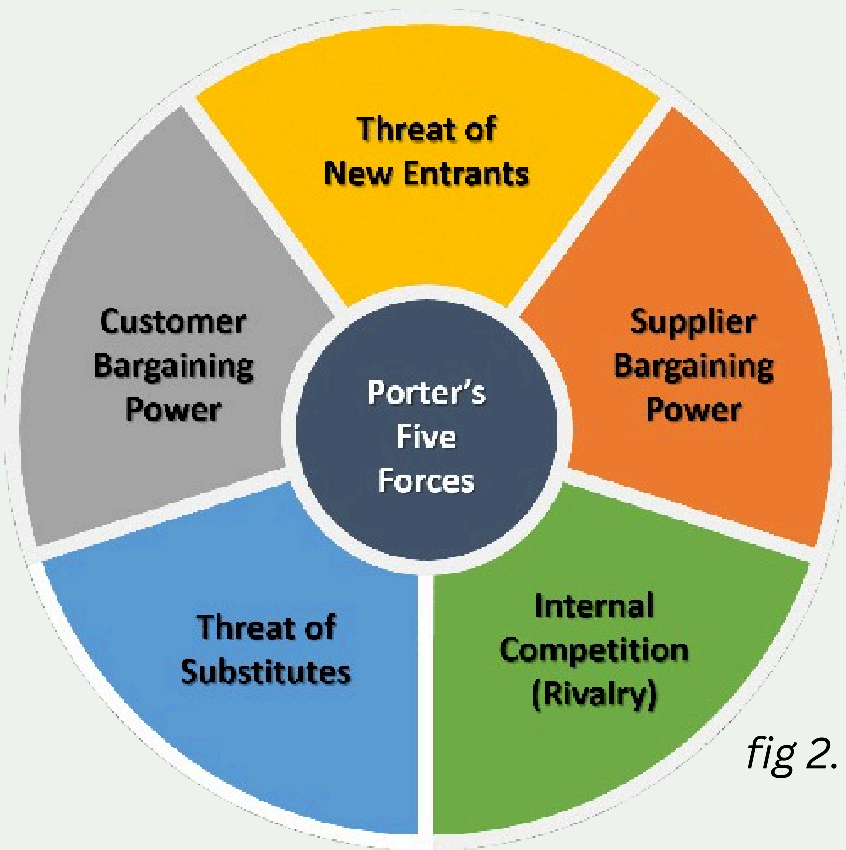


fig 2.

1.) Competitive Rivalry: 5/5 (Very High)

The technology sector is characterized by intense competitive rivalry across multiple verticals including software, cloud computing, consumer electronics, and enterprise solutions. Innovation cycles are fast-paced, and firms aggressively invest in R&D, marketing, and ecosystem development to gain market share. Rapid technological advancements and product convergence have also increased overlap between formerly distinct product categories, leading to even greater competition. Brand strength, customer loyalty, and scale provide some firms with an advantage, but the market remains saturated with well-established players constantly vying for dominance.

2.) Bargaining Power of Buyers: 3/5 (Moderate)

Buyers in the information technology sector maintain a moderate level of power due to the wide availability of alternative products and services. Price sensitivity and ease of access to digital platforms allow customers to compare solutions and switch providers, especially in commoditized segments like cloud storage or productivity software. However, in many cases, switching costs for consumers and especially enterprise clients can be high due to product integration, data migration complexity, and long-term contracts. These factors can limit buyer leverage in more entrenched ecosystems.

3.) Bargaining Power of Suppliers: 2/5 (Low-Medium)

Supplier power across the tech industry is generally low to moderate, particularly for firms that purchase components or services at scale. Large technology companies often have diversified supplier networks and can exert pricing pressure due to their purchasing volume. Additionally, many suppliers compete for contracts with top-tier tech firms, further reducing their leverage. However, in specialized segments (e.g., advanced semiconductor manufacturing), supplier concentration can increase dependency and give certain providers elevated influence over pricing and timelines.

4.) Threat of Substitutes: 2.5/5 (Low to Moderate)

The threat of substitution exists but remains limited due to the high value-added nature of integrated software platforms, cloud ecosystems, and proprietary hardware. While alternative solutions are available, many users remain locked into existing platforms due to familiarity, compatibility, and workflow dependencies. In addition, continued innovation in areas like artificial intelligence, cybersecurity, and cloud infrastructure further enhances the value proposition of incumbent offerings, raising the bar for potential substitutes to displace them.

5.) Threat of New Entrants: 1/5 (Very Low)

The technology industry has substantial barriers to entry, including high capital requirements, technical expertise, intellectual property protections, and brand loyalty. The need for continuous innovation and scale to compete effectively in sectors like cloud computing, operating systems, or consumer hardware makes it difficult for new firms to gain meaningful market share. Regulatory compliance, established distribution channels, and legal exposure (e.g., data privacy, antitrust) further constrain the viability of new entrants in an already mature and consolidated market landscape.

How might our analysis effect Microsoft ?

1.) Competitors (Strong):

Microsoft operates in multiple highly competitive sectors including; Software, Cloud computing, and consumer electronics industries (everything from PC's, Laptops, Gaming consoles, etc.). While major competitors such as Apple, Google, Amazon, and IBM continue to innovate and expand their product offerings, which increases competition in the sector. Microsoft is aided by its strong brand awareness, substantial product ecosystem, and significant amount of financial resources. All combine to allow MSFT to maintain its leading position. For example, in fiscal year ended June 30, 2024, Microsoft reported revenue of approximately $245 billion, which is up 16% from the previous year. In addition, their operating income of $109 billion is also up 24% from the previous year.

2.) Bargaining Power of Buyers (Average):

Consumers have moderate bargaining power due to the availability of substitute products and services. Although, Microsoft's diverse ecosystem of products including Windows, Office, Azure, and a multitude of other services (Game Pass for Xbox), all come with high switching costs for consumers and businesses. This integration increases customer loyalty and reduces the likelihood of switching to competitors in any of the aforementioned products above.

3.) Bargaining Power of Suppliers (Low-Medium):

MSFT's size and financial strength reduce the bargaining power of suppliers. This is because the company purchases in such large quantities, and it has multiple suppliers for most hardware components, so it can negotiate extremely favorable terms. Their dynamic with suppliers also allows them to effectively manage costs, and maintain healthy profit margins.

4.) Threat of Substitutes (Low-Medium):

Yes, while alternative software and cloud solutions do exist, Microsoft's product portfolio and continual innovation serve to mitigate the threat of substitute goods. The company's investments in AI and cloud computing have expanded its product offering, making it difficult for other companies to match the value of Microsoft's comprehensive services. In addition, the Azure cloud platform saw promising growth in fiscal 2024, contributing to the company's strong financial performance.

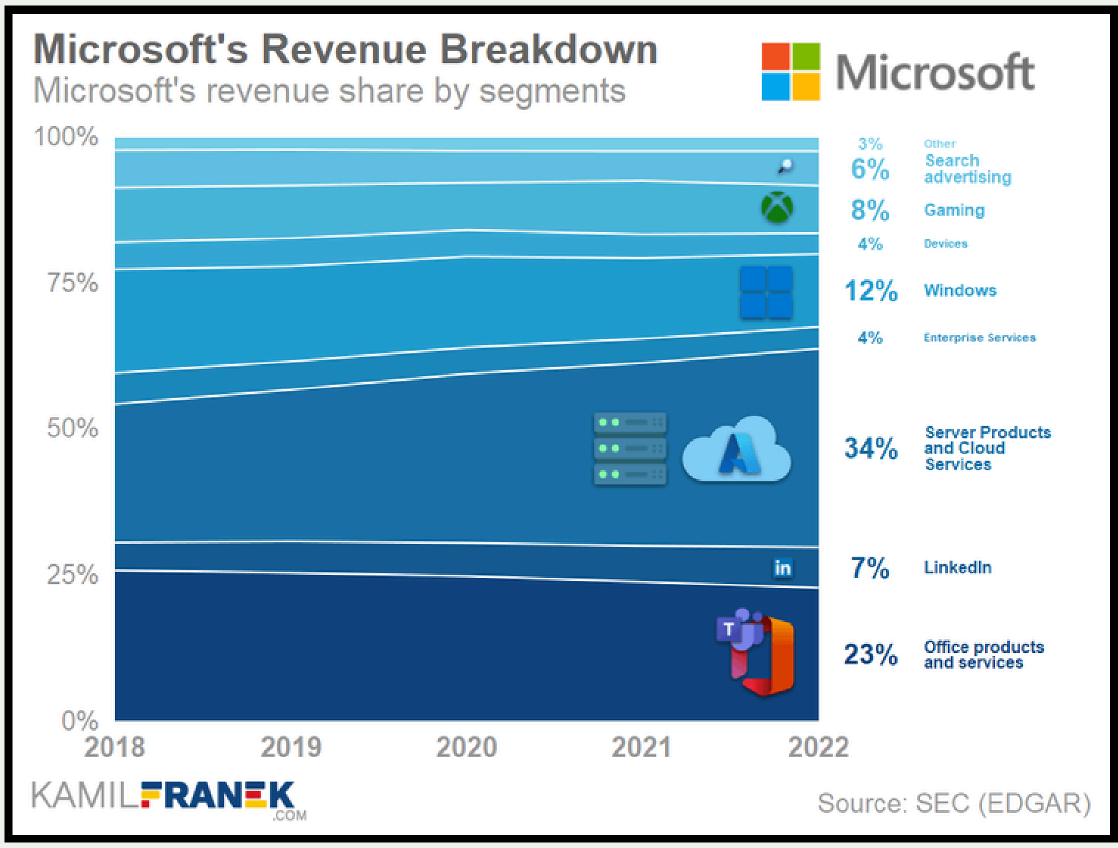
5.) Threat of New Entrants (Low Potential):

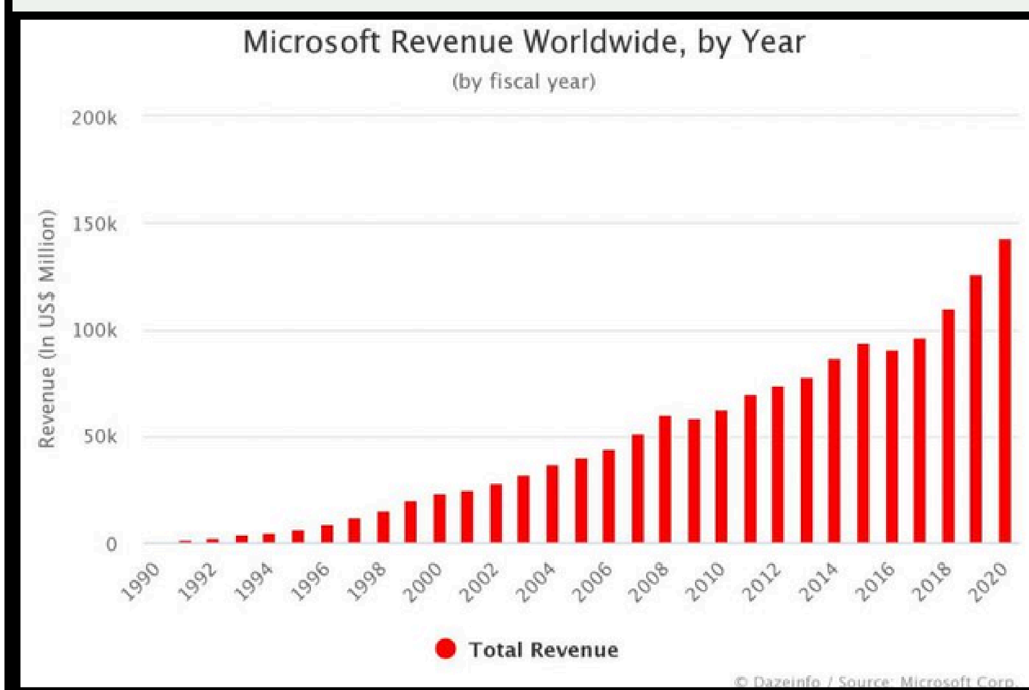
Whilst the technology sector has high barriers to entry due to necessary capital expenditures required to manufacture and compete on the cutting edge and provide consumers affordable products respectively. Deep rooted brand loyalty, commercial / institutional software and hardware clientss, as well as the need for continuous innovation are two key reasons aside from MSFT being an established and financially capable company in retaining their strong market position. Also MSFT's large patent portfolio, and economies of scale make it nearly impossible for new entrants to compete effectively... (Remember that antitrust suit in the early 2000s, and that they have legal actions pending against them in multiple EU courts).

What are the potential impacts on MSFT Stock ?

Microsoft's strong financial results in 2024 are reflective of its effective management and ability to compete with other competitive emerging forces in the sectors they do business. Also, it's well intrenched and established, controlling significant market share percentages in most market subsectors (products and services) MSFT participates in. The company's ability to innovate, retain customers, and leverage its scale provides substantial shareholder value, along with a very real amount of growth potential. Yet, investors should consider market dynamics, technological advancements, and competitor actions that could impact Microsoft's future results.

(Don't forget... Kodak, Blackberry, Yahoo and others used to rule the tech sector !)



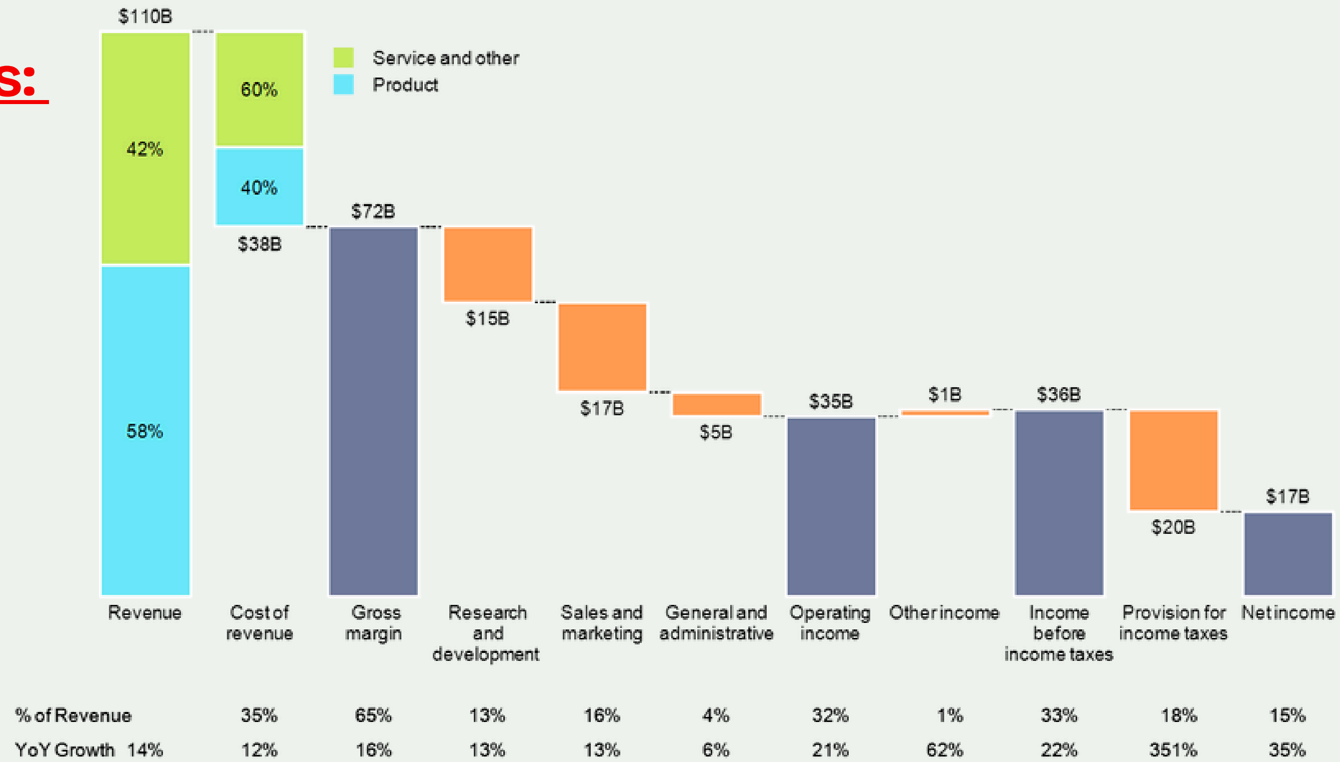


Competitive Position Analysis:

➜ ***Is Microsoft a cost leader ? Or a Differentiator ?***

➜ ***What are their advantages or disadvantages ?***

➜ ***What is their competitive strategy ?***



Overview:

MSFT's competitive strategy aligns with Michael Porter's differentiation model in regards to focusing on the creation of unique products and services that are distinct from its competitors. This is evident through MSFT's extensive investment in research and development in cloud computing and AI specifically. Although, MSFT has continued to be a leader in PC software with windows and microsoft office. As well as having a majority of market share in gaming with their Xbox console, and primarily their ownership and licensing of major games, and game developers.

Differentiation Strategy:

Consumers have moderate bargaining power due to the availability of substitute products and services. Although, Microsoft's diverse ecosystem of products including Windows, Office, Azure, and a multitude of other services (Game Pass for Xbox), all come with high switching costs for consumers and businesses. This integration increases customer loyalty and reduces the likelihood of switching to competitors in any of the aforementioned products above. As stated previously, MSFT's differentiation strategy encapsulates a broad range of products and services for a variety of diverse demographics. For example, flagship products such as Azure cloud computing, Windows and office are mainstays for corporations. These services and products offer a consistent source of quarterly revenue while providing versatile solutions that cater to both corporations and retail consumers who are buying software for both work, as well as leisure.

Financial Considerations:

Asset Turnover Ratio:

The asset turnover ratio is a measure of how efficiently a company uses its assets to generate returns (aka revenue). MSFT's asset turnover ratio is 0.53, so for every dollar spent MSFT generates $0.53 in revenue.

Inventory Turnover Ratio:

Measures how many times a company sells its inventory and replaces it. Microsoft's inventory turnover ratio is 59.48 which suggests they are efficiently managing their inventory.

Receivables Turnover Ratio:

Measures how effectively a company collects revenue. MSFT's receivables turnover ratio is 4.64, which tells us that they collect receivables 4.64 times a year on average.

Synopsis:

Although the ratios aren't quite as high as we'd see in other industries from their given cost leaders. The ratios do still indicate effective management of capital and resources. Which supports our hypothesis that Microsoft's strategic focus on investing in innovative market segments, and balancing new innovation in segments with a larger market share; it aligns with Porter's differentiation strategy. Overall, Microsoft's strong profit margins, paired with good management are a hallmark of its success and approach. These factors allow MSFT to maintain its competitive edge in each segment of the technology sector it's involved in.

Cross Sector Ratio Comparison: *(for reference)*

	Aerospace / Defense	Consumer Retail	Pharmaceuticals	Transportation	Finance
Current Ratio	1.2x	1.2x	1.6x	0.9x	1.8x
Quick Ratio	0.6x	0.5x	1.2x	0.8x	1.2x
Cash Ratio	0.2x	0.4x	0.6x	0.5x	0.5x
Total Debt to Total Equity	156.60%	168.50%	126.10%	203.30%	36.40%
Total Debt / Total Assets	77.90%	74.60%	71.40%	78.50%	52.90%
Return on Assets %	3.40%	7.80%	6.90%	5.70%	7.40%
Return on Common Equity	13.40%	41.20%	19.40%	28.60%	19.90%
Accounts Receivable Turnover	4.5x	21.6x	4.6x	11.2x	8.5x
Earnings per Share ($)	-	-	-	-	-
Price to Earnings Ratio	27.61	28.85	32.54	33.95	18.4
Price to Book Ratio	5.08	7.24	5.2	5.38	1.05
Enterprise Value / EBITDA	17.91	11.71	15.32	13.1	17.98

figures from S&PNetAdvantage

Financial Statement Analysis:

Now that we've seen how MSFT's ratios compare to other industry's averages:

How does MSFT compare to it's two largest competitors in the same sector(s) ?

	MSFT	AAPL	DELL
Current Ratio	1.35	0.92	0.77
Quick Ratio	1.34	0.88	0.64
Cash Ratio	0.161	0.163	0.137
Total Debt to Total Equity	0.76	4.15	-38.42
Total Liabilities / Total Assets	47.60%	84.40%	102.70%
Return on Assets %	18.07%	27.91%	5.01%
Return on Common Equity	33.36%	145.35%	-163.61%
Accounts Receivable Turnover	5.8x	15.0x	8.8x
Earnings per Share ($)	$12.41	$6.08	$4.36
Price to Earnings Ratio	33.4	35.13	21.84
Price to Book Ratio	10.19	56.42	-39.63
Price to Sales Ratio	11.65	9.7	0.95

Note: Figures are for year end 2024 or 12-31-2024

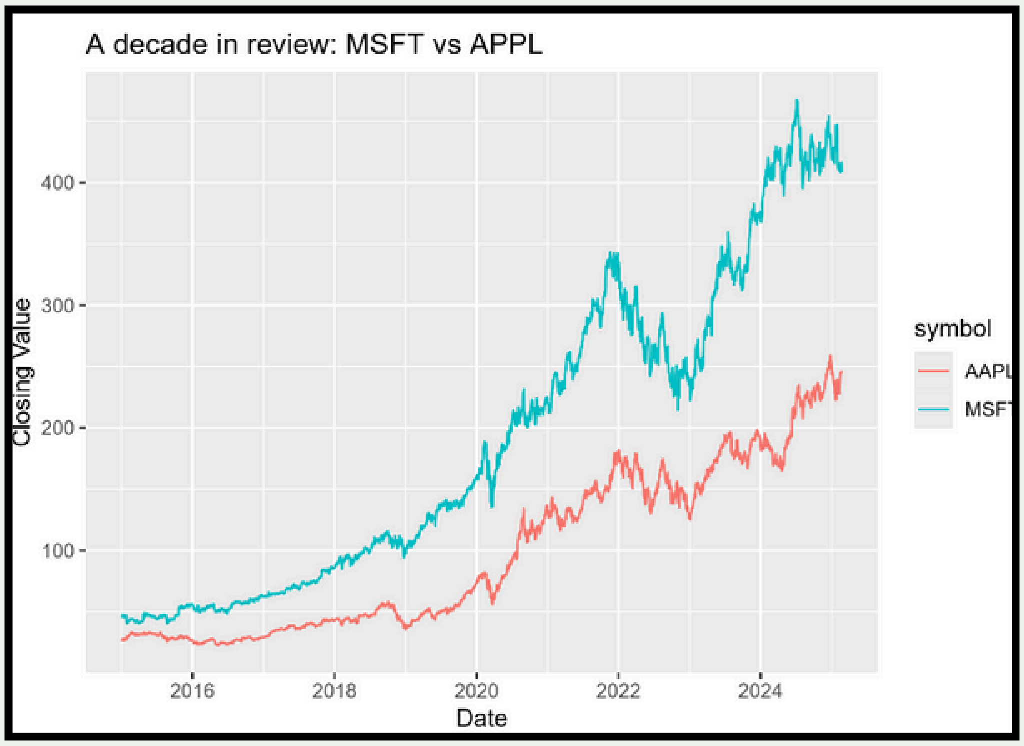
Bank Ratios

	C
Total Debt to Total Equity	140.06
Net Interest Margin	2.13
Return on Assets	0.39
Return on Common Equity	4.24
Efficiency Ratio	80.64
Earnings per Share	4.04
Price to Earnings Ratio	13.24
CFO / CAPEX	-11.15
Price to Book Ratio	0.7

Industry Ratio Comparison:

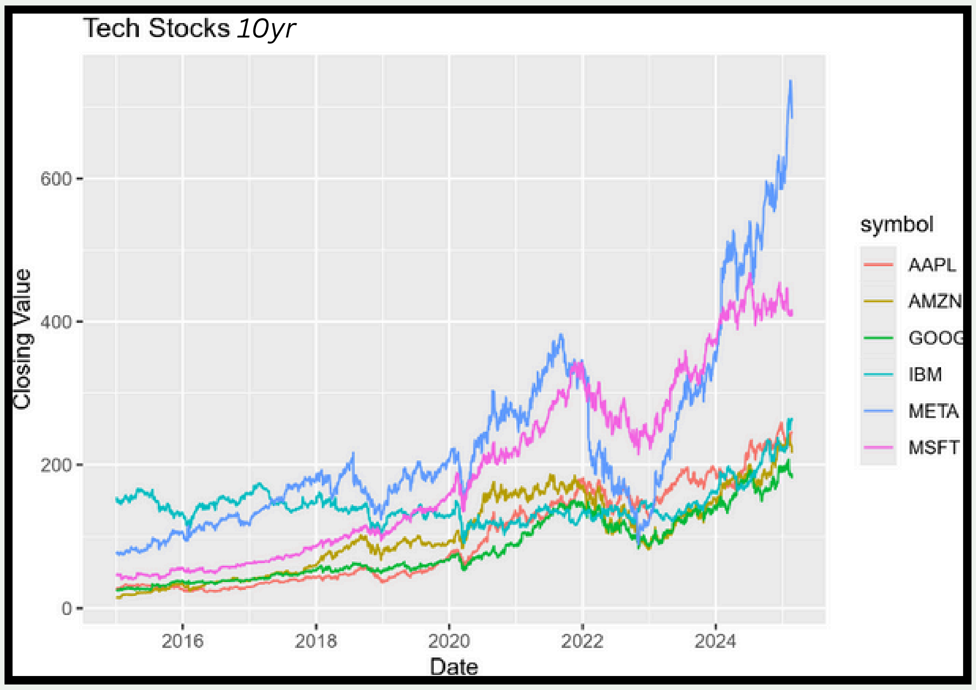
Liquidity Ratios:

- **MSFT** has the strongest liquidity across all three ratios (Current, Quick and Cash).
- **AAPL** has weaker liquidity since it's quick ratio is less than 1.0
- **DELL** has the weakest liquidty with all ratios being less than 1.0, which is indicative of short-term financial stress.



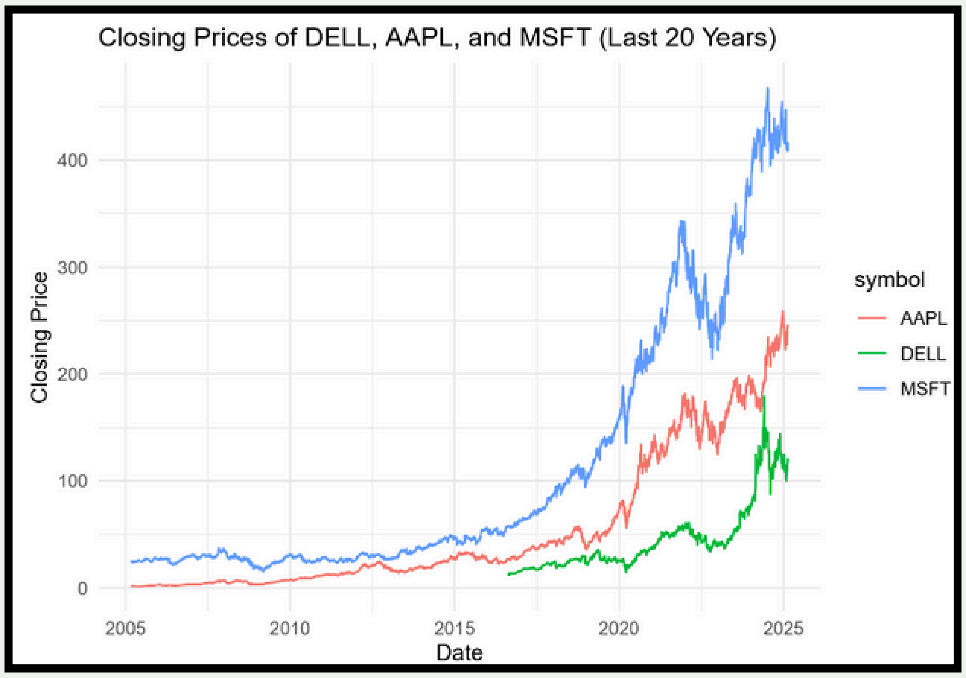
Leverage Ratios:

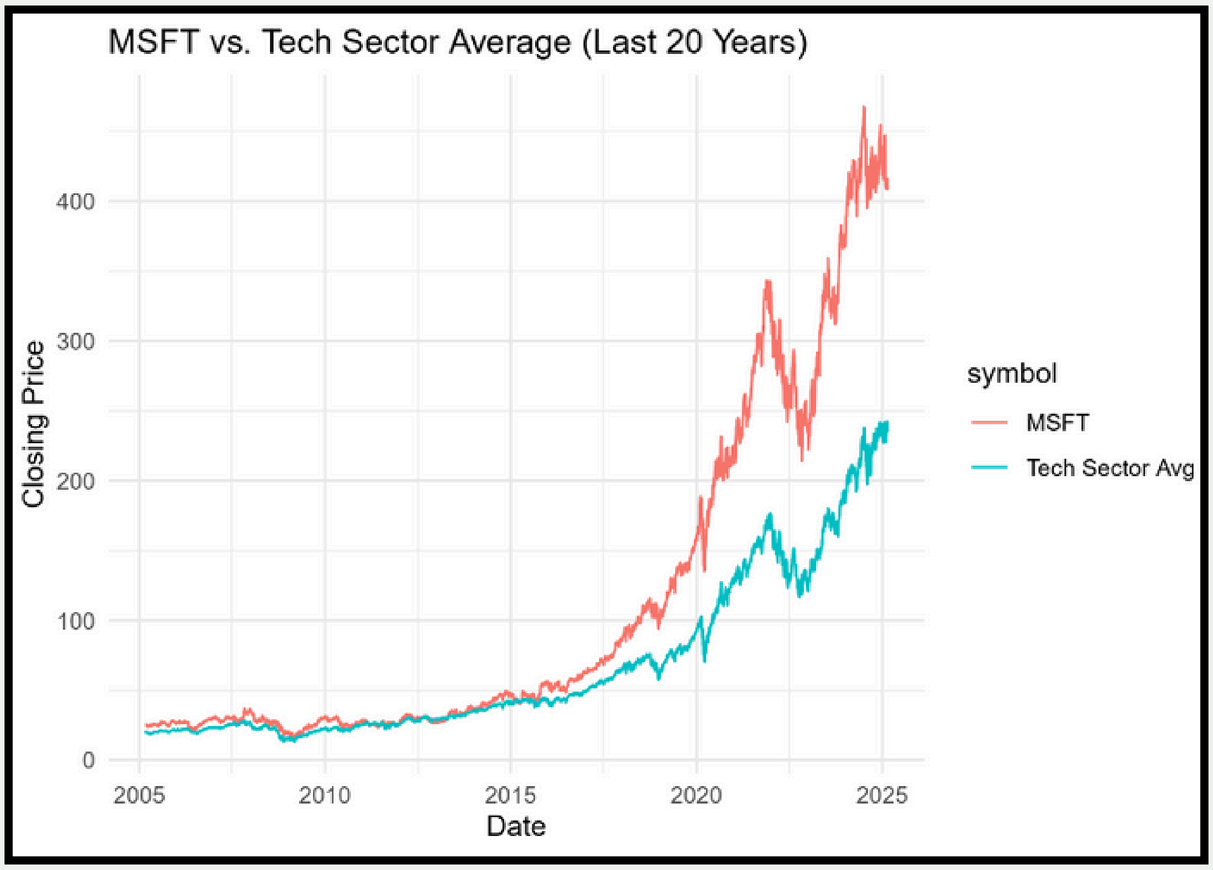
- **MSFT** has moderate leverage with a Total Debt to equity of 0.75 and Liabilities to assets equaling 47.6%
- **AAPL** carries substantially more debt with a D/E of 4.15 and Liabilities to assets at 84.4%
- **DELL** shows further evidence of financial turmoil displaying a negative equity figure. This has led to extreme leverage ratios of -38.42 and 102.7% (in D/E and L/A, respectively).



Profitability Ratios:

- **MSFT** is next with a 18.07% ROA and ROE of 33.36%, which still indicates strong profitability. Both overall and within it's sector.
- **AAPL** displays the higher Return on Assets at 27.91% and Return on Common Equity (145.35%). Figures that demonstrate efficiency in returns in the last fiscal year.
- **DELL** continues to underperform in this aspect with a 5.01% ROA and an extreme -163.61% ROE in the last fiscal year, being reflective of poor ability to generate profit.





TidyQuant Graphs & Data Set in R-Studio

Efficiency Ratios:

- **MSFT** actually lags behind it's peers in this category, with a 5.8x figure suggesting it takes longer for MSFT to collect its receivables.

- **AAPL** is the leader in Accounts Receivable Turnover with 15.0x, which is representative of faster collections than it's sector competitors.

- **DELL** is second suprisingly, at 8.8x

Market Ratios:

- **MSFT** has the highest **Earnings per share (EPS)** with $12.41, thus outperforming AAPL's $6.08 and DELL's $4.36

- **MSFT** and **AAPL** both have comprable **Price to Earnings (P/E) Ratios** at 33.4 and 35.13, respectively. Which could tell us that the market has priced in similar growth expectations.

- **AAPL** has the highest **Price to Book Ratio** at 56.42, which helps show us that investors are willing to buy Apple for a premium compared to MSFT and DELL at 10.19 and -39.63, respectively.

- **DELL** has the lowest **Price to Sales Ratio** at 0.95, which is implicative of a lower market valuation relative to their total gross and net revenue(s).

Overall:

- **MSFT** has strong liquidity, moderate leverage, high profitability (relative to it's sector and the market), but it falls behind AAPL in efficiency.

- **AAPL** is the most profitable and efficient, however they are very highly leveraged.

- **DELL** has weak liquidity, excessive leverage, and poor profitability. These factors make it the weakest perfoming stock in comparison to others in its sector.

Valuation: Financial Modeling

Is the stock overvalued or undervalued, at it's current price ?

Computing IRR:

(with Free Cash Flow to Equity , COE, PGR, Terminal Value, EV, EBITDA)

Microsoft (MSFT)
IRR Valuation

YE 31-Dec, in Billions of USD

	2014E	2015E	2016E	2017E	2018E	2019E	2020E	2021E	2022E	2023E	2024E
Free Cash Flow to Equity		23.724	24.982	31.378	32.252	38.260	45.234	56.118	65.149	59.475	74.071
Factor		*0.9*	*0.8*	*0.8*	*0.7*	*0.7*	*0.6*	*0.6*	*0.5*	*0.5*	*0.4*
Discounted FCF		21.8	21.1	24.3	22.9	25.0	27.1	30.9	32.9	27.6	31.6

$$\text{Factor}_t = \frac{1}{(1+\text{COE})^t}$$

COE	**8.90%**
PGR	**2%**
Terminal value	1,169.0
Discounted TV	498.4
PV of CF	265.2
Equity Value	**763.6**
Net Debt	(33.125)
Minority Interest	--
Enterprise Value	**730.4**
1 Year Fwd EV/EBITDA	**20.39x**
1 Year Fwd EV/EBIT	**25.06x**

Net Debt= Total Debt - Cash and Cash Equivalents

Which is: 78.775B - 111.9B = -33.125B (as of fiscal year ending June 30 2024)

Formulas:

$$\text{Equity Value} = \sum_{t=1}^{n} \frac{FCFE_t}{(1+\text{COE})^t}$$

$$\text{Factor}_t = \frac{1}{(1+r)^t}$$

Valuation:

Model - Fair Value Calculator:

(WACC / Earnings Based DCF fair value)

As of March 10, 2025 - Microsoft (MSFT)

Weighted Average Cost of Capital:	**8.80%**
Market Value of Equity:	$2,815,843.791 Million
Cost of Equity:	9.859%
Cost of Debt:	3.7272%
Tax Rate:	18.36%
Book Value of Debt:	$71,822.8 Million

Fair Value Calculator

Symbol	MSFT	
Growth Rate (Growth Stage)	19.20%	
Discount Rate	9.69%	*(based on WACC of 8.8%)*
Terminal Growth Rate	4.00%	

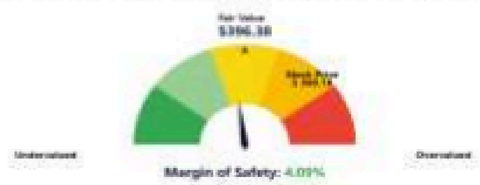
Year		2024
EPS without NRI	$	11.80
X		1.087
Y		0.948

Growth Value		**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
$	**191.78**	12.82	13.93	15.14	16.46	17.88	19.43	21.12	22.95	24.94	27.10
Terminal Value		**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
$	**204.55**	25.69	24.36	23.10	21.90	20.76	19.69	18.67	17.70	16.78	15.91

Fair Value	$	396.33
Price	$	380.16
Margin of Safety		4.08%

Microsoft Corp (MSFT)

DCF (Earnings Based) Fair Value: $ 396.38



TTM EPS:	$ 12.510
Discount Rate:	10.29%
Growth Stage	
Years	10
Growth Rate	19.2%
Growth Value	$ 196.6
Terminal Stage	
Years	10

(As can be seen, my forecasted values closely match industry analyst estimates)

Excel Model fair value
⇒ $396.33

Online fair value
⇒ $396.38

Valuation:

Is the stock selling for a price above or below the estimated price?

Would that make the stock overvalued or undervalued relative to our estimated price?

Why MSFT is Undervalued:

As shown in the MSFT Fair Value calculator, Microsoft stock is currently slightly **undervalued at $380.16** (as of March 10th, 2025), versus its calculated **fair value of $396.33**.

However, this was an exceptionally volatile week in the equity markets, with our President alternating between imposing and retracting tariff measures—most notably around 12:01 p.m. on Wednesday March 5th. Prior to the end of last week, and the beginning of this week, Microsoft stock would have been considered overvalued, as supported by the comparative analysis chart above. Specifically, Microsoft shares currently hold the highest Price to Sales ratio amongst their largest industry competitors.

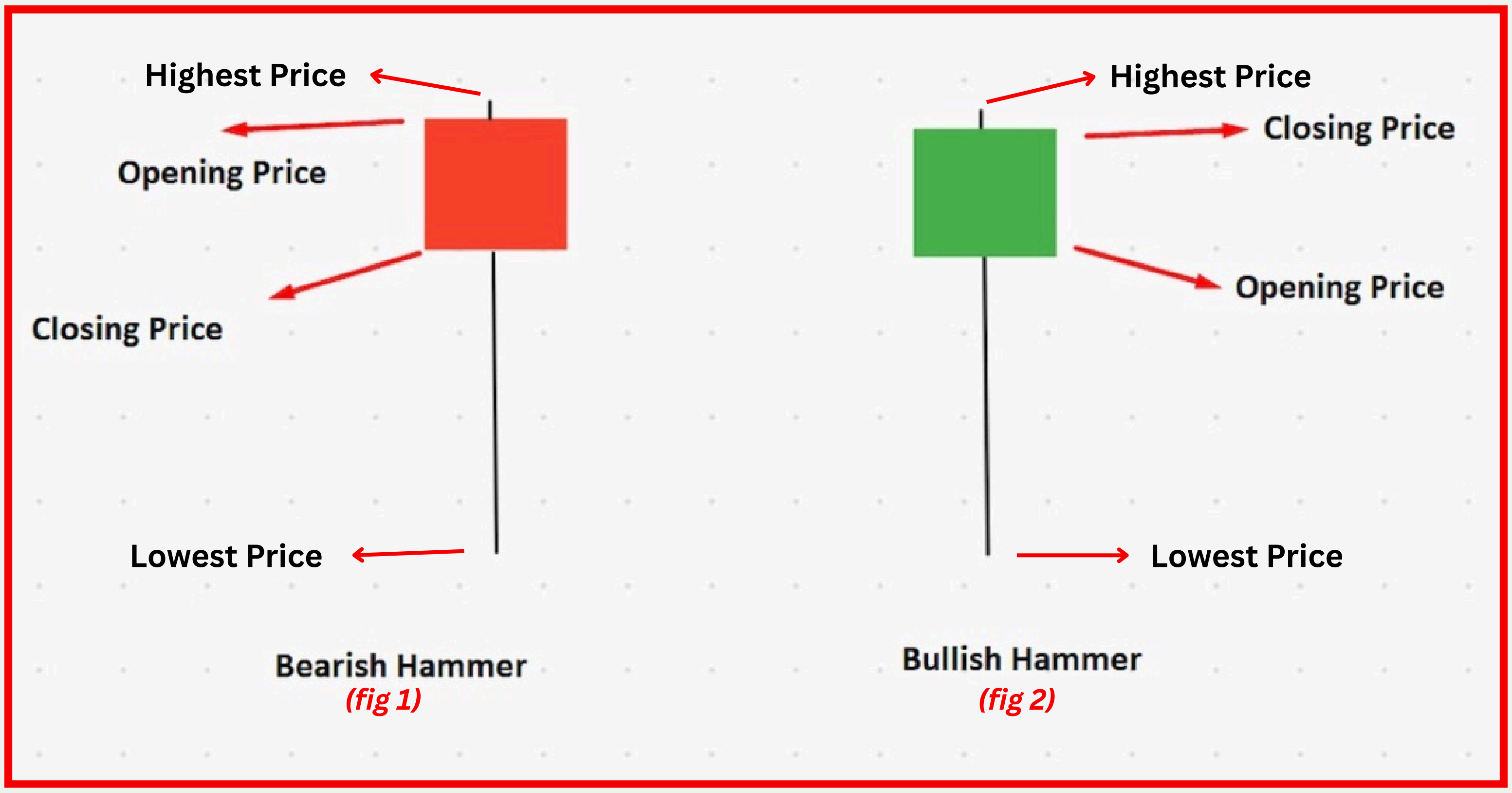
Overall, given the prevailing market uncertainty surrouding trade; Microsoft stock is not a buy at this time—even if it appears undervalued on paper. Should the market stabilize and a definitive decision be reached regarding the implementation of tariffs in Canada by the end of the week, one could then factor in Microsoft's strong financials and fundamentals, along with its diversified presence across multiple business sectors that generate stable revenue and cash flow. Assuming these conditions hold, we would agree that Microsoft is undervalued within the mid-$300 price range. In other words, one could consider Microsoft's solid financials & fundamentals along with their substantial market share of multiple tech sub-sectors that provide diversified sources of revenue and cash flow. Therefore, the aforementioned held constant, I would agree that Microsoft is undervalued into the mid 300s price range under normal conditions. Unless the volatility we've been witnessing subsites however, I wouldn't reccommend buying an stocks until (at least) the freefall starts slowing down. Best case we get a reversal trend with significant volume, test a support area, and confirm the uptrend.

Technical Analysis:

What is Technical Analysis? Who uses it, and why?

Technical Analysis is defined as a method of security analysis that seeks to forecast stock / futures / commodities movement through the use of past market data, candlestick charts and various indicators. Before we discuss technical analysis, it's important to touch upon a few terms and be familiarized with what the charts represent. The candlestick charts we see in daytrading and typical technical analysis are representative of price action over the period of time they represent. Candlesticks can represent 1,2,3,5,10,15 minutes all the way through hours and even entire days.

Technical Analysis:



Candlesticks are nothing more than an illustration of the people (and algorithms) buying and selling a given security. This behavior is commonly reffered to as Price Action, or the price market participants were willing to pay in the time a candle represents. In other words, the candlestick is simply a visual representation of how market participants valued an asset over during that specific period. In the first candle (fig 1), price opened at the top of the red block, the highest price was during this 1 minute was the top wick, the lowest was the bottom of the bottom wick and the closing price of the candle at the end of the one minute it represents was the bottom of the red block. Now let's remember, a market requires a buyer and a seller. Obviously someone has to buy at the ask or sell at the bid. But consider this... no one trades securities to lose money. So every second, and every trade, someone selling thinks the price should be / is going lower and someone believes the price should be / is going higher. So we can say that looking at candlesticks is really just looking at peoples market sentiment or how they value a given security during a given moment in time. Typically in technical analysis larger time frames will be more representative of the overall move a security or futures / commodity market is making. Although the market is fractal and when a higher time frame bias, like a bearish Fair value Gap aligns with a lower time frame FVG. Or if we're trading two standard deviations above or below VWAP (Volume Weighted Average Price), it's more likely that the security will respect these areas, by rebalancing to equilibrium, generating or creating liquidity (institutions do this to get better prices and enter large positions). If the market is trending up after breaking a daily or weekly ATR (Average Trading Range), and on the 15 minute chart its selling off, it's likely that this short term move is to rebalance or generate sellside liquidity for institutions to have the ability to enter long. Because these large funds need people selling for them to be able to buy.

Technical Analysis:

Technical Analysis:	Using charts, price action, indicators and trading behavior to analyze short and long term movements of stock.
Fundamental Analysis:	Doing ratios and looking at companies financial statements to (also) find when a company is over / undervalued.
Quantitative Analysis:	Using mathematics, statistics, and algorithms to automate and model patterns in financial markets. Very broad.

Lets try looking at MSFT stock to see how all this info is applied in practice.

MSFT on 3/19/2025 - ONE MINUTE CHART

Starting with the one minute chart that represented MSFT on 3/19. The gap on the left is where we opened after selling off during the aftermarket and premarket hours.

We continue from where the market closed at 4:00pm the day prior at 9:30am market open on 3/19 at the premarket price MSFT was trading.

Technical Analysis:

Recap: The chart shows us that we gapped down or sold off after close yesterday, and opened in between 386 and 387 per share. At market open (9:30am), we sold off than made a series of lower lows, which is indicative of a downtrend. Without adding any indicators like VWAP, it's important to know that algorithms like to rebalance, and when price goes 1.0 to 2.0 standard deviation of the normal vwap, we usually get a little reversal like we see here. In other words, the market moves irrationally but it also likes to rebalance to equilibrium and won't just sell or buy up indefinitely. Than we can see at about 11:00, MSFT had been accumulating in an uptrending range, until it broke that range and sold up. If you really zoom in you can see after that initial spike up, we went back down into that green area and came back. That green area is a FVG or fair value gap, it means that there weren't any sellers and less buyers in that area because no one wanted to sell so no one could buy. Usually when that happens, we go back down to that area, people buy and it becomes a support level. A support level is an area where buyers show they think a stock is a good buy. Usually you can spot these levels as wicks on candles where the price goes to and bounces, it usually wicks' it or doesn't have an actual candle close in that area because institutional liquidity buys or sells at that area and price doesn't stay there with so much opposing volume. Anyway, later in the day the lowest price sold off was back to that same liquidity / support area, which tells us that institutions believe that was a fair and undervalued price for MSFT today.

NOTE:

The wonderful part about patterns and their corresponding price levels is that the market is **fractal**... Meaning they translate across time frames. Let's take a look at a few other timeframe charts now.

Technical Analysis:

(Previous Chart): See that red fair value gap ? Well, look what happened ! The market sold off, and than ultimately recovered to go fill the red FVG because markets always **rebalance** prices. You can also see the selloff above the number 20, went and bounced a 5-min green FVG, again rebalancing price! It's important to remember that rebalancing eqilibrium is driven by liquidity and volume.

(Below): Let's "zoom out" ever further, and try getting a gauge of Microsoft stocks overall trend on a longer time frame for confluence of the trend we're recognizing.

MSFT 15 minute chart:

As we can see here, MSFT has been in a textbook downtrend over the 1-2 months.

Technical Analysis:

1-Hr Chart:

While the downtrend is ever more clear on the 1-hr chart. We also have something interesting happening between March and april... We can see the stock stopped making clean lower highs and lower lows and kept bouncing off that one area before making GREEN FVG's and now looking like a new trend is forming !!! The fact that we respected that green FVG and almost perfectly touched it tells us that this move could have confirmation. Over the next few days if we were to close a candle above that double red FVG, than it would become what's known as an IFVG or inverse fair value gap, and serve as a highly bullish indicator of a new trend being respected.

Discovering "Smart Money":

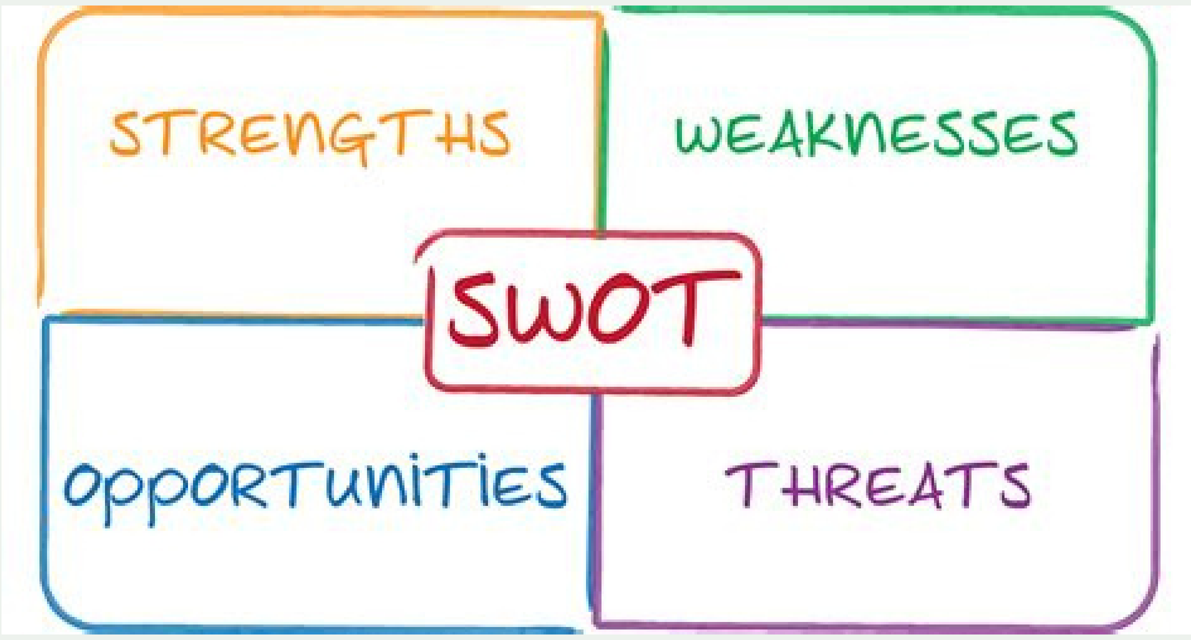
But wait? Why did it accumulate and ultimately bounce off that area? Well... I would guess that there's a previous low there. Or some level of liquidity that MSFT had previously sold off too or bounced off of that serves as an area of resistance because institutions believe that's a good area to buy. This would also be the price where options sellers who are selling calls would do so if they expect price to hold there/ or they believe it's a good price they'd want to long MSFT common shares. Let's see...

This is the One Day MSFT chart now. So each candle represents one day, and the chart shows MSFT since 2020. I drew a line on the area I'm referring to but you can see two red wicks. Areas that we sold off to previously and people bought MSFT without allowing it to sell off any lower. Yes we didn't bounce off the exact same price, but the price number itself isn't that important. The candlesticks are showing us that people are buying around that price.

Which people have the most money? That's a great question... the people who have the most money are institutions like investment banks, and hedge funds (aka smart money). So looking at this chart shows us that there is buy side liquidity from institutions around the $380s. This is good early evidence we may see a recovery, however if we break that level and people determine MSFT isn't worth it anymore. It would be evidence of a downward move and traders would get in short / try to identify another possible area where MSFT could recover.

MSFT: SWOT Analysis

(Strengths, Weaknesses, Opportunities, Threats)



Strengths:

‣ **Market Leadership:** Dominates the PC operating system market with Windows and has a significant presence in productivity software through Microsoft Office.

‣ **Cloud Computing Growth:** Azure positions Microsoft as a leader in the rapidly expanding cloud services sector.

‣ **Financial Robustness:** Consistently strong revenue and profit margins support ongoing investments and innovation.

‣ **Diverse Product Portfolio:** Offers a wide range of products and services, including hardware (Surface), gaming (Xbox), and professional networking (LinkedIn).

Weaknesses:

‣ **Security Concerns:** Past vulnerabilities in software have raised questions about product security.

‣ **Dependence on PC Market:** Despite diversification, a significant portion of revenue is still tied to the PC market, which is experiencing slower growth.

MSFT: SWOT Analysis

Opportunities:

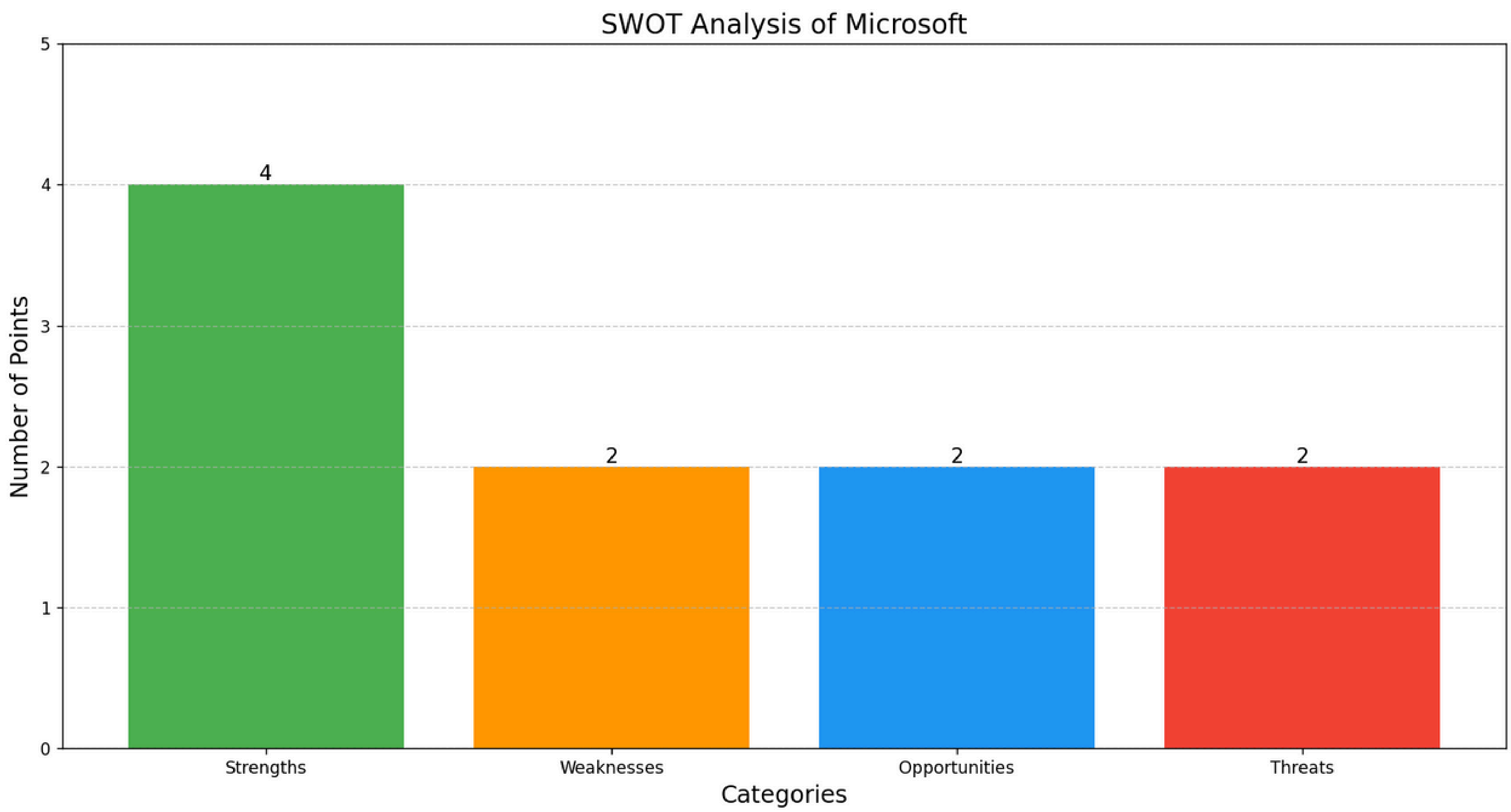
- **Artificial Intelligence (AI):** Investments in AI, including partnerships with segment leading companies like OpenAI, could enhance product offerings and open new markets. (News headlines)

- **Expansion into New / Emerging Markets:** Growing economies present opportunities to increase market share and customer base.

Threats:

- **Competition:** MSFT could face strong competition from other tech giants like Apple, Google, and Amazon across various product lines such as, AI and/or Cloud Computing. (News)

- **Regulations / Scrutiny:** Increasing attention from regulators regarding antitrust issues and data privacy concerns.



Python Code

SWOT Analysis: Comparison (AAPL)

Strengths:

- **Brand Loyalty:** Enjoys a dedicated customer base and a reputation for quality and innovation.

- **Ecosystem Integration:** Seamless integration across devices and services enhances user experience and customer retention.

- **Financial Performance:** Consistently high revenue and profitability, with substantial cash reserves. (Barron's & WSJ)

Weaknesses:

- **Higher Prices:** Premium pricing may limit market share in price-sensitive segments.

- **Dependent on the sale of iPhones:** a substantial portion of revenue is derived from iPhone sales, and this lack of diversification compared to MSFT makes the company vulnerable to market saturation / competition in the smartphone, and tablet sector.

Opportunities:

- **Wearable Tech:** Growth in products like the Apple Watch & AirPods (pro + max) open new revenue streams. (source article)

- **Services / Expansion:** Increasing focus on services such as Apple Music, iCloud, and Apple TV+ diversifies income sources.

Threats:

- **Supply Chain:** Reliance on global supply chains exposes the company to risks from geopolitical tensions and disruptions.

- **Regulation:** Legal and regulatory challenges related to app store policies and antitrust concerns.

Metric	Microsoft (MSFT)	Apple (AAPL)
Revenue (FY2024)	$245.1 billion	$394.3 billion
Net Income (FY2024)	$94.7 billion	$99.8 billion
P/E Ratio (Mar 2025)	33.40	35.13
Current Ratio	2.10	0.92

SWOT Analysis: Comparison (Tech Sector)

Strengths:

- **Rapidly Innovating:** Continually making advancements and driving new product development / improving efficiency. (Ex: NVIDIA comes out with a newer GPU that's twice as fast every year).

- **Global Markets:** Most technology companies operate on a global scale, accessing diverse markets, and pools of talent.

Weaknesses:

- **High Competition / Research and Ddevelopment Costs:** The fast-paced nature of the industry leads to short product life cycles and constant pressure to innovate.

- **Talent Shortages:** The demand for skilled professionals often outstrips supply, leading to recruitment and retention challenges. (something to watchout for with the new addministrations crackdown on immigration, including H1B Visa's).

Opportunities:

- **Emerging Technologies:** area's such as artificial intelligence, blockchain, and quantum computing are presenting new business opportunities that companies are fighting to capitalize on.

- **Digital Transformation:** Organizations across sectors are investing in digital technologies, expanding the market for tech products and services.

Threats:

- **Cybersecurity Risks:** Increasing frequency, and sophistication of cyberattacks are posing a significant risk to companies, and their customers.

- **Multi-National Regulations / Anti-Trust:** Ever evolving regulations around data privacy, antitrust, and digital taxation can impact operations and profitability.

Risk Assessment & Final Recomendation:

Risk Assessment:

These are truly unprecedented times. As a direct result of current policy, the United States is now engaged in a trade war with China, Mexico, and Canada — our three largest trading partners. While there remains some optimism on Wall Street that our present economic situation may prove temporary, sentiment is beginning to shift. As the situation increasingly becomes reminiscent of the time that inflation was supposed to be "transient." On a more positive note, as of May 7th, the Federal Reserve still appears to be acting independently, having left interest rates unchanged.

However, it is a fact that even if President Trump were to reverse tariff and trade war policies tomorrow, supply chain disruptions would persist for at least four to five weeks with effects lingering later into the year around holiday time as a result of mass order cancellations now. As such, the convergence of political risk — which has driven extreme volatility — and substantial business risk, in the form of rising input costs, has already begun to manifest as increased prices for consumers. This could ultimately reduce sales volumes, especially if manufacturers struggle to source the raw materials required to meet whatever demand is still present. In light of these factors, it may be worth taking one final lesson from the retiring Mr. Buffett: stay on the sidelines until the weaponization of free trade begins to unwind.

Final Recomendation:

Therefore, my final recommendation regarding Microsoft is one of cautious patience. While Microsoft appears to be a strong long-term investment regardless of its current price—and is technically undervalued at present—it would be prudent for investors to wait for confirmation of a sustained uptrend, supported by both trading volume and favorable political developments (as outlined in the previous technical analysis section).

Market recoveries often take longer than expected. Following the 2008 financial crisis, it took several years for equities to regain their footing, and some companies once deemed "undervalued" never fully recovered due to structural shifts in the market (e.g., Citigroup, Kodak, Blackberry). While Microsoft is unlikely to share that fate, each investment should be made with a level of conviction strong enough to justify holding the stock through any price level. In our uncertain market climate, discipline and clarity of purpose remain absolutely essential.

P.S.

I personally beleive that unless you'd be willing to buy a stock at ANY price – don't buy it. So if you think a stock is a good buy at ANY price, as I do for MSFT. Then you'll be happier, and remain more convicted with your choice to buy; Regardless of prevailing economic conditions. (Or at least I am)

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