KEY POINTS

CERTIFICATE COURSE
INTRODUCTION TO FINANCIAL STATEMENTS

MODULE 1 – FINANCIAL STATEMENTS

DEFINING THE FINANCIAL STATEMENT

- Financial statements are formally prepared documents communicating an entity's financial activities to parties including investors, management and tax officials.
- An entity's financial statement typically includes four basic components: a balance sheet, income statement, cash flow statement, and statement of changes in equity.
- The balance sheet reports a point-in-time snapshot of the assets, liabilities and equity of the entity.
- An income statement reports on a company's expenses and profits to show whether the company made or lost money.
- The cash flow statement reports the flow of cash in and out of the business, dividing cash into operating, investing and financing activities.
- A statement of changes in equity explains the changes of the company's equity throughout the reporting period, including profits or losses, dividends paid and issue or redemption of stock.

USES OF THE FINANCIAL STATEMENT

- Owners and managers use financial statements to make important long-term business decisions. For example: whether or not to continue or discontinue part of its business, to make or purchase certain materials, or to acquire or rent/lease certain equipment in the production of its goods.
- Prospective investors use financial statements to perform financial analysis, which is a key component in making investment decisions.
- A lending institution will examine the financial health of a person or organization and use the financial statement to decide whether or not to lend funds.

LIMITATIONS OF FINANCIAL STATEMENTS

- One limitation of financial statements is that they are open to human interpretation and error, in some cases even intentional manipulation of figures to inflate economic performance.
- Another set of limitations of financial statements arises from different ways of accounting for activities across time periods and across companies, which can make comparisons difficult.
- Another limit to financial statements as a window into the creditworthiness or investment attractiveness of an entity is that financial statements focus solely on financial measures. Some argue for a "triple bottom line" including social and environmental measures.

THE INCOME STATEMENT

- The income statement consists of revenues and expenses along with the resulting net income or loss over a period of time due to earning activities. The income statement shows investors and management if the firm made money during the period reported.
- The operating section of an income statement includes revenue and expenses. Revenue consists of cash inflows or other enhancements of assets of an entity, and expenses consist of cash outflows or other using-up of assets or incurring of liabilities.

- The non-operating section includes revenues and gains from non-primary business activities, items that are either unusual or infrequent, finance costs like interest expense, and income tax expense.
- The "bottom line" of an income statement is the net income that is calculated after subtracting the expenses from revenue. It is important to investors - also on a per share basis (as earnings per share, EPS) - as it represents the profit for the accounting period attributable to the shareholders.

LIMITATIONS OF THE INCOME STATEMENT

- Income statements include judgments and estimates, which mean that items that might be relevant but cannot be reliably measured are not reported and that some reported figures have a subjective component.
- With respect to accounting methods, one of the limitations of the income statement is that income is reported based on accounting rules and often does not reflect cash changing hands.
- Income statements can also be limited by fraud, such as earnings management, which occurs when managers use judgment in financial reporting to intentionally alter financial reports to show an artificial increase (or decrease) of revenues, profits, or earnings per share figures.

EFFECTS OF GAAP ON THE INCOME STATEMENT

- Items that create temporary differences due to the recording requirements of GAAP include rent or other revenue collected in advance, estimated expenses, and deferred tax liabilities and assets.
- Also there are events, usually one-time events, which create "permanent differences," such as GAAP recognizing as an expense an item that the IRS will not allow to be deducted.
- The four basic principles of GAAP can affect items on the income statement. These principles include the historical cost principle, revenue recognition principle, matching principle, and full disclosure principle.

NON CASH ITEMS

- Non-cash items should be added back in when analyzing income statements to determine cash flow because they do not contribute to the inflow or outflow of cash like other gains and expenses eventually do.
- Depreciation refers to the decrease in value of assets and the allocation of the cost of assets to periods in which the assets are used--for tangible assets, such as machinery.
- Amortization is a similar process to deprecation when applied to intangible assets, such as patents and trademarks.

ASSETS

- The main categories of assets are usually listed first, and normally, in order of liquidity. On a balance sheet, assets will typically be classified into current assets and non-current (long-term) assets.
- Current assets are those assets which can either be converted to cash or used to pay current liabilities within 12 months. Current assets include cash and cash equivalents, short-term investments, accounts receivable, inventories and the portion of prepaid liabilities paid within a year.
- A non-current asset cannot easily be converted into cash. Non-current assets include property, plant and equipment (PPE), investment property, intangible assets, long-term financial assets, investments accounted for using the equity method, and biological assets.

LIABILITIES AND EQUITY

- In financial accounting, a liability is defined as an obligation of an entity arising from past transactions or events, the settlement of which may result in the transfer or use of assets, provision of services or other yielding of economic benefits in the future.
- Equity is the residual claim or interest of the most junior class of investors in assets, after all liabilities are paid.
- The types of accounts and their description that comprise the owner's equity depend on the nature of the entity and may include: Common stock, preferred stock, capital surplus, retained earnings, treasury stock, stock options and reserve.

WORKING CAPITAL

- Net working capital is calculated as current assets minus current liabilities.
- Current assets and current liabilities include three accounts which are of special importance: accounts receivable, accounts payable and inventories.
- The goal of working capital management is to ensure that the firm is able to continue its operations and that it has sufficient cash flow. The management of working capital involves managing inventories, accounts receivable and payable, and cash.

LIQUIDITY

- Liquidity refers to a business's ability to meet its payment obligations, in terms of possessing sufficient liquid assets, and to such assets themselves. For assets, liquidity is an asset's ability to be sold without causing a significant movement in the price and with minimum loss of value.
- A standard company balance sheet has three parts: assets, liabilities and ownership equity. The main categories of assets are usually listed first, typically in order of liquidity.
- For a corporation with a published balance sheet there are various ratios used to calculate a measure of liquidity, namely the current ratio, the quick ratio, the operating cash flow ratio, and the liquidity ratio (acid test).

DEBT TO EQUITY

- The debt-to-equity ratio (D/E) is a financial ratio indicating the relative proportion of shareholders' equity and debt used to finance a company's assets. Closely related to leveraging, the ratio is also known as risk, gearing or leverage.
- Preferred stocks can be considered part of debt or equity. Attributing preferred shares to one or the other is partially a subjective decision.
- The formula of debt/ equity ratio: D/E = Debt (liabilities) / equity = Debt / (Assets – Debt) = (Assets – Equity) / Equity.

MARKET VALUE VS. BOOK VALUE

- Market value is the price at which an asset would trade in a competitive auction setting.
- Book value or carrying value is the value of an asset according to its balance sheet account balance. For assets, the value is based on the original cost of the asset less any depreciation, amortization or impairment costs made against the asset.
- In many cases, the carrying value of an asset and its market value will differ greatly. However, they are interrelated.

LIMITATIONS OF THE BALANCE SHEET

- Balance sheets do not show true value of assets. Historical cost is criticized for its inaccuracy since it may not reflect current market valuation.
- Some of the current assets are valued on an estimated basis, so the balance sheet is not in a position to reflect the true financial position of the business.

- The balance sheet can not reflect those assets which cannot be expressed in monetary terms, such as skill, intelligence, honesty, and loyalty of workers.

CORPORATE TAXES

- Legal forms of corporations include sole proprietorships, partnerships, C corporations, S corporations, and LLCs.
- The type of corporation chosen will determine such factors as liability and taxation on the entity.
- Taxable income for a corporation is defined as all gross income (sales plus other income minus cost of goods sold and tax exempt income) less allowable tax deductions and tax credits.

TAX DEDUCTIONS

- Business expenses are those that are incurred in order to generate profit for a company, such as cost of goods sold.
- Ordinary expenses, such as interest paid on debt, are typically deductible as long as they are appropriate to the nature of the business, the sort expected to help produce income, and are not lavish and extravagant.
- In a progressive tax system, the marginal tax rate must be used in order to calculate the after-tax cost of a deductible expense.
- While a deduction is a reduction of the level of taxable income, a tax credit is a sum deducted from the total amount of tax owed.

DEPRECIATION

- To determine depreciation expense, the useful life of an asset under depreciation is estimated in time-units. Then the corresponding depreciation rate is calculated that will extinguish the value of the asset from the books when the estimated useful life ends.
- The straight-line method of depreciation reduces the book value of an asset by the same amount each period.
- The declining balance method of depreciation provides for a higher depreciation expense in the first year of an asset's life and gradually decreases expenses in subsequent years.
- Activity depreciation methods are not based on time but on a level of activity, such as miles driven or cycle counts.
- Depreciation allows a company to properly identify the amount of income it generates in a given period.

INDIVIDUAL TAXES

- A direct tax is one imposed upon an individual person or on property, as opposed to an indirect tax that is imposed upon a transaction.
- Income tax is levied on the total income of the individual, less deductions and credits.
- Sales tax is levied on the state level on retail sale, lease, and rental of many goods, as well as some services.
- Property tax is levied on interests in real property (land, buildings, and permanent improvements).
- Estate tax is an excise tax levied on the right to pass property at death.

CASH FLOW FROM OPERATIONS

- Operating cash flows refers to the cash a company generates from the revenues it brings in, excluding costs associated with long-term investment on capital items or investment in securities (these are investing or financing activities).

- GAAP and IFRS vary in their categorization of many cash flows, such as paying dividends. Some activities that are operating cash flows under one system are financing or investing in another.
- Major operating activities such as manufacturing products or selling a product may appear on the income statement but not on the cash flow statement, because cash has not yet changed hands.

CASH FLOW FROM INVESTING

- Assets included in investment activity include land, buildings, and equipment.
- Receiving dividends from another company's stock is an investing activity, although paying dividends on a company's own stock is not.
- An investing activity only appears on the cash flow statement if there is an immediate exchange of cash.

CASH FLOW FROM FINANCING

- Financing activities can be seen in changes in non-current liabilities and in changes in equity in the change-in-equity statement.
- A positive financing cash flow could be really great for a company (it just went issued stock at a great price) or could be due to the company having to take out loans to stay out of bankruptcy.
- Issuing credit is not a financing activity though taking on credit is. Like all cash flows, such activities only appear on the cash flow statement when the exchange of money actually takes place.

INTERPRETING OVERALL CASH FLOW

- The three types of cash flow are cash from operations, investing, and financing.
- Having positive cash flows is important because it means that the company has at least some liquidity and may be solvent.
- A positive cash flow does not guarantee that the company can pay all of its bills, just as a negative cash flow does not mean that it will miss its payments.
- When preparing the statement of cash flows, analysts must focus on changes in account balances on the balance sheet.
- Cash flows from operating activities are essential to helping analysts assess the company's ability to meet ongoing funding requirements, contribute to long-term projects and pay a dividend.
- Analysis of cash flow from investing activities focuses on ratios when assessing a company's ability to meet future expansion requirements.
- The free cash flow is useful when analysts want to see how much cash can be extracted from a company without causing issues to its day to day operations.

THE STATEMENT OF EQUITY

- The statement breaks down changes in the owners' interest in the organization. Line items typically include profits or losses from operations, dividends paid, issue or redemption of stock, and any other items charged or credited to retained earnings.
- Owners' equity = assets − liabilities.
- The statement of equity uses information from the income statement and provides information to the balance sheet.
- Ending retained earnings = beginning retained earnings − dividends paid + net income.

DEPRECIATION

- Depreciation refers to the allocation of the cost of assets to periods in which the assets are used (depreciation with the matching principle).
- Generally this involves four criteria: cost of the asset, expected salvage value (residual value of the asset), estimated useful life of the asset, and a method of apportioning the cost over such life.
- There are several methods for calculating depreciation, generally based on either the passage of time or the level of activity of the asset: straight-line depreciation, accelerated depreciation methods, activity depreciation methods, sum-of-years' digits method, and units-of-production method.

FREE CASH FLOW

- There are four different methods for calculating free cash flows.
- Free cash flow measures the ease with which businesses can grow and pay dividends to shareholders.
- Net income and free cash flows are different. Some investors prefer using free cash flow instead of net income to measure a company's financial performance because free cash flow is more difficult to manipulate than net income.

MVA AND EVA

- Market Value Added (MVA) is the difference between the current market value of a firm and the capital contributed by investors.
- Economic Value Added or EVA, is an estimate of a firm's economic profit – being the value created in excess of the required return of the company's investors (being shareholders and debt holders).
- The firm's market value added, or MVA, is the discounted sum (present value) of all future expected economic value added: MVA = Present Value of a series of EVA values.

MODULE 2 – ANALYZING FINANCIAL STATEMENTS AND RATIOS

BALANCE SHEETS

- Of the four basic financial statements, the balance sheet is the only statement which applies to a single point in time of a business' calendar year.
- The main categories of assets are usually listed first (in order of liquidity) and are followed by the liabilities.
- The difference between the assets and the liabilities is known as "equity".
- Balance sheets can either be in the report form or the account form.
- A balance sheet is often presented alongside one for a different point in time (typically the previous year) for comparison.
- Guidelines for balance sheets of public business entities are given by the International Accounting Standards Board and numerous country-specific organizations/companies.

INCOME STATEMENTS

- Income statement displays the revenues recognized for a specific period, and the cost and expenses charged against these revenues, including write offs (e.g., depreciation and amortization of various assets) and taxes.
- The income statement can be prepared in one of two methods: The Single Step income statement and Multi-Step income statement.
- The income statement includes revenue, expenses, COGS, SG&A, depreciation, other revenues and expenses, finance costs, income tax expense, and net income.

CLASSIFICATION OF RATIOS

- Ratio analysis consists of the calculation of ratios from financial statements and is a foundation of financial analysis.
- A financial ratio, or accounting ratio, shows the relative magnitude of selected numerical values taken from those financial statements.
- The numbers contained in financial statements need to be put into context so that investors can better understand different aspects of the company's operations. Ratio analysis is one method an investor can use to gain that understanding.

OPERATING MARGIN

- The operating margin equals operating income divided by revenue.
- The operating margin shows how much profit a company makes for each dollar in revenue. Since revenues and expenses are considered 'operating' in most companies, this is a good way to measure a company's profitability.
- Although It is a good starting point for analyzing many companies, there are items like interest and taxes that are not included in operating income. Therefore, the operating margin is an imperfect measurement a company's profitability.

PROFIT MARGIN

- Profit margin is the profit divided by revenue.
- There are two types of profit margin: gross profit margin and net profit margin.
- A higher profit margin is better for the company, but there may be strategic decisions made to lower the profit margin or to even have it be negative.

RETURN ON TOTAL ASSETS

- ROA is net income divided by total assets.
- The ROA is the product of two common ratios: profit margin and asset turnover.

- A higher ROA is better, but there is no metric for a good or bad ROA. An ROA depends on the company, the industry and the economic environment.
- ROA is based on the book value of assets, which can be starkly different from the market value of assets.

BASIC EARNING POWER (BEP) RATIO

- The higher the BEP ratio, the more effective a company is at generating income from its assets.
- Using EBIT instead of operating income means that the ratio considers all income earned by the company, not just income from operating activity. This gives a more complete picture of how the company makes money.
- BEP is useful for comparing firms with different tax situations and different degrees of financial leverage.

RETURN ON COMMON EQUITY

- ROE is net income divided by total shareholders' equity.
- ROE is also the product of return on assets (ROA) and financial leverage.
- ROE shows how well a company uses investment funds to generate earnings growth. There is no standard for a good or bad ROE, but a higher ROE is better.

INVENTORY TURNOVER RATIO

- Inventory turnover = Cost of goods sold/Average inventory.
- Average days to sell the inventory = 365 days /Inventory turnover ratio.
- A low turnover rate may point to overstocking, obsolescence, or deficiencies in the product line or marketing effort.
- Conversely, a high turnover rate may indicate inadequate inventory levels, which may lead to a loss in business as the inventory is too low.

DAYS SALES OUTSTANDING

- Days sales outstanding is a financial ratio that illustrates how well a company's accounts receivables are being managed.
- DSO ratio = accounts receivable / average sales per day, or DSO ratio = accounts receivable / (annual sales / 365 days).
- Generally speaking, higher DSO ratio can indicate a customer base with credit problems and/or a company that is deficient in its collections activity. A low ratio may indicate the firm's credit policy is too rigorous, which may be hampering sales.

FIXED ASSETS TURNOVER RATIO

- Fixed asset turnover = Net sales / Average net fixed assets.
- The higher the ratio, the better, because a high ratio indicates the business has less money tied up in fixed assets for each unit of currency of sales revenue. A declining ratio may indicate that the business is over-invested in plant, equipment, or other fixed assets.
- Fixed assets, also known as a non-current asset or as property, plant, and equipment (PP&E), is a term used in accounting for assets and property that cannot easily be converted into cash.

TOTAL ASSETS TURNOVER RATIO

- Total assets turnover = Net sales revenue / Average total assets.
- Net sales are operating revenues earned by a company for selling its products or rendering its services.

- Anything tangible or intangible that is capable of being owned or controlled to produce value and that is held to have positive economic value is considered an asset.
- Companies with low profit margins tend to have high asset turnover, while those with high profit margins have low asset turnover.

CURRENT RATIO

- The liquidity ratio expresses a company's ability to repay short-term creditors out of its total cash. The liquidity ratio is the result of dividing the total cash by short-term borrowings.
- The current ratio is a financial ratio that measures whether or not a firm has enough resources to pay its debts over the next 12 months.
- Current ratio = current assets / current liabilities.
- Acceptable current ratios vary from industry to industry and are generally between 1.5 and 3 for healthy businesses.

QUICK RATIO (ACID-TEST RATIO)

- Quick Ratio = (Cash and cash equivalent + Marketable securities + Accounts receivable) / Current liabilities.
- Acid Test Ratio = (Current assets - Inventory) / Current liabilities.
- Ideally, the acid test ratio should be 1:1 or higher, however this varies widely by industry. In general, the higher the ratio, the greater the company's liquidity.

TOTAL DEBT TO TOTAL ASSETS

- The debt ratio measures the firm's ability to repay long-term debt by indicating the percentage of a company's assets that are provided via debt.
- Debt ratio = Total debt / Total assets.
- The higher the ratio, the greater risk will be associated with the firm's operation.

TIMES-INTEREST-EARNED RATIO

- Times interest earned (TIE) or Interest Coverage ratio is a measure of a company's ability to honor its debt payments. It may be calculated as either EBIT or EBITDA divided by the total interest payable.
- Interest Charges = Traditionally "charges" refers to interest expense found on the income statement.
- EBIT = Revenue – Operating expenses (OPEX) + Non-operating income.
- EBITDA = Earnings before interest, taxes, depreciation and amortization.
- Times Interest Earned or Interest Coverage is a great tool when measuring a company's ability to meet its debt obligations.

THE DUPONT EQUATION

- By splitting ROE into three parts, companies can more easily understand changes in their returns on equity over time.
- As profit margin increases, every sale will bring more money to a company's bottom line, resulting in a higher overall return on equity.
- As asset turnover increases, a company will generate more sales per asset owned, resulting in a higher overall return on equity.
- Increased financial leverage will also lead to an increase in return on equity, since using more debt financing brings on higher interest payments, which are tax deductible.

ROE AND POTENTIAL LIMITATIONS

- Return on equity is an indication of how well a company uses investment funds to generate earnings growth.
- Returns on equity between 15% and 20% are generally considered to be acceptable.

- Return on equity is equal to net income (after preferred stock dividends but before common stock dividends) divided by total shareholder equity (excluding preferred shares).
- Stock prices are most strongly determined by earnings per share (EPS) as opposed to return on equity.

ASSESSING INTERNAL GROWTH AND SUSTAINABILITY

- The internal growth rate is a formula for calculating the maximum growth rate a firm can achieve without resorting to external financing.
- Sustainable growth is defined as the annual percentage of increase in sales that is consistent with a defined financial policy.
- Another measure of growth, the optimal growth rate, assesses sustainable growth from a total shareholder return creation and profitability perspective, independent of a given financial strategy.

DIVIDEND PAYMENTS AND EARNINGS RETENTION

- Many corporations retain a portion of their earnings and pay the remainder as a dividend.
- Dividends are usually paid in the form of cash, store credits, or shares in the company.
- Cash dividends are a form of investment income and are usually taxable to the recipient in the year that they are paid.
- Dividend payout ratio is the fraction of net income a firm pays to its stockholders in dividends.
- Retained earnings can be expressed in the retention ratio.

RELATIONSHIPS BETWEEN ROA, ROE, AND GROWTH

- Return on equity measures the rate of return on the shareholders' equity of common stockholders.
- Return on assets shows how profitable a company's assets are in generating revenue.
- In other words, return on assets makes up two-thirds of the DuPont equation measuring return on equity.
- Capital intensity is the term for the amount of fixed or real capital present in relation to other factors of production. Rising capital intensity pushes up the productivity of labor.

EVALUATING FINANCIAL STATEMENTS

- Ratio analysis is a tool for evaluating financial statements but also relies on the numbers in the reported financial statements being put into order to be used for comparison. With a few exceptions, the majority of the data used in ratio analysis comes from the financial statements.
- Prior to the calculation of financial ratios, reported financial statements are often reformulated and adjusted by analysts to make the financial ratios more meaningful as comparisons across time or across companies.
- In terms of reformulation, earnings might be separated into recurring and non-recurring items. In terms of adjustment of financial statements, analysts may adjust earnings numbers up or down when they suspect the reported data is inaccurate due to issues like earnings management.

INDUSTRY COMPARISONS

- One of the advantages of ratio analysis is that it allows comparison across companies. However, while ratios can be quite helpful in comparing companies within an industry and even across some similar industries, cross-industry comparisons may not be helpful and should be done with caution.
- An industry represents a classification of companies by economic activity, but "industry" can be too broad or narrow a definition for ratio analysis comparison. When comparing ratios,

companies should be comparable in terms of having similar characteristics in the statistics being analyzed.
- Valuation using multiples only reveals patterns in relative values. For multiples to be useful, the statistic involved must bear a logical, meaningful relationship to the market value observed, which is something that can vary across industry.

BENCHMARKING

- Financial ratios allow for comparisons and, therefore, are intertwined with the process of benchmarking, comparing one's business to that of relevant others or of the same company at a different point in time processes on a specific indicator or series of indicators.
- Benchmarking can be done in many ways and ratio analysis is only one of these. One benefit of ratio analysis as a component of benchmarking is that many financial ratios are well-established calculations derived from verified data.
- Benchmarking using ratio analysis can be useful to various audiences; for example, investors and managers interested in incorporate quantitative comparisons of a company to peers.

LIMITATIONS OF FINANCIAL STATEMENT ANALYSIS

- Ratio analysis is hampered by potential limitations with accounting and the data in the financial statements themselves. This can include errors as well as accounting mismanagement, which involves distorting the raw data used to derive financial ratios.
- Proponents of the stronger forms of the efficient-market hypothesis, technical analysts, and behavioral economists argue that fundamental analysis is limited as a stock valuation tool, all for their own distinct reasons.
- Ratio analysis can also omit important aspects of a firm's success, such as key intangibles, like brand, relationships, skills and culture. These are primary drivers of success over the longer term even though they are absent from conventional financial statements.
- Other disadvantages of this type of analysis is that if used alone it can present an overly simplistic view of the company by distilling a great deal of information into a single number or series of numbers that may not provide adequate context or be comparable across time or industry.

IMPACT OF INFLATION ON FINANCIAL STATEMENT ANALYSIS

- Many of the historical numbers appearing on financial statements are not economically relevant because prices have changed since they were incurred.
- Since the numbers on financial statements represent dollars expended at different points of time and, in turn, embody different amounts of purchasing power, they are simply not additive.
- Reported profits may exceed the earnings that could be distributed to shareholders without impairing the company's ongoing operations.
- Future earnings are not easily projected from historical earnings. Future capital needs are difficult to forecast and may lead to increased leverage, which increases the risk to the business.
- The asset values for inventory, equipment and plant do not reflect their economic value to the business.

DISINFLATION

- Disinflation occurs when the increase in the "consumer price level" slows down from the previous period when the prices were rising. Disinflation is the reduction in the general price level in the economy but for a very short period of time.
- The causes of disinflation may be a decrease in the growth rate of the money supply. If the central bank of a country enacts tighter monetary policy, the supply of money reduces, and money becomes more upscale and the demand for money remains constant.

- Disinflation may result from a recession. The central bank adopts contractionary monetary policy, goods, and services are more expensive. Even though the demand for commodities fall, the supply still remains unaltered. Thus, the prices would fall over a period of time leading to disinflation.

DEFLATION

- In the IS/LM model (Investment and Saving equilibrium/ Liquidity Preference and Money Supply equilibrium model), deflation is caused by a shift in the supply-and-demand curve for goods and services, particularly a fall in the aggregate level of demand.
- In more recent economic thinking, deflation is related to risk: where the risk-adjusted return on assets drops to negative, investors and buyers will hoard currency rather than invest it. This can produce a liquidity trap.
- In monetarist theory, deflation must be associated with either a reduction in the money supply, a reduction in the velocity of money or an increase in the number of transactions. But any of these may occur separately without deflation.
- In mainstream economics, deflation may be caused by a combination of the supply and demand for goods and the supply and demand for money; specifically the supply of money going down and the supply of goods going up.
- The effects of deflation are: decreasing nominal prices for goods and services, increasing buying power of cash money and all assets denominated in cash terms, possibly decreasing investment and lending if cash holdings are seen as preferable, and benefiting recipients of fixed incomes.

DISCREPANCIES

- At the end of each month when you get your bank or credit card statement, you will need to reconcile each account in your accounting program against the statement.
- You will want to double check that you entered the correct starting and ending balances for the account, and if you did, go back through all the transactions until you find the problem. Then correct it and you can proceed with your reconciliation.
- In accounting, reconciliation refers to a process that compares two sets of records (usually the balances of two accounts) to make sure they are in agreement.
- It depends on the type of discrepancies, most accounting discrepancies are due to the lack of accuracy (decimal places) when breaking down a large figure. Although more decimal places in your calculations can help solve discrepancies it can look rather unsightly on a report.

EXTRAORDINARY GAINS AND LOSSES

- Extra gains or losses are nonrecurring, onetime, unusual, non-operating gains or losses that are recorded by a business during the period.
- No items may be presented in the income statement as extraordinary items under IFRS regulations, but are permissible under US GAAP. (IAS 1.87) The amount of each of these gains or losses, net of the income tax effect, is reported separately in the income statement.
- Examples of extraordinary items are casualty losses, losses from expropriation of assets by a foreign government, gain on life insurance, gain or loss on the early extinguishment of debt, gain on troubled debt restructuring, and write-off of an intangible asset.

SELECTED FINANCIAL RATIOS AND ANALYSES

- When using comparative financial statements, the calculation of dollar or percentage changes in the statement items or totals from one period to the next or for the timeframe presented is referred to as horizontal analysis.
- Vertical analysis performed on an income statement is especially helpful in analyzing the relationships between revenue and expense items, such as the percentage of cost of goods sold to sales.

- Financial ratios, which compare one value in relation to another value over a 12 month period, are computed using information from a company's financial statements. Ratios can identify various financial attributes, such as solvency and liquidity, profitability, and return on equity.
- An example of a financial ratio is the current ratio, used to determine a company's liquidity, or its ability to meet its short term obligations. When comparing two companies, in theory, the entity with the higher current ratio is more liquid than the other.
- Often a financial ratio, which is a relative magnitude of two selected numerical values taken from a company's financial statements is used to find out a specific piece of information such as the quality of income.

MODULE 3 – FORECASTING AND PRO FORMA FINANCIAL STATEMENTS

SALES FORECAST INPUT

- Net sales are operating revenues earned by a company for selling its products or rendering its services.
- Gross sales are the sum of all sales during a time period. Net sales are gross sales minus sales returns, sales allowances, and sales discounts.
- The purpose of profit-based sales target metrics is to ensure that marketing and sales objectives mesh with profit targets.

INPUTS TO THE PRODUCTION SCHEDULE

- A good purchased as a "raw material" goes into the manufacture of a product.
- A good only partially completed during the manufacturing process is called "work in process".
- When the good is completed as to manufacturing but not yet sold or distributed to the end-user, it is called a "finished good".
- Inventory management is primarily about specifying the shape and percentage of stocked goods.
- Basic reasons for keeping an inventory involve time, uncertainty and economics of scales.

INPUTS TO COGS

- Costs include all costs of purchase, costs of conversion, and other costs incurred in bringing the inventories to their present location and condition.
- The key components of cost generally include: parts - raw materials and supplies used, labor - including associated costs such as payroll taxes and benefits, and overhead of the business allocable to production.
- A miscalculation or faulty estimation can be amplified drastically, causing a vastly different forecasted amount of income than what will actually come to pass.

OTHER EXPENSES

- Other expenses include operation expenses section and non-operation expenses section.
- Operation section expenses include SG&A, depreciation, amortization, and R&D expenses.
- Non-operation section expenses include finance costs, income tax expense, and discontinued operations expenses.
- SG&A is usually understood as a major portion of non-production related costs, in contrast to production costs such as direct labor.

PRO FORMA INCOME STATEMENT

- The *pro forma* accounting is a statement of the company's financial activities while excluding "unusual and nonrecurring transactions" when stating how much money the company actually made.
- Income statement is a company's financial statement that indicates how the revenue is transformed into the net income during a certain period of time.
- *Pro forma* Income statement includes revenue, COGS, operational expenses and non-operational expenses.

PRO FORMA BALANCE SHEET

- The pro forma accounting is a statement of the company's financial activities while excluding "unusual and nonrecurring transactions" when stating how much money the company actually made.

- In business, pro forma financial statements are prepared in advance of a planned transaction, such as a merger, an acquisition, a new capital investment, or a change in capital structure such as incurrence of new debt or issuance of equity.
- Pro forma figures should be clearly labeled as such and the reason for any deviation from reported past figures clearly explained.

BALANCE SHEET ANALYSIS

- Balance sheet is a summary of the financial balances of a sole proprietorship, a business partnership, a corporation or other business organization. Assets, liabilities and ownership equity are listed as of a specific date, such as the end of its financial year.
- Balance sheet analysis (or financial analysis) the process of understanding the risk and profitability of a firm (business, sub-business or project) through analysis of reported financial information, particularly annual and quarterly reports.
- Financial ratio analysis should be based on regrouped and adjusted financial statements. Two types of ratio analysis are performed: 3.1) Analysis of risk and 3.2) analysis of profitability.
- Balance sheet analysis consists of 1) reformulating reported Balance sheet, 2) analysis and adjustments of measurement errors, and 3) financial ratio analysis on the basis of reformulated and adjusted Balance sheet.

RECEIPTS

- Cash receipts come from internal sources, such as cash from sales and accounts receivable, and external sources, such as bank loans or accounts receivable financing.
- A company needs to understand the timing involved with cash-producing or cash-depleting activities before it can properly plan for cash flows.
- The receipt cycle is the total time between when products or services are delivered and when payment from the customer clears the bank.
- The overall objective for a company should be to decrease the receipt cycle.

PAYMENTS

- Cash payments must be made for relevant expenses, which include those to suppliers for inventory or other supplies, employees for wages, government for taxes, and lenders for interest on borrowed money.
- A company's objective in regards to the cash dispersement cycle should be to increase the cycle time, or delay making payments until they are due.
- Typical cash outflows from investing activities include purchase of capital assets, purchase of bonds/notes or shares of other entities, and loans to other entities.
- Typical cash outflows from financing activities include payments of dividends to the company's own shareholders, redemption (repurchase) of company's own shares, and repayment of principal and interest on company's own bonds or notes.

THE FORECAST BUDGET

- Cash is the most liquid of assets, and it represents the lifeblood for growth and investment.
- If a business runs out of cash and is not able to obtain new financing, it will become insolvent.
- In order to generate cash, a company manages activities. such as billing customers as quickly as possible, disbursing payments only when they come due, collecting cash on overdue accounts, and investing idle cash.
- What a cash flow forecast does is estimate cash inputs and outputs over a period of time, usually at least 90 days, in order to give you assurance that your business will have the cash necessary to meet its obligations to others.

RATIO ANALYSIS AND EPS

- Financial analysts use financial ratios to compare the strengths and weaknesses in various companies.
- Financial ratios quantify many aspects of a business and are an integral part of the financial statement analysis. Financial ratios are categorized according to the financial aspect of the business which the ratio measures.
- Earnings per share (EPS) is the amount of earnings per each outstanding share of a company's stock.

IMPACTS OF FORECASTING ON A BUSINESS

- Business planning and forecasting refers to the set of activities where business operations are planned against the business strategy.
- Forecasting financial statements comprises the estimation of several values - including sales, costs, and expected interest rates.
- It is always easier to forecast future performance of a business if your business is already up and running because there are past trading results to look at.
- Forecasting can be used in Supply Chain Management to make sure that the right product is at the right place at the right time.
- On a broader level, economic forecasting is the process of making predictions about the economy as a whole.

REGRESSION ANALYSIS FOR FORECAST IMPROVEMENT

- Regression Analysis is a causal / econometric forecasting method. Some forecasting methods use the assumption that it is possible to identify the underlying factors that might influence the variable that is being forecast.
- Regression analysis includes several classical assumptions.
- Regression analysis includes many techniques for modeling and analyzing several variables when the focus is on the relationship between a dependent variable and one or more independent variables.
- A large body of techniques for carrying out regression analysis has been developed. Familiar methods, such as linear regression and ordinary least squares regression, are parametric.

IMPACT OF MODIFYING INPUTS ON BUSINESS OPERATIONS

- Accounts receivable has a great effect on a firm's expected cash inflows, and thus modifying this input on a forecast will affect how much cash a company decides to have on hand.
- Because of its prevalence as an expense, modifying the amount of inventory will have far reaching consequences on all forecasted financial statements.
- Accounts payable will influence the current liabilities of a business; therefore, its modification will change a company's perspective on the amount of cash-on-hand needed.