Cash Flow Statement items (Indirect Cash Flow Approach**):**

1. Net Income
2. Add Depreciation Expense
3. Subtract Increase in Current Assets: Cash, Inventory
4. Add Increase in Current Liabilities: A/c Payable
5. Increase in A/c Payable 500
6. Cash Flow from Operations
7. Cash Flow from Investments all cash sale and purchases of non-current assets and marketable securities
8. Cash Flow from Financing includes all cash changes in loans, leasing, and equity etc.
9. Net Cash Flow from All Activities should match the difference of two closing balance.

LIQUIDITY & SOLVENCY RATIOS:

1. **Current Ratio = Current Assets / Current Liabilities**
   A ratio of (2:1) is considered ideal.

2. **Quick/Acid Test ratio = (Current Assets – Inventory) / Current Liabilities**
   The quick ratio measures the liquidity and points out the inventory piling problem

3. **Average Collection Period = Average Accounts Receivable / (Annual Sales/360)**
   Also known as **Days Sales Outstanding**,
   Average collection period shows in how many days the Accounts receivables of the company are converted into cash.

PROFITABILITY RATIOS:

The profitability ratios show the combine effects of liquidity, asset management, and debt management on operating result.

1. **Profit Margin (on sales) = [Net Income / Sales] X 100**
   The higher the ratio, the better it is. Most of the companies compare this ratio to the previous years' ratios to assess if the company is better off.

2. **Return on Assets = [Net Income / Total Assets] X 100**
   It shows the profitability of the company against each dollar invested in total assets.
   To find if the assets have been used efficiently enough to generate profits.

3. **Return on equity = [Net Income/Common Equity]**
   This ratio shows that for each dollar in equity how much profit is generated by the company.

ASSET MANAGEMENT RATIOS:

These measures show how effectively the firm has been managing its assets.

1. **Inventory Turnover = Sales / inventories**
   Inventory turnover shows the number of times the inventories are replenished within one accounting cycle. The inventory turnover confirms whether or not the major portion of the current assets of the firm is tied up in inventory. This ratio is also used in measuring the operating cycle and cash cycle of the firm. A higher turnover is desirable as it reflects the liquidity of the inventories.

2. **Total Assets Turnover = Sales / Total Assets**
   To measure how effectively a company has used its total assets to generate revenues

DEBT (OR CAPITAL STRUCTURE) RATIOS:

1. **Debt-Assets = Total Debt / Total Assets**
   The greater the proportion of debt in the financing mix, the less willing creditors, and investors would be to provide more finances to the company. In Pakistan, the debt to assets ratio is prescribed in prudential regulations by the State Bank of Pakistan as a guideline for the banks (creditors). A ratio greater than 0.66 to 1 is considered alarming for the providers of funds.

2. **Debt-Equity = Total Debt / Total Equity**
   Another commonly used ratio, debt to equity, explicitly shows the proportion to debt to equity. A ratio of 60 to 40 is used for new projects to raise funds.

3. **Times-Interest-Earned = EBIT / Interest Charges**
   Times-interest-earned reflects the ability of a company to pay its financial charges (interest). Conceptually, the interest charges are to be paid from the **earnings before interest and taxes**. A ratio of 4 to 1 shows that the company covers the interest charges 4 times, which is generally considered satisfactory. A high **times-interest-earned** ratio is a good sign, especially for the creditors.

MARKET VALUE RATIOS:
These ratios give management an indication of what equity investors think of the company's past performance & future prospects

1. **Earning Per Share (EPS) = Net Income / Average No of Common Shares Outstanding**

2. **Price Earning Ratio (PE) = Market Price per share / Earnings per share**
   This ratio reflects the optimism, or lack thereof, investors have about the future performance of the company.

3. **Market /Book Ratio = Market Price per share / Book Value per share**
   Market to book ratio gives an indication how equity investors regard the company's value. This ratio is also used in case of mergers, acquisition or in the event of bankruptcy of the firm.

Ratios help us to compare different businesses in the same industry and of a similar size.

Limitations of Financial Statement Analysis (FSA):
Despite the fact that ratios are a useful analysis tool, there are certain limitations, which are important for an analyst to understand before applying this tool, in order to make his analysis more meaningful.

1. FSA is generally an outdated (because of Historical Cost Basis) post-mortem of what has already happened. It is simply a common starting point for comparison. Use Constant Rupee /Dollar analysis to account for inflation.

2. FSA is limited by the fact that financial statements are "window dressed" by creative accountants. **Window dressing refers to the understatement or overstatement of financial facts.**

3. Different companies use different accounting standards for Inventory, Depreciation, etc. therefore comparing their financial ratios can be misleading

4. FSA just presents a few static snapshots of a business' financial health but not the complete moving picture.

5. It's difficult to say based on Financial Ratios whether a company is healthy or not because that depends on the size and nature of the business.

Difference in Focus:
Financial Statements are prepared by financial accountants with a certain perspective, however the financial managers—the end users of these financial statements, have a different focus to draw meaningful conclusions out of these statements. These differences are listed below

Financial Accounting (FA) Focus:
1. Use Historical Value (assets are booked at original purchase price)
2. Follow Accrual Principle (calculate Net Income based on accrued expense and accrued revenue)
3. How to most logically, clearly, and completely represent the financial data.

Financial Management (FM) Focus:
1. Use Market Value (assets are valued at current market price)
2. Follow Incremental Cash Flows because an Asset's (and a Company's) Value is determined by the cash flows that it generates.
3. How to pick the best assets and liabilities portfolios in order to maximize shareholder wealth.

FM Measures of Financial Health:

M.V.A (Market Value Added):
Market Value Added is a measure of wealth added to the amount of equity capital provided by the shareholders. It can be determined by the following equation

MVA (Rupees) = Market Value of Equity – Book Value of Equity Capital
Following are the characteristics of **MVA**
1. It is a cumulative measure, i.e., it is measured from the inception of the company to date.
2. Market Value is based on market price of shares.
3. It shows how much more (or less) value the management has succeeded in adding (or reducing) to the company in the eyes of the general public / market.
4. It is used for incentive compensation packages for CEO's and higher level management.
5.

E.V.A (Economic Value Added) = EBIT (or Operating Profit) – Cost of Total Capital
Economic Value Added focuses on the managerial effectiveness in a given year.

EVA has the following characteristics
1. It is measured for any one year.
2. It is relatively difficult to calculate because Operating Profit depends on Depreciation Method, Inventory Valuation, and Leasing Treatment, etc. Also, a combined Cost of Total Capital (Debt and Equity) is difficult to compute.

Interest Formulas(Present Value and Discounting)

1. **Future Value (FV) = Present Value (PV) + (PV x i x n)** **where i = simple rate of interest**
   i. n = no. of years
2. **Future Value (FV) = Present Value (PV) x $(1+i)^n$** **where i = Compound rate of interest**
3. **Future Value (FV) = Present Value (PV) x $(1+i/m)^{nxm}$** **where m = intervals per year**
4. **Future Value (FV) = Present Value (PV) x $e^{i \times n}$** **where i = Continuous Compound Exponential Interest rate And e = 2.718**

Annuity & Perpetuity:

Annuity (FV) = CCF x $([(1+i/m)^{nxm}-1)/i]$ **where CCF = Constant Cash Flow**

Perpetuity (PV) = CCF/i **where CCF = Constant Cash Flow**