11.1 Sector Coverage

Data Services & Innovations Department strives hard to disseminate quality statistics. It not only produces primary data but also provides secondary data with analysis to the various stakeholders including researchers and policy makers. As the performance of financial sector reflects the financial health of an economy, standard analytical tools are used to gauge the performance of this vital sector.
The analysis[1] includes the following sectors[2]:

- Banks
- DFIs
- Microfinance Banks
- Investment Banks
- Leasing Companies
- Modaraba Companies
- Insurance Companies
- Exchange Companies
- Mutual Funds (close ended)

Consolidation is provided at the beginning of each sector's analysis. For banks, consolidation is at different levels. At first level, overall consolidation of all banks including foreign banks is given. The information and ratios relating to number of ordinary shares, dividend earning per share and breakup value per share are not taken into consideration because foreign banks do not have such type of information. The level of consolidation for banks is as follows:

- All Banks (overall)
  - Local Banks
    - Public Sector Banks
    - Private Sector Banks
    - Specialized Banks
  - Foreign Banks

Similarly, consolidated analysis of insurance companies is also provided to reflect financial health of Insurance Sector. The level of consolidation is as follows:

- Insurance Companies (overall)
  - Life Insurance
  - Non-Life Insurance
  - Takaful

[1]Since each sector has peculiar business activities, therefore, for analysis separate set of variables was taken into consideration. Similarly, an associated set of financial ratios has also been selected for each sector.

11.2 Methodology

Methodology used for analysis is ratio analysis because it is a powerful tool to analyze financial statements of any company. Ratio analysis measures inter-relationship between various items of the financial statements. Ratios are taken as guide lines for these are useful in evaluating a company's financial position and operation and making comparison with results in previous years or with others in the same industry. The primary objective of ratio analysis is to point out areas requiring further investigation. Ratios are calculated from the following financial statements and relevant notes to accounts:

- Balance Sheet
- Profit and Loss Account
- Statement of Changes in Equity
- Cash Flow Statement

Total equity is computed as the sum of ordinary share capital plus reserve & surplus plus un-appropriated profit/loss while the revaluation, intangible assets etc. are clubbed together in 'others' of total equity section. For foreign banks, the ordinary share capital is replaced by head office capital account. Since the financial sector comprises variety of financial institutions having peculiar business activities, therefore, variables used for analysis would be different for each sector.

11.3 Concepts and Definitions

Banks, Development Finance Institutions (DFIs) and Microfinance Banks (MFBs)

Following variables are used for analysis of banks, DFIs and MFBs:

Shareholders' Equity

The sum of following items except "others" is considered for analysis:

- Ordinary Share Capital or Head Office Account (in case of foreign bank)
- Reserves
- Un-appropriated Profit/Loss
- Others

Liabilities

Bills Payables, borrowings and deposits being the major items contributing towards liabilities of banks, DFIs and MFBs are taken for analysis, the remaining heads of liabilities are pooled under 'others':

- Bills Payables
- Borrowing from Financial Institutions
- Deposits and Other Accounts
- Others

Assets

The following items are included in the analysis. The relevant information is taken from balance sheet as well as respective notes to accounts.

- Cash and Balances with Treasury Banks
- Balances with Other Banks
- Lending to Financial Institutions
- Investment
- Gross Advances
- Advances –Non-Performing/Classified
- Provision Against Advances
- Advances Net of Provision
- Fixed Assets
- Others

Profit and Loss Account

The following items are included for analysis. The relevant figures are obtained from profit and loss accounts and notes to financial statements.

- Interest Earned
- Interest Expensed
- Net Interest Income
- Provision and Write-offs
- Net Interest Income after Provision
- Non-Interest Income
- Non-Interest Expense
- Administrative Expenses
- Profit/Loss before Tax
- Profit/Loss after Tax

Other Items

- **No. of Ordinary Shares**
  Outstanding shares at end of the period as shown in balance sheet.
- **Cash Dividend**
  The amount of cash dividend is taken as the percentage declared during the period.
- **Stock Dividend/Bonus Shares**
  The number of bonus shares declared is also taken as percentage amount distributed during the period.
- **Cash Generated from Operating Activities**
  The amount is taken from cash flow statement
- **Commitment and Contingencies**
  This is an off balance sheet item. The detail is given in notes to accounts and the sum of all kinds of commitments and contingencies is taken for analysis.

Leasing Companies

Following variables are involved in the analysis of leasing companies:

Shareholders' Equity

Shareholders' equity includes share capital, reserves and un-appropriated profit/loss. Any other item(s) mentioned in the balance sheet under shareholders' equity is pooled under the head 'others'.

Liabilities

Borrowings from financial institutions and deposits with financial institutions are the major items contributing towards liabilities of leasing companies. For analysis, these two items are taken separately while the remaining items of liabilities are pooled under 'others'

Assets

Assets are classified into current and non-current. Major items of non-current assets are mentioned below where remaining items of non-current assets are pooled under "others"

Non-Current Assets

- Term Deposit Certificates
- Net Finance-Investment
- Advances – Net
- Fixed Assets
- Others

Current Assets

Three main items are taken for analysis while the rest are pooled under 'others'
- Cash and Balances with Central Bank
- Balances with Other Banks
- Placement with Other Banks
- Others

Profit and Loss Account

The amounts reported under the following heads are extracted from profit and loss accounts along with relevant notes to accounts:

- Income from Operating Lease
- Income from Investment
- Income from Finances
- Other Income
- Administrative Expenses
- Profit/Loss before Tax
- Profit/Loss after Tax

Other Items

- **No. of Ordinary Shares**
  The number of shares outstanding as on balance sheet date
- **Cash Dividend**
  The amount of cash dividend is taken as percentage of the dividend declared during the period.
- **Stock Dividend**

The number of bonus shares declared is also taken as percentage amount during the period.

- **Cash Generated from Operating Activities**
  The amount is taken from the cash flow statement.

Investment Banks

Following variables are used in the analysis of investment banks:

Shareholders' Equity

The composition and explanation of shareholders' equity is same as explained earlier.

Liabilities

The amount of current and non-current liabilities is taken from the balance sheet and the sum of these two is the same as total liabilities of the company.

Assets

Current assets are classified into 'cash and bank balances' and 'others' while non-current assets are divided into three heads i.e., long term investment, fixed assets, and others.

Current Assets

- Cash and Banks Balances
- Others

Non-Current Assets

- Long Term Investment
- Fixed Assets
- Others

Profit and Loss Account

The following items are taken for analysis. The relevant figures are taken from profit and loss account and notes to financial statements.

- Gross Revenues
- Administrative and Operating Expenses
- Operating Profit
- Profit/Loss before Tax
- Profit/Loss after Tax

Other Items

These include:

- No. of Ordinary Shares

- Cash Dividend
- Stock Dividend
- Cash Generated from Operating Activities

Mutual Funds (Close Ended)

The analysis includes the following variables:

Shareholders' Equity

The composition and explanation of shareholders' equity is same as explained earlier.

Liabilities

As the financial activities of mutual funds are limited, the composition of liabilities is divided into two heads as follows:

- Payable to Investment Adviser
- Others

Assets

The asset base of mutual fund is also not broad, therefore, for analysis it is limited to three items. These are available in the company's balance sheet and notes to financial statements.

- Cash and Banks Balances
- Investment
- Others

Profit and Loss Account

The following items are taken into consideration for analysis. The relevant figures are obtained from profit and loss account and notes to financial statements.

- Interest Income
- Dividend Income
- Net Gain on Sale of Investment
- Net Unrealized Gain
- Income from Future Transactions
- Capital Gain
- Other Income
- Remuneration to Management Co-advisor
- Remuneration to Trustees/Custodian
- Brokerage, Commission /Fee
- Administrative and General Expenses
- Other Expenses

Other Items

The information on the following is extracted from the balance sheet and relevant notes to financial statements:

- No. of Ordinary Shares
- Cash Dividend

- Stock Dividend
- Cash Generated from Operating Activities

Modaraba Companies

Following variables are included in the analysis of modaraba companies:

Certificate Holders Equity

Modaraba company issues certificates instead of shares. Therefore the amount subscribed through issuing certificates is termed as certificate capital. For analysis, certificate holders' equity is the sum of 'certificate capital', 'reserves', and un-appropriated profit/loss. Any other items under the section of certificate holders equity is pooled under the head of 'others'.

- Certificates Capital
- Reserves
- Un-appropriated Profit/Loss
- Others

Liabilities

These include current and non-current liabilities taken from the balance sheet.

Assets

The current and non-current assets and their break up are taken from balance sheet. In case of current assets the amount of cash and bank balances is taken separately while the remaining current assets are pooled under "others". Similarly, long term investment and fixed assets are taken individually while the remaining non-current assets are pooled under "others".

Current Assets

- Cash and Banks Balances
- Others

Non-Current Assets

- Long Term Investment
- Fixed Assets
- Others

Profit and Loss Account

The following items are taken for analysis. The relevant figures are taken from profit and loss account and notes to financial statements.

- Gross Revenues
- Operating Expenses
- Operating Profit
- Modaraba Company Management Fee
- Profit/Loss before Tax
- Profit/Loss after Tax

Other Items

These include:

- No. of certificates outstanding as mentioned in balance sheet.
- Cash Dividend
- Stock Dividend
- Cash Generated from Operating Activities

Exchange Companies

Following variables are included for analysis of exchange companies:

Shareholders' Equity

- Share Capital
- Reserves
- Accumulated Profit/Loss
- Others

Liabilities

These include:

- Current Liabilities
- Non-current Liabilities

Assets

These include:

Current Assets

- Cash and Banks Balances
- Others

Non-Current Assets

- Long Term Investment
- Fixed Assets
- Others

Profit and Loss Account

The following items are taken from profit and loss account of the company:

- Revenues
- Admin and General Expenses
- Profit/Loss before Tax
- Profit/Loss after Tax

Other Items

The following items are extracted mainly from notes to accounts of the company:

- No. of Ordinary Shares
- Cash Dividend

- Stock Dividend
- Cash Generated from Operating Activities

Insurance Companies

Following variables are involved in the analysis of Insurance Companies:

Shareholders' Equity
These include:

- Share Capital
- Reserves
- Un-appropriated Profit/Loss
- Others

Liabilities
These include:

- Balance in the Statutory Fund
- Outstanding Claims, Premiums Received in Advance, Amount Due to Other Insurers
- Other Liabilities

Assets
These include:

- Cash and Balances with Banks
- Deposit with Banks
- Investment in Securities and Properties
- Advances
- Loans to employees
- Other Assets

Profit and Loss Account
These include:

- Interest/Investment Income
- Net Premium
- Gross Premium
- Gross Claims
- Net Claims
- Underwriting Profit
- Profit before Tax
- Profit after Tax

Other Items
These include:

- No. of Ordinary Shares
- Cash Dividend
- Stock Dividend
- Cash Generated from Operating Activities

11.4 Performance Indicators

Pakistan's financial sector is an integration of institutions of diversified nature including Banks DFIs, Leasing Companies, Modaraba Companies, Insurance Companies, Investment Banks, etc. Therefore, ratios used to analyze these sectors may be different in some cases as different sectors have peculiar business activities but some ratios are common to all sectors. Some important ratios and their explanations are given below which may be read in combination with the analysis sheet of each sector separately.

Efficiency/Profitability Ratio

Spread Ratio

$$= \frac{\text{Net Markup/Interest Income}}{\text{Markup/Interest Earned}} * 100$$

It is the amount of Net Markup/Interest Income divided by Markup/Interest Earned . This ratio is useful for Banks, DFIs and MFBs.

Net Interest Margin Ratio

$$= \frac{\text{Total Interest Income} - \text{Total Interest Expense}}{\text{Total Assets}} *100$$

This ratio indicates the earning capacity through core banking business by utilizing all assets. Banks normally borrow from savers and lend to investors. It is the ratio between the difference of interest income and interest expense to total assets. It is also useful for Banks, DFIs and MFBs.

Return on Assets (ROA)

$$\text{ROA} = \frac{\text{Net Profit after Tax}}{\text{Total Assets}} * 100$$

This ratio expresses the capacity of earning profit by a bank on its total assets employed in the business. It is calculated as percentage of net profit after tax to total assets. It is useful for whole financial sector.

Return on Equity (ROE)

$$\text{ROE} = \frac{\text{Net Profit after Tax}}{\text{Total Shareholders' Equity}} *100$$

Total Shareholders' Equity (Pakistani Banks) = Share Capital + Reserves + Un-appropriated Profit (Loss)
Total Shareholders' Equity (Foreign Banks) =H.O Capital Account + Reserves +Unremitted Profit
This ratio expresses the return on shareholders' equity. ROE is a direct measure of returns to the shareholders. It is calculated as a percentage of the net profit after tax to total Shareholders' equity. It is also useful for whole financial sector.

Non-Interest Income to Total Assets Ratio

$$= \frac{\text{Total Non}-\text{Markup Income}}{\text{Total Assets}} * 100$$

Ratio on incomes earned other than mark-up e.g. capital gains, commission, fee to total assets etc. This ratio expresses how much income is earned other than mark-up through other functions of the bank by employing total assets. It is useful for Banks, DFIs and MFBs.

Interest Ratio

$$= \frac{\text{Interest Paid}}{\text{Interest Earned}} * 100$$

This ratio expresses the payment of interest mainly to depositors. The lower the ratio, the less the company is burdened by debt expenses. It is useful for Banks, DFIs and MFBs.

Administrative Expenses to Profit before Tax

$$= \frac{\text{Administrative Expenses}}{\text{Profit before Tax}}$$

This ratio expresses the relationship between administrative expenses and profit before tax. It is useful for whole financial sector.

Net Interest Income after Provision to Total Assets

$$= \frac{\text{Net Interest Income after Provision}}{\text{Total Assets}} * 100$$

This is the ratio between interests earned less provision to total assets. It is useful for Banks, DFIs and MFBs.

Non-Interest Expenses to Total Income

$$= \frac{\text{Non}-\text{interest expenses}}{\text{Total income}} * 100$$

The ratio expresses the percentage of non-interest expenses to total income which reflects efficiency of management in applying the banks' resources. It is useful for Banks, DFIs and MFBs.

Administrative Expenses to Non-Interest Income

$$= \frac{\text{Administrative Expenses}}{\text{Non}-\text{Interest Income}}$$

This ratio expresses total administrative expenses to non-interest income. It is useful for Banks, DFIs and MFBs.

Earnings per Share (EPS)

$$= \frac{\text{Net Profit after Tax}}{\text{No.of Ordinary Shares}}$$

EPS is the ratio between net profit after tax to number of shares outstanding at the end of the year as shown in balance sheet and its relevant notes to accounts. It is useful for whole financial sector except for Modaraba Companies where certificates are issued for raising capital.

Return on Capital Employed (ROCE)

$$= \frac{\text{Profit before Tax}}{(\text{Total Assets – Current Liabilities})} *100$$

ROCE is a ratio that indicates the efficiency and profitability of a company's capital investments. The amount of capital employed is calculated by subtracting current liabilities from total assets. It is useful for whole financial sector except for banks, DFIs, Insurance, mutual fund.

Return on Revenue (ROR)

$$= \frac{\text{Net income}}{\text{Revenue}} * 100$$

This is a measure of a company's profitability, calculated as net income divided by revenue. This ratio is useful for Leasing Company, Mutual Fund, etc.

Lease Ratio

$$= \frac{\text{Lease Income}}{\text{Total Income}} * 100$$

The core function of a leasing company is to earn profit from operating and financial lease. This ratio expresses how much portion of total income is being generated through its core business. It is useful for leasing company.

Operating Expense Ratio

$$= \frac{\text{Operating Expense}}{\text{Net Income}} *100$$

It is a measure of operating efficiency i.e., how well the management controls its expenses. Operating expense ratio can be used to gauge the general health of the core or other businesses. It is useful for Modaraba and Investment Banks.

Gain Ratio

$$= \frac{\text{Total Gains}}{\text{Total Income}} * 100$$

A total gain comprises gain on sales of securities, gain on re-measurement, gain on disposal of long-term investment, etc. It is useful for Mutual Fund.

Trading Income Ratio

$$= \frac{\text{Gain on Sale of Investments}}{\text{Total Income}} * 100$$

The core business of mutual fund is to gain from trading of shares and securities and the higher ratio reflects that funds are being efficiently managed. Both figures are taken from the income statement. It is useful for Mutual Fund.

Management Expenses Ratio

$$= \frac{\text{Remuneration to Advisor}}{\text{Total Expenses}} * 100$$

For mutual funds management expenses ratio is calculated by dividing remuneration to adviser by total expenses.

Net Investment in Finance Lease to Total Assets

$$= \frac{\text{Net Investment in Finance Lease}}{\text{Total assets}} * 100$$

This ratio expresses the relationship of net investment in finance lease to total assets. This ratio is useful for leasing companies.

Earning per Certificate

$$= \frac{\text{Profit after Tax}}{\text{No.of Certificates}}$$

The ratio between profits after tax to number of certificates is an important efficiency ratio because it reflects how much amount is earned on each certificate. It is useful for Modaraba Companies.

Net Claims incurred Ratio

$$= \frac{\text{Net Claims}}{\text{Net Premium}} *100$$

This expresses the efficiency of insurance company and is calculated as the claim incurred on net premium. Higher ratio indicates that the incurrence of claims is more than premium. It is useful for insurance companies.

Underwriting profit to Net profit

$$= \frac{\text{Underwriting Profit}}{\text{Net profit}} * 100$$

The ratio shows the percentage of underwriting profit as of net profit. Underwriting profit is net of underwriting income and expenses of the cost of obtaining new policies. This ratio is useful for insurance companies.

Investment Income to Net Premium

$$= \frac{\text{Investment Income}}{\text{Net Premium}} * 100$$

The ratio shows the relationship between investment income and net premium. This is one of the ratios used to measure efficiency of an insurance company.

Liquidity Ratios

Cash and Balances with Banks to Total Assets

$$= \frac{\text{Cash and Balances with Banks}}{\text{Total Assets}} * 100$$

This ratio expresses the percentage of total assets available in the form of highly liquid assets.

Total Deposit and other Accounts to Total assets

$$= \frac{\text{Total Deposit and other Accounts}}{\text{Total assets}} * 100$$

The ratio shows what percentage of total assets comprises total deposits and other accounts.

Investment and Total Assets

$$= \frac{\text{Total Investment}}{\text{Total Assets}} * 100$$

The ratio between Investment and total assets shows investment activity with reference to its total assets. It indicates the portion of total assets used for investment in various venues. This ratio is useful for banks, DFIs and insurance companies.

Advances and Total Assets

$$= \frac{\text{Advances (Net)}}{\text{Total Assets}} * 100$$

This ratio expresses the relationship of advances (net) to total assets. This ratio is useful for banks, DFIs and MFBs.

Total Liabilities to Total Assets

$$= \frac{\text{Total liabilities}}{\text{Total Assets}} * 100$$

The ratio shows the proportion of banks assets, which are financed through debt. This ratio is useful for banks, DFIs and MFBs.

Gross Advances to Deposits

$$= \frac{\text{Gross Advances}}{\text{Deposits}} * 100$$

The ratio expresses the percentage of gross advances to deposits and expresses the utilization of deposits in the core business of a bank, i.e., intermediation. This ratio is useful for banks, DFIs and MFBs.

Gross advances to Borrowing and Deposits

$$= \frac{\text{Gross Advances}}{(\text{Borrowing} + \text{Deposits})} * 100$$

The ratio expresses the percentage of gross advances to deposits and borrowings. This ratio shows activity of a banking business as it reflects that advances are being made more/less than deposits. This ratio is useful for banks, DFIs and MFBs.

Current Ratio

$$= \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

This ratio shows how many times current assets cover current liabilities and the strength of the company to pay immediate liabilities. This ratio is used for whole financial sector except for banks, DFIs and MFBs.

Long Term Investment to Total Assets

$$= \frac{\text{Long term Total Investment}}{\text{Total Assets}} * 100$$

The ratio between long-term investments to total assets shows investment activity with reference to its total assets. It indicates the portion of total assets used to invest in different venues.

Assets Quality Ratios

Non-Performing Loans (NPLs) to Gross Advances

$$= \frac{\text{NPLs}}{\text{Gross Advances}} * 100$$

This ratio expresses the quality of loan portfolio of a bank. It shows the percentage of NPLs as gross advances made by a bank and evaluates assets quality based on loan portfolio. This ratio is useful for banks, DFIs and MFBs.

Provision against NPLs and Gross Advances

$$= \frac{\text{Provision against NPLs}}{\text{Gross Advances}} * 100$$

The ratio between provisions against classified loans/advances to gross advances reflects the quality of advances of banks, DFIs and MFBs.

NPLs to Equity Ratio

$$= \frac{\text{NPLs}}{\text{Total Shareholders' equity}} * 100$$

Where,
Total Shareholders' Equity (Pakistani Banks) = Share Capital + Reserves + Un-appropriated Profit (Loss)
Total Shareholders' Equity (Foreign Banks) =H.O Capital Account + Reserves +Unremitted Profit

The ratio between NPLs to shareholders' equity indicates the exposure of the common shareholders to NPLs. This ratio is useful for banks, DFIs and MFBs.

NPLs write-off to NPLs Provision Ratio

$$= \frac{\text{NPLs write−off}}{\text{NPLs Provision}} * 100$$

This ratio is calculated for banks, DFIs and MFBs.

NPLs Provision to NPLs Ratio

$$= \frac{\text{Provision for NPLs}}{\text{NPLs}} * 100$$

The ratio reflects what percentage of provision has been made against NPLs. This ratio is useful for Banks, DFIs and MFBs.

Capital/Leverage Ratios

Capital Ratio

$$= \frac{\text{Total Shareholders' Equity}}{\text{Total assets}} * 100$$

Where,
Total Shareholders' Equity (Pakistani Banks) = Share Capital + Reserves + Un-appropriated Profit (Loss)
Total Shareholders' Equity (Foreign Banks) =H.O Capital Account + Reserves +Unremitted Profit.
The ratio between shareholders' equity and total assets expresses the percentage of equity in total assets.

Contingent Liabilities and Commitment to Shareholders' Equity

$$= \frac{\text{Contingent Liabilities } and \text{ Commitments}}{\text{Shareholders' Equity}}$$

The ratio between contingent liabilities and commitments to shareholders' equity expresses exposure of contingent liabilities and commitments by banks.

Break-Up Value per Share

$$= \frac{\text{Total Shareholders' Equity}}{\text{No.of Ordinary Shares}}$$

Break-up Value is net worth per share and is an important criterion to measure financial soundness of a company. The break-up value is calculated for whole financial sector except in case of foreign banks and Modaraba Companies.

Deposits to Equity Ratio

$$= \frac{\text{Total Deposits}}{\text{Total Shareholders' Equity}}$$

The ratio shows the relationship between total deposits in a bank to the total shareholders' equity.

Break-up Value per Certificate

$$= \frac{\text{Modaraba Certificate Holders' Equity}}{\text{No.of Modaraba Certificates}}$$

Break-up value is net worth per certificate and is one of the important criteria to measure the financial soundness of a company. This ratio is calculated for Modaraba Companies only.

Capital Ratio (Modaraba Company)

$$= \frac{\text{Modaraba Certificate holders' Equity}}{\text{Total assets}} * 100$$

The ratio expresses the percentage of equity in total assets. It is calculated for Modaraba Companies only.

Cash Flow Ratios

Cash Flow to Profit after Tax

$$= \frac{\text{Cash Generated from Operating Activities}}{\text{Profit after Tax}}$$

The ratio expresses proportions of cash being spun off from ongoing operations. This ratio is useful for the whole financial sector.

Cash flow to Current Liabilities Ratio

$$= \frac{\text{Cash Generated from Operating Activities}}{\text{Current Liabilities}}$$

The ratio reflects cash generation strength of a company to meet current liabilities. This ratio is calculated for all sectors except investment banks, insurance companies, banks, DFIs and mutual fund