This is my first project, which is designed to measure the performance of four companies in the same sector (Commercial Sector) and to develop solutions for the company where I work.

The tools I used include:

1. **Excel Worksheets with Pivot Tables:** For a clearer view of the companies and their performance.
2. **SQL Workbench:** To ensure accurate calculations by combining all values for each company into one file and then joining them using SQL JOIN.
3. **R Programming Language:** To create combined graphs in the Financial_Health file using the ggplot2 library.

You will find below four files:

1. **Project_Four_Companies (Original):** The actual data that I obtained.
2. **P_Adjusted:** Adjusted data formatted to measure the ratios.
3. **Ratios:** This file is divided into Four workbooks. The Third contains the ratios themselves, and the Fourth shows the percentage changes for every quarter compared to the previous quarter. Although the latter is not used frequently, it was necessary for more accurate analysis.
4. **Financial_Health:** For those who prefer to see all graphs combined for the four companies, this special file consolidates the visual data.

Note 😊: You will find in the Pivot Table's Slicer the years which are 2021, 2022, and 2023, shown as 21, 22, and 23, along with their four quarters. For example, the first quarter of 2021 appears as 21-Q1, the second quarter of 2023 appears as 23-Q2. If you want to show the graphs **for specific years with their quarters, <u>hold Ctrl</u>** and select the combined years as desired **after** clicking on **Enable Editing**.

Now, let's dive into the analysis. For more accurate clarifications, please refer to the Ratios file, specifically the Ratios workbook.

Scenario: I am a financial analyst at Tech Company, which operates in a commercial market comprising four companies. Our company has been experiencing a decline in both product sales and profits over time, unlike our competitors who are enjoying high profitability.

A summary of each company's data is as follows:

Speed: Upon reviewing its data, it is evident that this company is the dominant player in the commercial sector. This dominance has allowed it to impose strict controls on Accounts Receivable, enabling the company to collect its funds promptly at the end of each quarter ("For example, if a customer purchases on account for $100,000 at the beginning of Q1 2021, they have until the end of Q1 2022 to settle the amount due"). This practice contributes to fluctuations in the Cash Conversion Cycle each year.

Regarding the company's debt, the Solvency Ratios indicate that the company leverages its market power and dominance to increase its borrowing capacity. This has significantly impacted the Net Profit Margin, as the higher level of debt has effectively reduced the company's tax burden.

In terms of profitability, the key indicators, ROE (Return on Equity) and OROA (Operating Return on Operating Assets), show positive performance for two reasons. Firstly, OROA remains strong because the company has maintained stable inventory turnover (meaning the period in which the inventory is quickly sold). Secondly, ROE has remained stable due to the improvement and consistency in the Dupont Analysis.

Maclr: Similar to the previous company, Maclr has comparable Margin rates, which is expected for all companies in this sector due to the above-average economic conditions and demand.

In contrast to the previous company, Maclr does not impose any restrictions on Accounts Receivables. This is evident from the low Receivable Turnover over the years, which has significantly impacted the Cash Conversion Cycle by extending it. This extension is detrimental to any commercial company aiming to shorten the cycle for quick cash collection and inventory purchases. Consequently, this has also negatively affected the Activity Ratios, showing a decline over the years.

Regarding Solvency, despite the cash flow issue, the company's Net Profit Margin remains stable and does not decline. This is because the company heavily relies on external debt rather than operating cash flow and liquidity. Although this strategy has reduced taxes and increased net income, it places the company at high risk of bankruptcy if it fails to meet its debt obligations. This issue is further highlighted by the declining Profitability Ratios over the coming years, confirming the problem of reduced operating efficiency. Additionally, the declining inventory turnover over the years indicates that the company is struggling with its operational systems.

Dain: Regarding Margins, there are no issues, and the indicators are normal, similar to other companies in the same sector. However, Dain faces a problem similar to Maclr, as it does not appear to impose any restrictions on Accounts Receivables. The consequences of this have already been discussed in the case of Maclr.

One significant difference is that Dain has a high inventory turnover, indicating it sells its products quickly, almost surpassing the dominant company, Speed. This efficiency has also helped Dain reduce its Cash Conversion Cycle. Additionally, Dain has managed to extend its Payable Turnover without adversely affecting its operations over the years. Therefore, its only issue lies in the Receivable Turnover.

Regarding debt, Dain is similar to Maclr, except for the bankruptcy risk. Dain has sufficient liquidity from its operating activities to manage its debt obligations, especially short-term debts.

Tech: Unlike the other companies, Tech shows a decrease in Margin Ratios, which is unusual compared to the surrounding companies.

Another issue is the lack of restrictions on Accounts Receivables, despite stable inventory turnover rates and an increase in Payable Turnover. The lack of controls on Accounts Receivables has significantly extended the Cash Conversion Cycle due to the decrease in Receivable Turnover Ratio. This situation poses a greater risk to the company, particularly if bad debt and the Allowance for Doubtful Accounts increase, which could severely weaken its liquidity ratios.

Although the company does not rely on debt to the same extent as other companies, this will affect the stability of its operating systems. The ROA indicator is stable but tends to decline in the coming years. The OROA has decreased significantly due to the company's deteriorating ability to increase sales and another reason that will be mentioned later.

Now, addressing the crucial point, the company has declining Margins despite the surrounding companies not experiencing similar issues. If we look at the Gross Profit Margin, it is lower compared to other companies. This could be due to one of two reasons: either the company is not well-known and thus sells less, which is unlikely since the data shows that all four companies have nearly equal profits, or the second and more likely reason is that Tech's product pricing is higher than that of other companies. Upon investigating, it was found that Tech has higher Costs of Goods Sold compared to the other companies.

Regarding the EBIT Margin (Earnings Before Interest and Tax), it has been low over the years, also due to higher Operating Expenses than the other companies. Ultimately, this has resulted in a lower Net Profit Margin. Additionally, the lower debt levels compared to other companies have led to higher taxes for Tech compared to its peers.

Now that we have reviewed each company, summarizing their advantages and disadvantages, let's discuss the solutions that should be presented to Tech, in order to make it competitive with Speed and other Companies.

1. Cost Analysis and Value Engineering: The first step Tech should take is to thoroughly examine its costs by implementing value engineering techniques. This involves identifying and eliminating all non-value-added activities to reduce overall costs. By doing so, the company can lower its product prices, thereby increasing its Gross Profit Margin and enhancing its inventory turnover.

2. Implementing Appropriate Controls on Accounts Receivables: After reducing prices, the company should introduce suitable controls on Accounts Receivables that align with its market position. This strategy will help increase the Receivable Turnover, thereby shortening the Cash Conversion Cycle. Consequently, this will improve liquidity and boost operating activities.

3. Optimizing Debt-to-Equity Ratio: Once the company stabilizes and its market value increases, it can leverage the third crucial factor: optimizing its Debt-to-Equity ratio. By aligning its debt levels with its financial position and liquidity at that time, the company can increase its Net Profit Margin and benefit from a reduction in taxes.

Implementing these strategies will enhance Tech's competitiveness with Speed and other Companies and improve its overall financial performance.