Financial Ratio Analysis: Task 3

Deconstructing Return on Equity (ROE) using the DuPont Analysis Framework

The following publicly traded companies were compared according to their Annual 2024 Reports.

- Microsoft (technology)
- JPMorgan Chase (banking)

Microsoft:

1. Net Income = $88,136 (in millions)
2. Revenue (Sales) = $24,456 (in millions)
3. Total Assets = $512,163 (in millions)
4. Total Equity = $268,477 (in millions)
5. Total Liabilities = $243,686 (in millions)

JP Morgan Chase:

1. Net Income = $58,471 (in millions)
2. Total Revenue = $ 21,578 (in millions)
3. Total Assets= $4,002,814 (in millions)
4. Total Equity = $344,758 (in millions)
5. Total Liabilities = $3,658,056 (in millions)

Dupont Decomposition:

To calculate the ROE, use the following equations

$$\text{Equation 1}: ROE = \frac{Net\ Income}{Equity}$$

$$\text{Equation 2}: ROE = \left(\frac{Net\ Income}{Revenue}\right)\ X\ \left(\frac{Revenue}{Assets}\right)\ X\ \left(\frac{Assets}{Equity}\right)$$

Table 1 Displaying the ROE components for both Microsoft and JP Morgan Chase

	Microsoft	**JPMorgan Chase**
Net Profit Margin	3.604	2.71
Asset Turnover	0.048	0.00539
Equity Multiplier	1.908	11.611
Debt to Equity Ratio	0.908	10.61
ROE	32.83%	16.96%

Given that ROE is a ratio that measures a company's ability to generate net income from its shareholders' equity, this means that Microsoft and JP Morgan Chase can make approximately 32.8 cents and 17 cents in profit for every dollar of a shareholder equity respectively.

Since Microsoft's ROE is higher this can indicate a more efficient use of equity capital. However as Microsoft and JP Morgan Chase are in different industries, technology and banking, this could also be due to the differing industry dynamics.

Profitability:

Microsoft has a higher net profit margin which reflects the successful strategies implemented within technological companies. Costs associated with products provided by technological companies remain relatively stable as they have low marginal costs whilst revenue generated increases which leads to higher profit margins. Banks however tend to have lower net profit margins as their business models require higher operating costs, interest rate fluctuations and other factors. Overhead expenses as well as the fluctuations in interest have a direct impact on the overall profitability of the company.

Although the aforementioned reasons can explain why technological companies have high profit margins, a profit margin of 3.604 reflects a value above 100% which is not possible and so indicates that the revenue (sales) calculated was incorrect. The same can be said for JPMorgan Chase as it has a profit margin of 2.71. Typically, a bank's net profit margin is between 20-30%.

Efficiency:

Microsoft has a higher asset turnover compared to that of JPMorgan Chase. However generally speaking a asset turnover ratio of 0.048 is not particularly high. This can be attributed to the fact that technological companies' business models tend to not invest heavily in physical assets and rather they focus on intellectual property and other intangible assets in order to generate revenue. JPMorgan Chase also has a low asset turnover which is due to the fact that the banking industry business model relies on leveraging large amounts of assets, for instance deposits and loans, and do not generate sales based off, for example, an inventory.

Tech companies tend to have higher profit margins and lower asset turnovers which is seen here as Microsoft has a profit margin of 3.604 whilst having an asset turnover of 0.048.

Leverage:

JP Morgan Chase has a higher equity multiplier. This is expected given that equity multipliers are used as a risk indicator that measures the portion of a company's assets financed by shareholders' equity rather than debt. Generally speaking, a lower equity multiplier is better as this would mean a company is not incurring excessive debt in order to finance its assets. Since banks have higher financial leverage it is typical to see that JPMorgan Chase (10.61) has a higher debt to equity ratio than Microsoft (0.908). Microsoft's lower debt to equity ratio indicates that it is relying on its earnings to facilitate its business rather than debts.

To summarise, Microsoft's higher ROE is driven by strong profitability whilst JPMorgan Chase's ROE is driven mainly by high leverage. This is due to fundamental differences in each industry as tech firms have high margins with less debt whilst banks rely on leverage due to the nature of their services.