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) = $244,600 (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 = $ 165,000 (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

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

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	0.36	0.354
Asset Turnover	0.478	0.0412
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.

A profit margin value must be below 100% and so the value calculated for both Microsoft (36%) and JPMorgan Chase (35%) fulfil this requirement. Typically, as previously explained technological companies have higher net profit margins compared to that of banks which can be seen within these calculations. The difference between each companies' net profit margin is small relatively however it is also important to consider that JP Morgan Chase generated approximately 80,000 million less in revenue than Microsoft. A bank's net profit margin is between 20-30% and so JPMorgan Chase appears to perform better than expected.

Efficiency:

Microsoft has a higher asset turnover compared to that of JPMorgan Chase, 0.478 and 0.0412 respectively. 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.

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.