

# FIN401 ADVANCED FINANCIAL MANAGEMENT

## NOTE: FINANCIAL STATEMENTS AND ANALYSIS

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### Introduction

Financial statements are written records that convey the business activities and the financial performance of a company. They measure the profitability, financial health, and cash flows of the company. Financial statements provide key information for investors, creditors, and management.

To fully understand financial statements, we need to do financial analysis of those statements. This analysis can help us understand a company's results, operational efficiency, strategy, and much more. A company's financial statements tell a story. As we get better at analyzing the statements, we can gain an understanding of what they are telling us.

### Financial Statements

The three primary financial statements are as follows:

- Income Statement (also known as Profit & Loss statement (P&L) or the Earnings Statement)
- Balance Sheet
- Cash Flow Statement

#### Income Statement

The income statement presents the net income for a period of time, generally for a month, quarter, or year. It presents the revenue and expenses of a company, and the resulting net income. The formula for an income statement is as follows:

$$\text{Revenue} - \text{Expenses} = \text{Net Income}$$

A detailed income statement contains further categories of margins and expenses. Below is a sample income statement:

Revenue (Sales)	\$125,000
Cost of Goods Sold (Variable Costs or Direct Costs)	\$60,000
Gross Margin (Contribution Margin or Gross Profit)	\$65,000
Operating Expenses (Fixed Expenses or Indirect Costs)	\$ 47,000
Earnings Before Interest and Taxes (EBIT)	\$ 18,000
Interest Expense	\$ 9,000
Tax Expense	\$ 3,000
Net Income (Net Profit or Net Earnings)	\$ 6,000

#### Balance Sheet

The balance sheet presents the assets, liabilities, and equity of a company at any given point of time, generally at the end of a month, quarter, or year. Unlike the income statement, a balance sheet is not for a period of time, but rather a snapshot at a particular date. A balance sheet measures a company's financial health.

A balance sheet's assets must equal the total of its liabilities and equity. The formula for the balance sheet is as follows:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

Below is a sample balance sheet:

<b>Current Assets</b>	
Cash	\$ 127,445
Accounts Receivable	\$ 9,052
Inventory	\$ 14,897
<b>Total Current Assets</b>	<b>\$ 151,394</b>
Equipment and Leasehold Improvements	\$ 133,896
Accumulated Depreciation	\$ (51,152)
<b>Total Fixed Assets</b>	<b>\$ 82,744</b>
<b>Total Assets</b>	<b>\$ 234,138</b>
<b>Current Liabilities</b>	
Accounts Payable	\$ 12,167
Taxes Payable	\$ (5,852)
<b>Total Current Liabilities</b>	<b>\$ 6,315</b>
Long-term Debt	\$ 145,382
<b>Total Liabilities</b>	<b>\$ 151,696</b>
Stock	\$ 100,000
Retained Earnings	\$ (17,558)
<b>Total Equity</b>	<b>\$ 82,442</b>
<b>Total Liabilities and Equity</b>	<b>\$ 234,138</b>

### Cash Flow Statement

The cash flow statement presents the inflows and outflows of cash over a period of time, generally a month, quarter, or year. It presents the change in a company's cash balance for the period. It is sometimes referred to as the sources and uses of funds statement. The cash flow statement has three sections:

- Cash from operations
- Cash from investments
- Cash from financing

Cash from operations details the cash that was generated by the primary business of the company. Cash from investments details the cash that was spent for major asset acquisitions of the company. Cash from financing details the details of cash that was received or spent as part of the funding of the business.

Below is a sample cash flows statement:

<b>Cash from operations:</b>	
Net Income	\$ 140,000
Depreciation (add back)	\$ 15,000
Working Capital Changes	\$ (25,000)
<b>Total cash from operations</b>	<b>\$ 130,000</b>
<b>Cash from investing:</b>	
Equipment Purchase	\$ (90,000)
<b>Total cash from investing</b>	<b>\$ (90,000)</b>
<b>Cash from financing:</b>	
Stock sale	\$ 125,000
Dividends paid	\$ (45,000)
Long-term debt borrowed	\$ 30,000
<b>Cash from financing</b>	<b>\$ 110,000</b>
<b>Change in cash</b>	<b>\$ 150,000</b>

## Financial Analysis

Financial analysis can take on many forms. Financial analysis allows us to be able to go deeper into the financial statements to understand the story they are telling.

For example, a company may make \$1 million in a given year. Is that good or bad? For a small company, that might be great. But for a large Fortune 500 company, that would be terrible.

Some common methods of financial analysis include the following:

- **Variance analysis**, which may include comparing results to prior year results or to budgeted results.
- **Benchmarking analysis**, which compares a company's results to another company's results or to industry averages.
- **Common-size statements**, in which a company's income statement is presented as a % of revenue of 100%; or in which a balance sheet is presented as a % of total assets of 100%. Common-size statements facilitates comparisons between companies that are of different size.
- **Financial ratios**, in which a company compares the financial magnitude of numbers within its financial statements. There are hundreds of ratios that can be used to analyze a company's financial statements, and many ratios are calculated differently depending on the user.

Financial ratios can measure many things. Five common usages of financial ratios are to measure the following:

- Liquidity
- Leverage
- Efficiency
- Profitability
- Valuation

#### Liquidity Ratios

Liquidity ratios measure the amount of cash and other current assets that can be used to cover your current liabilities and debts. They can help in determining the financial health of a company. Some liquidity ratios include the following:

- Current ratio ( $\text{Current Assets} / \text{Current Liabilities}$ )
- Quick ratio ( $((\text{Current Assets} - \text{Inventory}) / \text{Current Liabilities})$ )

#### Leverage Ratios

Leverage ratios measures how a company uses debt and equity to fund its business. These could include the following:

- Debt-to-Equity ratio ( $\text{Debt} / \text{Equity}$ )
- Debt as a % of Total Capital ( $\text{Debt} / (\text{Debt} + \text{Equity})$ )
- Leverage ratio ( $\text{Total Assets} / \text{Total Equity}$ )

#### Efficiency Ratios

Efficiency ratios measure how well a company is utilizing its resources. Come efficiency ratios include the following:

- Asset Turnover ratio ( $\text{Revenue} / \text{Total Assets}$ )
- Days of Accounts Receivable ( $\text{Accounts Receivable} / \text{Average Daily Sales}$ )
- Days of Inventory ( $\text{Inventory} / \text{Average Daily Cost of Goods Sold}$ )
- Days of Accounts Payable ( $\text{Accounts Payable} / \text{Average Daily Cost of Goods Sold}$ )

#### Profitability Ratios

Profitability ratios measure a company's ability to generate profit relative to its revenue and balance sheet. These could include the following:

- Gross Margin % ( $\text{Gross Margin} / \text{Revenue}$ )
- Net Income % (Profit Margin % or Net Earnings %) ( $\text{Net Income} / \text{Revenue}$ )
- Return on Assets (ROA) % ( $\text{Net Income} / \text{Total Assets}$ )
- Return on Invested Capital (ROIC) % ( $\text{Net Operating Profit} / \text{Invested Capital}$ )
- Return on Equity % ( $\text{Net Income} / \text{Total Equity}$ )

#### Valuation Ratios

Valuation ratios help measure the value of a company. Valuation ratios could include the following:

- Earnings per Share (EPS) ( $\text{Stock Price per Share}$ )
- Price-Earnings ratio ( $\text{Stock Price} / \text{Earnings per Share}$ )