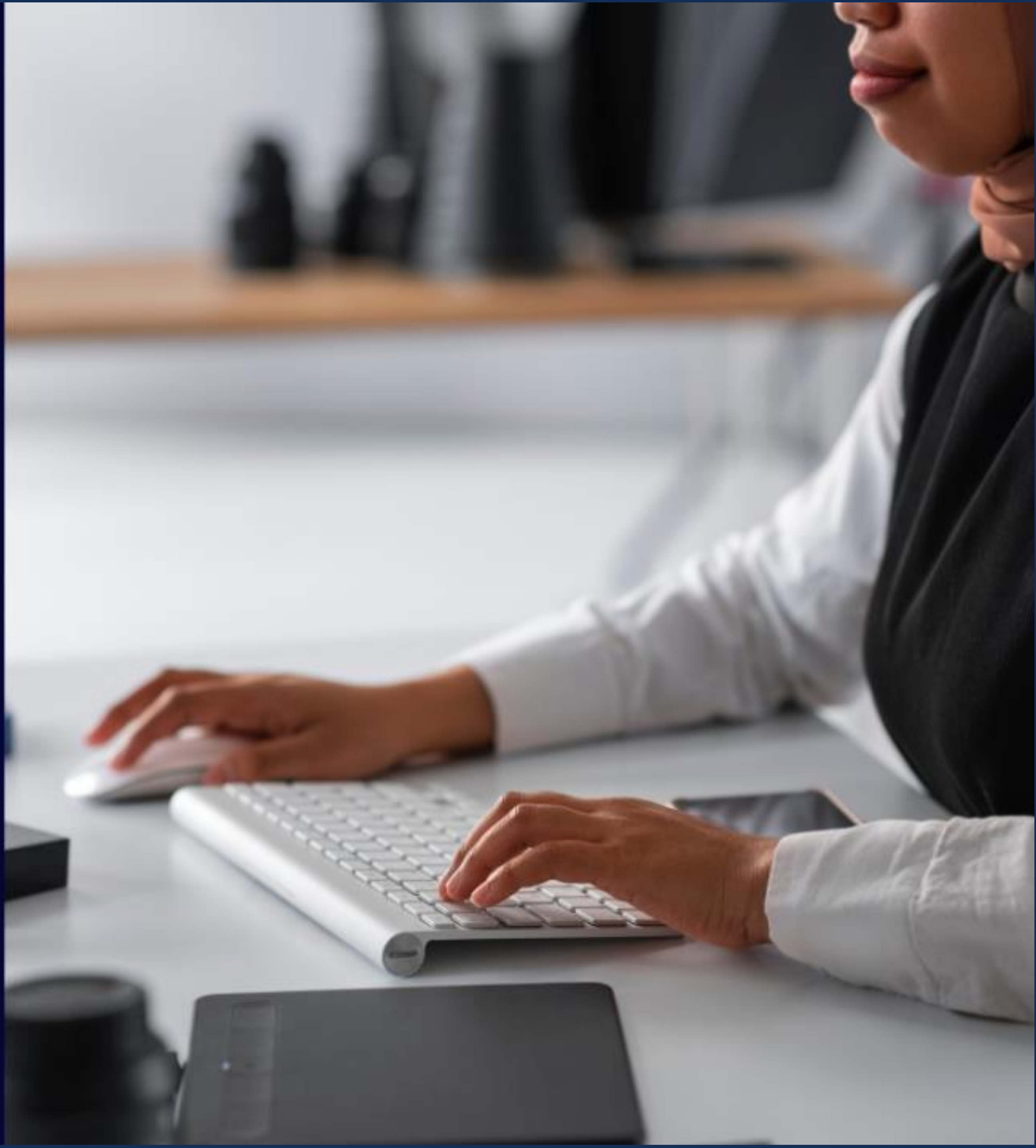
Financial Analysis Fundamentals

Virginia Institute of Finance and Management

Learning Objectives

- Undertake a comprehensive financial analysis using wide range of ratios
- Use ratios to analyze the income statement and profitability.
- Look at ratios to analyze operating assets and asset utilization.
- Analyze capital structure with ratios.
- Recommend how a business can improve operations, capital structure, and asset utilization.
- Use the DuPont Pyramid of ratios to get a more comprehensive view of a business.

Trend (Horizontal) Analysis



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What Is Best Practice Financial Analysis

1. **Gather**

   Get multiple years of historical financial statements (i.e., income statement, balance sheet, and cash flow statement).

2. **Calculate**

   Calculate financial ratios that provide a broad range of perspectives on the business (e.g., liquidity ratios, profitability ratios, and solvency ratios).

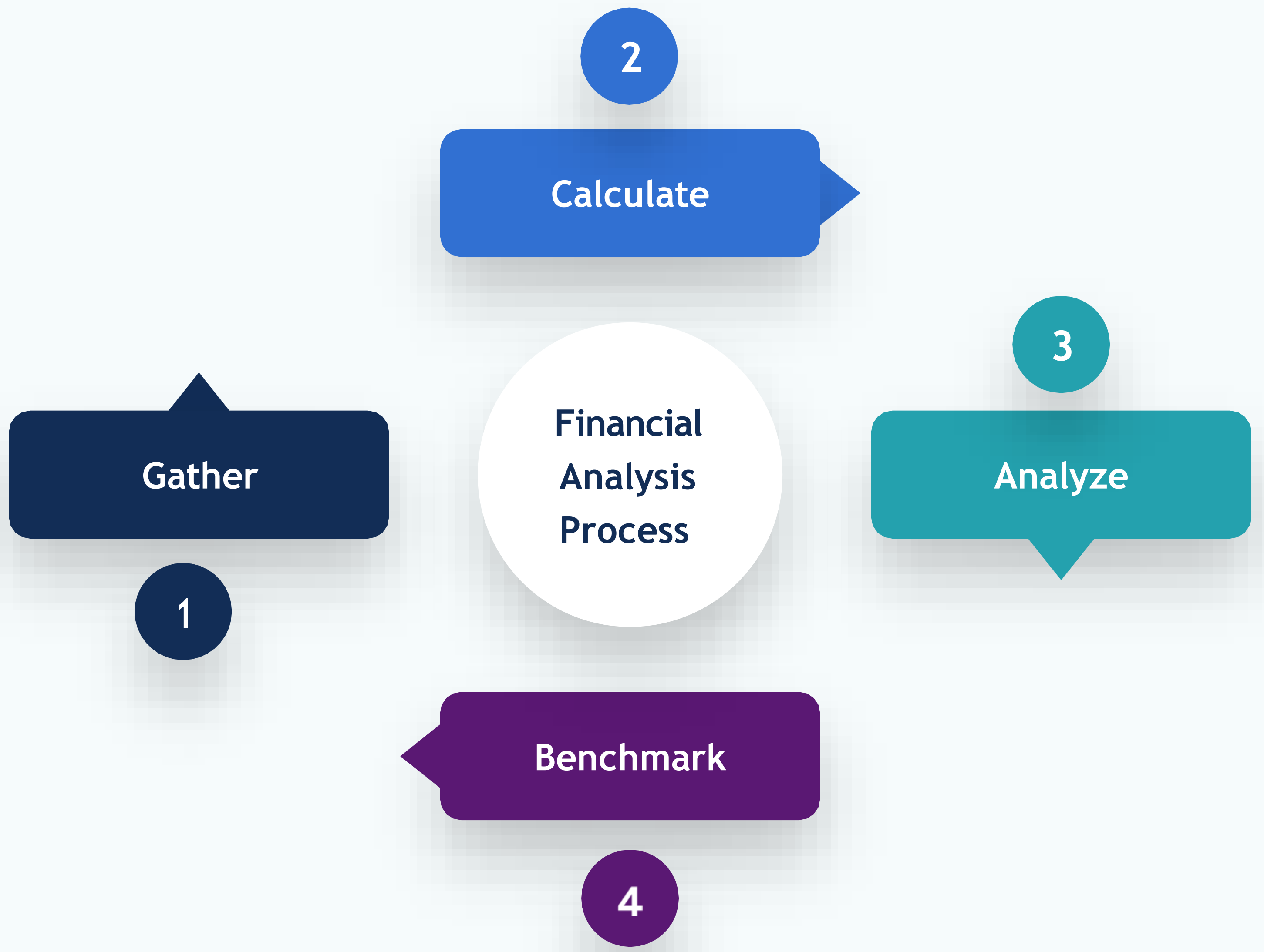
3. **Analyze**

   Interpret the calculated ratios and uncover trends and stories (e.g., a declining profitability ratio may indicate inefficiencies).

4. **Benchmark**

   Benchmark with an appropriate peer group or industry averages (e.g., evaluate how the company fares in relation to its competitors or industry).

What Is Best Practice Financial Analysis



Critical Tips for Effective Financial Analysis

- Gather a minimum of five years of historical financial performance to better identify trends over time.

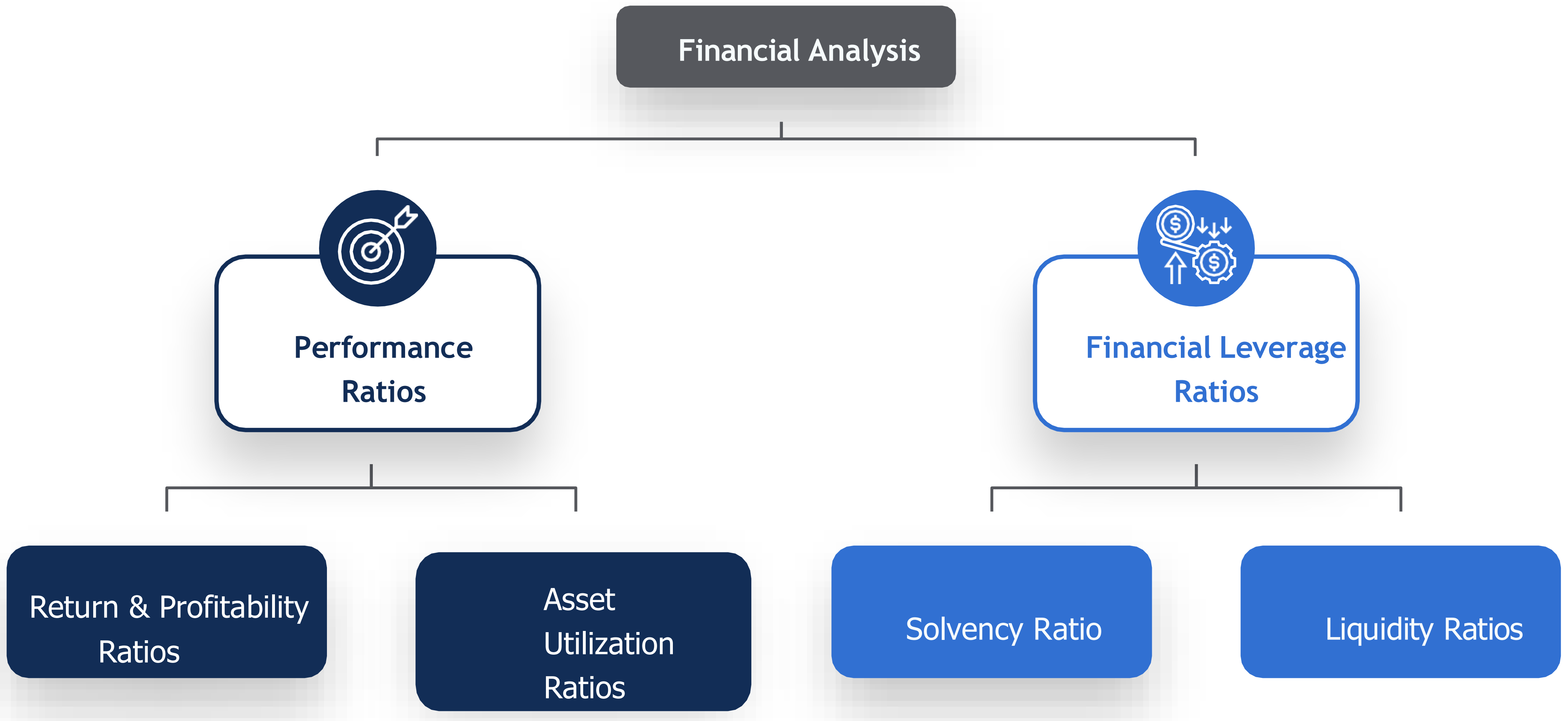
Make your calculations in Excel transparent so that you can trace from financial statements to ratios.

Need to identify an appropriate peer group, which is broader in scope, as it is rare to find two companies that are exactly similar.

Keep adjustments of ratios to a minimum, as there is more room for error to creep in.

Averages are typically more academically sound, but in practice, virtually everyone uses closing balances.

Financial Analysis Ratio Categories



Quick Recap of the Three Financial Statements

Let’s do a quick Recap of the three financial statements.

Income Statement

- Revenues
- Expenses
- Profit Or loss

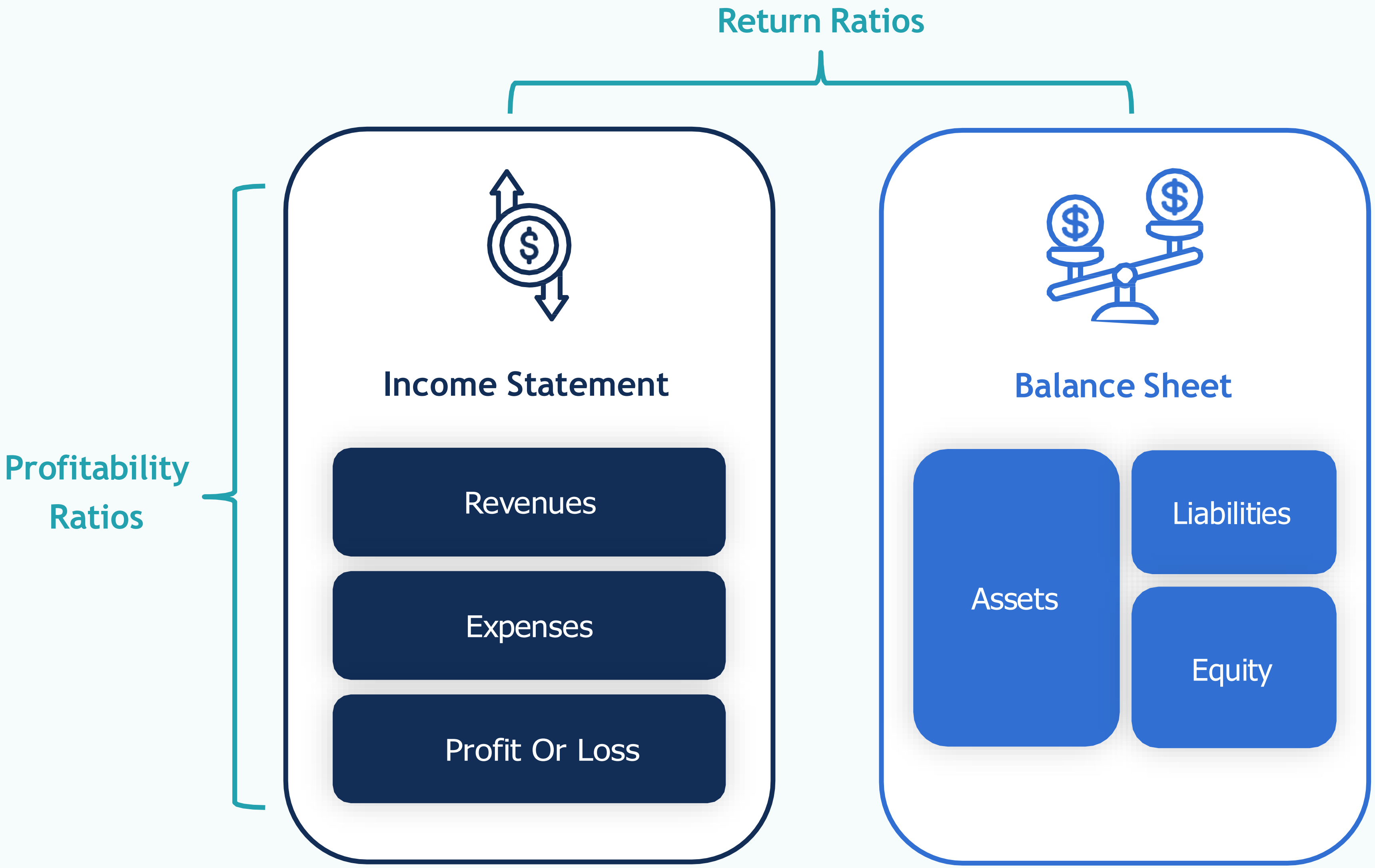
Balance Sheet

- Assets
- Liabilities
- Equity

Statement of Cash Flows

- Operating
- Investing
- Financing

Quick Recap of the Three Financial Statements



What Is Trend Analysis

Trend analysis is **crucial component** of our financial analysis.

Trend analysis (horizontal analysis) involves **comparing results across different periods,** such as months, quarters, or years.

Conducting analyses over multiple years allows trends to emerge, providing valuable **insight for forecasting and future projections.**

Through the examination of historical trends, we gain a better understanding of **how to project future performance.**

What Is Trend Analysis

What Is Trend Analysis

here is **to assess trends over several years** and use them to make projections about future performance.

forward-looking analysis is essential for gaining insights into the company's prospects.

The Benefit of Visualizing Trends

Profitability and Return Ratios

All figures in USD thousands unless stated	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Average
Return on Equity	0.41%	4.81%	7.56%	11.59%	6.32%	9.62%	10.08%	16.20%	8.32%
Average	8.32%	8.32%	8.32%	8.32%	8.32%	8.32%	8.32%	8.32%	
Gross Margin	28.21%	31.15%	31.72%	32.72%	33.73%	35.97%	35.26%	36.48%	33.15%
Average	33.15%	33.15%	33.15%	33.15%	33.15%	33.15%	33.15%	33.15%	
EBITDA Margin	5.01%	7.03%	7.84%	8.26%	7.63%	9.98%	9.41%	10.53%	8.21%
Average	8.21%	8.21%	8.21%	8.21%	8.21%	8.21%	8.21%	8.21%	

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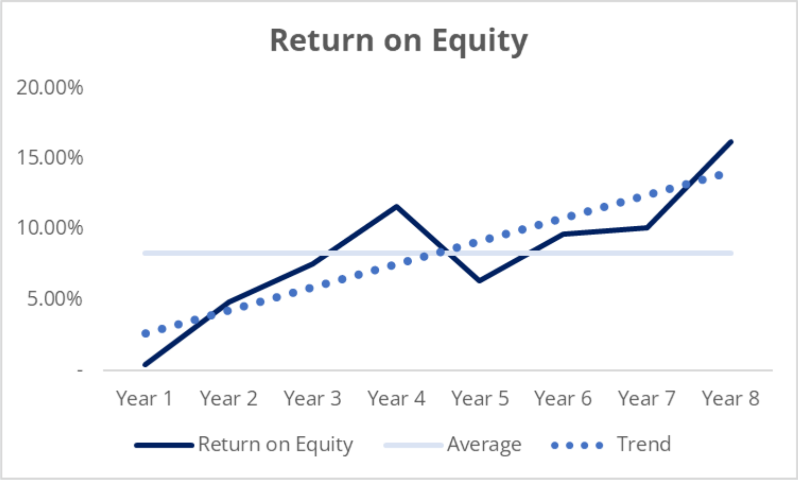
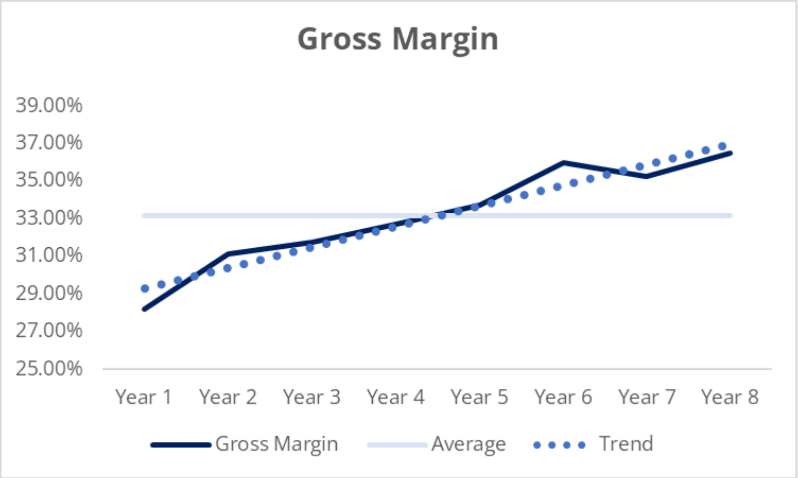
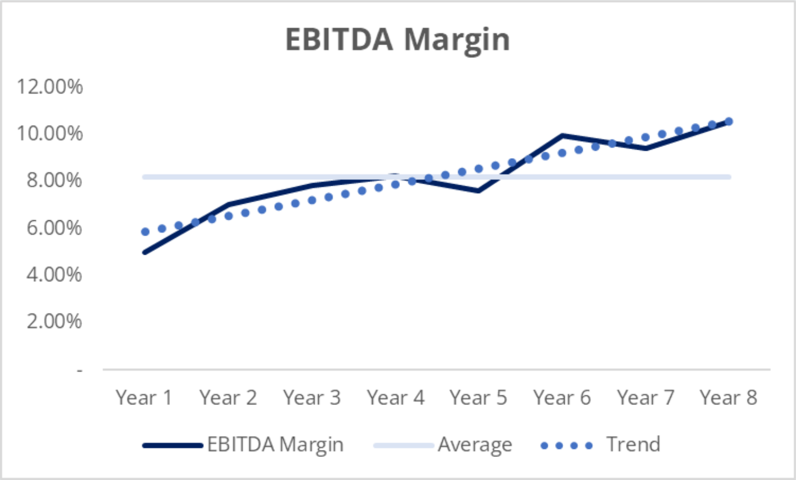
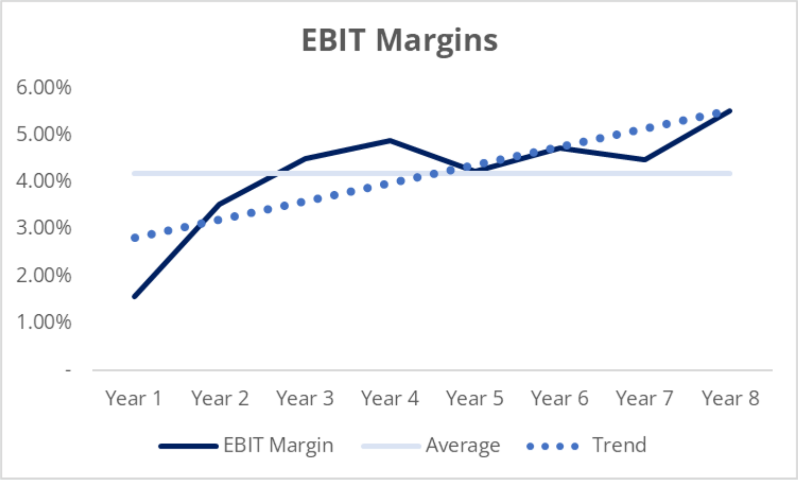
The Benefit of Graphing Trends









Growth Ratios

With growth ratios, the financial analyst should look at revenue, profitability, and asset growth.

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Asset Growth

Revenue Growth

Profitability Growth

Analyzing Growth Ratios

Scenario 1:

Assets are growing faster than revenues and

Interpretation:

Asset utilization, or the ability to generate revenues, is declining.

Growth Ratios

With growth ratios, the financial analyst should look at revenue, profitability, and asset growth.

Asset Growth

Revenue Growth

Profitability Growth

Analyzing Growth Ratios

Scenario 2:

Revenue growth is greater than profitability growth..

Interpretation:

There may be a problem with the management of expenses.

Growth Ratios

With growth ratios, the financial analyst should look at revenue, profitability, and asset growth.

Asset Growth

Revenue Growth

Profitability Growth

Analyzing Growth Ratios

Scenario 3:
Asset growth leads to greater revenue growth, which leads to even higher profitability growth.

Interpretation:
Ideal scenario indicating good financial management.

Growth and Degree of Leverage

Degree of Total Leverage = Degree of Operating Leverage × Degree of Financial Leverage

Operating Leverage

$$\frac{\text{\% Change in EBIT}}{\text{\% Change in Revenue}}$$

Shows fixed costs versus variable costs.

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Financial Leverage

$$\frac{\text{\% Change in Net Income}}{\text{\% Change in EBIT}}$$

Shows how much debt financing is being utilized.

Growth and Degree of Leverage

Degree of Total Leverage = Degree of Operating Leverage × Degree of Financial Leverage

Operating Leverage

$$\frac{\text{\% Change in EBIT}}{\text{\% Change in Revenue}}$$

Financial Leverage

$$\frac{\text{\% Change in Net Income}}{\text{\% Change in EBIT}}$$

Total Leverage

$$\frac{\text{\% Change in Net Income}}{\text{\% Change in Revenue}}$$

Operating Leverage and Growth

Variable Costs

Costs that **change** depending on the company's production volume

Revenue	
Increases	Decreases

Fixed Costs

Costs that **do not change** in relation to production

Revenue	
Increases	Decreases

If all costs are variable, then operating profit can only grow at the rate of revenue growth.
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If we by turning some of these variable costs into fixed costs, we introduce operating leverage.

Financial Leverage and Growth

How can we magnify net profit growth through leverage?

Financial Leverage:
Shows how much debt financing is being utilized.

Debt Utilization:

- Debt comes with interest expense, which **reduces profit.**
- Debt also has a **tax advantage** as interest expense can be deducted for tax purposes.