

Microsoft Corp (MSFT) Valuation

BPES-CF01 Group

- Microsoft was founded in 1975 and released its first product, MSDOS, in the early 1980s
- Through negotiations with tech giants IBM and Intel, Microsoft grew exponentially due to network effects. This is represented by the sharp increase in stock price and multiple stock splitting between 1986 and 1999 [2].
- The stock price peaked in 2000 due to the overvaluation caused by the *Dot-com* bubble.
- The stock price then stabilised suggesting a slowdown in Microsoft's growth.
- Microsoft started paying dividends in 2004.
- Microsoft's stock price doubled in the last five years, indicating an increase in growth together with a renewed confidence in the future of the company.

Microsoft Corporation (MSFT) ★ Watchlist

51.82 -0.37 (-0.71%) NASDAQ - As of 4:00PM EST
After Hours: 51.87 +0.05 (0.10%) 7:48PM EST



- Going forward, Microsoft plans to change its range of products to become mobile-first and cloud-first [4].
- Culture and business model changes are also planned to promote innovation, and benefit from software marketplaces [4].

Discounted Cash Flow Method (DCF)

- Microsoft's valuation is assessed with the DCF method, using 2014 as the base year.
- The revenue growth forecast is determined from Yahoo Finance analyst estimates for 2016 - 2017 [5].
- The revenue growth forecast is then assumed to decrease linearly to reach a terminal value of 2.5% (approximately half of the GDP growth to be conservative).
- The operating income forecast is determined assuming the operating margin decreases linearly from 31.97% (2014) to the terminal value 28.6%.
- The reinvestment forecast is assumed to steadily increase linearly since the financial statements reports the company's intention to increase capital expenditure [3].
- Tax rate (21%) and cost of capital (9%) are assumed to be constant [1] [4].

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Terminal Value
EBIT	27,759	29,918	28,320	28,609	29,126	30,175	31,110	31,888	32,685	33,502	34,340	
Less Tax	-5,688	-6,283	-5,947	-6,008	-6,116	-6,337	-6,533	-6,696	-6,864	-7,035	-7,211	
NOPLAT	22,071	23,635	22,373	22,601	23,010	23,838	24,577	25,191	25,821	26,467	27,128	
Less Reinvestment	-280	-436	-592	-748	-904	-1,060	-1,216	-1,372	-1,528	-1,684	-1,840	
Free Cash Flow	21,791	23,199	21,781	21,853	22,106	22,778	23,361	23,819	24,293	24,783	25,288	398,777
Discount Rate		0.92	0.84	0.77	0.71	0.65	0.60	0.55	0.50	0.46	0.42	0.42
Present Value of FCF		21,283	18,333	16,874	15,660	14,804	13,929	13,030	12,192	11,411	10,682	168,448
NPV												316,647
Less Debt												-6,900
Cash												92,000
Value of Equity												401,747
Number of shares												8,470
Value / Share												47.43
Price												52.00
Price as % of value												109.63%

- From these assumptions, the value of equity is estimated to USD 401,747 million which, for 8,470 million of shares, results in an estimated value per share of USD 47.43.

Stock Valuation & Sensitivity Analysis

- The estimated value per share of USD 47.43 is lower than the actual market price of USD 52.00, thus Microsoft seems to be overvalued.
- Microsoft's financial statement [4] states that the company is expected to face higher costs due to:
 - Higher investment in cloud-based services
 - Higher investment in development of software marketplaces
 - Organisational culture changes
 - Continuing expenses on development and marketing of the existing products
 - Competition from the new entrants, due to low barriers to entry
- Any such change would result in lower profit margins.
- Assuming that the EBIT margins decrease to 20%, estimated value/share would decrease drastically to USD 36.93.
- This would mean that the current share price constitutes 140% of share value, further highlighting over-valuation of the Microsoft shares.

Conclusion

- Discounted Cash Flow valuation analysis shows that the Microsoft stock could be currently overvalued.
- Microsoft faces a number of risks from the new entrants, who are competing on price, value propositions and business models.
- Furthermore, Microsoft is about to undergo major business, organisational and technological changes, which may reflect negatively on its valuation in the short term.
- However, should the proposed changes succeed and improve Microsoft's profit margins, the enterprise value will increase, this justifying the existing share price.

Appendix: References

[1] GuruFocus, *Microsoft Weighted Average Cost of Capital*, [Online] Available from:
<http://www.gurufocus.com/term/wacc/MSFT/Weighted+Average+Cost+Of+Capital+%2528WACC%2529/Microsoft+Corp>

[2] Yahoo Finance, *Historical Stock Price*, [Online] Available from:
[https://finance.yahoo.com/echarts?s=MSFT+Interactive#{"range":"max","allowChartStacking":true}](https://finance.yahoo.com/echarts?s=MSFT+Interactive#{)

[3] MarketWatch, *Annual Financials for Microsoft Corp*, [Online] Available from:
<http://www.marketwatch.com/investing/Stock/MSFT/financials/cash-flow>

[4] USA Securities and Exchange Commission, *Microsoft Corp Form 10k*, [Online] Available from:
<https://www.sec.gov/Archives/edgar/data/789019/000119312514289961/d722626d10k.htm>

[5] Yahoo Finance, *Microsoft Corp Analyst Estimates*, [Online] Available from:
<https://uk.finance.yahoo.com/q/ae?s=MSFT>