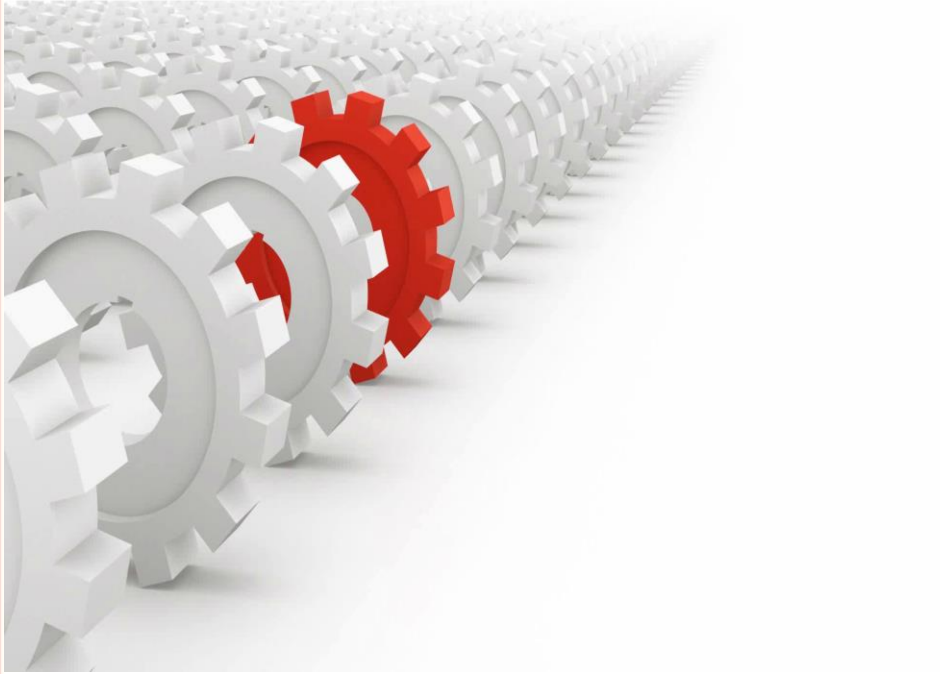

Components & Interpretation of Financial Statements

November 2022

What are financial statements?

Financial statements provide a look into the financial life of a company.

They show how money flows through the company, and reveals its financial health

Financial Statements

- The three financial statements are: (1) the Statement of Profit or Loss, (2) the Statement of Financial Position, and (3) the Statement of Cash Flows.
- These three core statements are intricately linked to each other and this guide will explain how they all fit together.
- Analyzing these three financial statements is one of the key steps when creating a financial model.

Overview of the 3 Financial Statements

1. Statement of Profit or Loss

- Often, the first place an investor or analyst will look is the income statement. The income statement shows the performance of the business throughout each period, displaying sales revenue at the very top. The statement then deducts the cost of goods sold (COGS) to find gross profit.
- From there, gross profit is impacted by other operating expenses and income, depending on the nature of the business, to reach net income at the bottom – "the bottom line" for the business.

Overview of the Three Financial Statements

Statement of Profit or Loss – key features

- Shows the revenues and expenses of a business
- Expressed over a period of time (i.e., 1 year, 1 quarter, Year-to-Date, etc.)
- Uses accounting principles such as *matching* and *accruals* to represent figures (not presented on a cash basis)
- Used to assess profitability

Overview of the Three Financial Statements

2. Statement of Financial Position

- The balance sheet displays the company’s assets, liabilities, and shareholders’ equity at a point in time. The two sides of the balance sheet must balance: assets must equal liabilities plus equity. The asset section begins with cash and equivalents, which should equal the balance found at the end of the cash flow statement.
- The balance sheet then displays the ending balance in each major account from period to period. Net income from the income statement flows into the balance sheet as a change in retained earnings (adjusted for payment of dividends).

Overview of the Three Financial Statements

Statement of Financial Position – key features

- Shows the financial position of a business
- Expressed as a "snapshot" or financial picture of the company at a specified point in time (i.e., as of December 31, 2021)
- Has three sections: assets, liabilities, and shareholders equity
- Assets = Liabilities + Shareholders Equity

Overview of the Three Financial Statements

3. Statement of Cash Flows

The cash flow statement then takes net income and adjusts it for any non-cash expenses. Then cash inflows and outflows are calculated using changes in the balance sheet. The cash flow statement displays the change in cash per period, as well as the beginning and ending balance of cash.

Overview of the Three Financial Statements

Statement of Cash Flows – key features

- Shows the increases and decreases in cash
- Expressed over a period of time (i.e., 1 year, 1 quarter, Year-to-Date, etc.)
- Undoes accrual accounting principles to show pure cash movements
- Has three sections: cash from operations, cash used in investing and cash from financing
- Shows the net change in the cash balance from the start to the end of the period

Summary Comparison

	Income Statement	Balance Sheet	Cash Flow
Time	Period of time	A point in time	Period of time
Purpose	Profitability	Financial position	Cash movements
Measures	Revenue, expenses, profitability	Assets, liabilities, shareholders' equity	Increases and decreases in cash
Starting Point	Revenue	Cash balance	Net income
Ending Point	Net income	Retained earnings	Cash balance

Analysing Financial Statements

1. Analyzing the Statement of Profit or Loss

- Most analysts start their financial statement analysis with the income statement. Intuitively, this is usually the first thing we think about with a business… we often ask questions such as, “How much revenue does it have?” “Is it profitable?” and “What are the margins like?”
- In order to answer these questions, and much more, we will dive into the income statement to get started.
- There are two main types of analysis we will perform: vertical analysis and horizontal analysis.

Analysing Financial Statements

Vertical Analysis

With this method of analysis, we will look up and down the income statement (hence, “vertical” analysis) to see how every line item compares to revenue, as a percentage.

For example, in the statement of profit or loss on the next slide, we have the total dollar amounts and the percentages, which make up the vertical analysis.

($ in millions)	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Revenue	**51,585**	**53,494**	**55,749**	100.0%	100.0%	100.0%
COGS	27,697	28,429	29,200	53.7%	53.1%	52.4%
Gross Profit	**23,888**	**25,065**	**26,550**	46.3%	46.9%	47.6%
SG&A	5,877	6,006	6,144	11.4%	11.2%	11.0%
Other	1,764	1,931	2,026	3.4%	3.6%	3.6%
EBITDA	**16,247**	**17,128**	**18,380**	31.5%	32.0%	33.0%
Depreciation	2,960	3,196	3,452	5.7%	6.0%	6.2%
Earnings Before Interest and Taxes	**13,287**	**13,932**	**14,928**	25.8%	26.0%	26.8%
Interest Expense	1,488	2,580	2,448	2.9%	4.8%	4.4%
Earnings Before Tax	**11,799**	**11,352**	**12,480**	22.9%	21.2%	22.4%
Tax	3,155	2,861	3,012	6.1%	5.3%	5.4%
Net Income	**8,644**	**8,491**	**9,468**	16.8%	15.9%	17.0%

Analysing Financial Statements

Vertical Analysis

- We do a thorough analysis of the income statement by seeing each line item as a proportion of revenue.
- The key metrics we look at are:

- Cost of Goods Sold (COGS)	- Gross profit
- Depreciation Selling	- Interest
- General & Administrative (SG&A)	- Tax
- Earnings Before Tax (EBT)	- Net earnings

Analysing Financial Statements

Horizontal Analysis

- With horizontal analysis, we look at the year-over-year (YoY) change in each line item.
- In order to perform this exercise, you need to take the value in Period N and divide it by the value in Period N-1 and then subtract 1 from that number to get the percent change.
- For the example on the next slide, revenue in Year 3 was \$55,749, and in Year 2, it was \$53,494. The YoY change in revenue is equal to \$55,749 / \$53,494 minus one, which equals 4.2%.

($ in millions)	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Revenue	**51,585**	**53,494**	**55,749**	NA	3.7%	4.2%
COGS	27,697	28,429	29,200	NA	2.6%	2.7%
Gross Profit	**23,888**	**25,065**	**26,550**			
SG&A	5,877	6,006	6,144	NA	2.2%	2.3%
Other	1,764	1,931	2,026	NA	9.5%	4.9%
EBITDA	**16,247**	**17,128**	**18,380**	NA	5.4%	7.3%
Depreciation	2,960	3,196	3,452	NA	8.0%	8.0%
Earnings Before Interest and Taxes	**13,287**	**13,932**	**14,928**	NA	4.9%	7.1%
Interest Expense	1,488	2,580	2,448	NA	73.4%	(5.1%)
Earnings Before Tax	**11,799**	**11,352**	**12,480**	NA	(3.8%)	9.9%
Tax	3,155	2,861	3,012	NA	(9.3%)	5.3%
Net Income	**8,644**	**8,491**	**9,468**	NA	(1.8%)	11.5%

Analysing Financial Statements

2. Analyzing the Statement of Financial Position

- Here, we evaluate the operational efficiency of the business. We take several items on the income statement and compare them to accounts on the balance sheet.
- The balance sheet metrics can be divided into several categories, including liquidity, leverage, and operational efficiency.
- Using the financial ratios derived from the balance sheet and comparing them historically versus industry averages or competitors will help assess the solvency and leverage of a business.

2. Analyzing the Statement of Financial Position

The main liquidity ratios for a business are:

- Quick ratio
- Current ratio
- Net working capital

2. Analyzing the Statement of Financial Position

The main leverage ratios are:

- Debt to equity
- Debt to capital
- Debt to EBITDA
- Interest coverage
- Fixed charge coverage ratio

2. Analyzing the Statement of Financial Position

The main operating efficiency ratios are:

- Inventory turnover
- Accounts receivable days
- Accounts payable days
- Total asset turnover
- Net asset turnover

3. Analyzing the Statement of Cash Flows

The cash flow statement will help us understand the inflows and outflows of cash over the time period we're looking at.

The cash flow statement, or statement of cash flow, consists of three components:

- Cash from operations
- Cash used in investing
- Cash from financing

($ in millions)	Year 1	Year 2	Year 3
Cash from Operations			
Net Income	8,644	8,491	9,468
Adjusted for:			
Depreciation	2,960	3,196	3,452
Stock-based Compensation	250	300	325
Change in Accounts Receivable	500	(1,500)	(1,000)
Change in Inventory	(3,000)	2,000	(1,400)
Change in Accounts Payable	(500)	500	1,000
Cash from Operations	**8,854**	**12,987**	**11,845**
Cash from Investing			
Purchase of PP&E	(5,000)	(5,500)	(6,000)
Acquisition of Business	–	(10,000)	–
Cash from Investing	**(5,000)**	**(15,500)**	**(6,000)**
Cash from Financing			
Issuance (Repayment) of Debt	6,000	3,500	18,500
Issuance (Repurchase) of Equity	–	–	30,000
Dividends	(100)	(150)	(200)
Cash from Financing	**5,900**	**3,350**	**48,300**
Net Change in Cash	9,754	837	54,145
Cash at Beginning of Period	6,680	7,000	12,750
Cash at End of Period	**16,434**	**7,837**	**66,895**

4. Rates of Return and Profitability Analysis

The key insights to be derived from the pyramid of ratios include:

- Return on equity ratio (ROE)
- Profitability, efficiency and leverage ratios
- Primary, secondary and tertiary ratios
- Dupont analysis

Analysing Financial Statements

4. Rates of Return and Profitability Analysis

- Dupont analysis

Return on equity = Net profit margin x Total asset turnover x Financial leverage

$$\frac{Net\ income}{Equity} = \frac{Net\ income}{Sales} \times \frac{Sales}{Total\ assets} \times \frac{Total\ assets}{Equity}$$

Thanks!

Any questions?