FINANCE

Basic Concepts of Finance

1. Risk/Return Trade-off
2. Diversification
3. Cost Averaging
4. Asset Allocation
5. Random Walk Theory
6. Efficient Market Hypothesis
7. The Optimal Portfolio
8. Capital asset Pricing Model
9. Cost of Capital

1. Risk/Return Trade-off

- Higher risk -higher return and
- lower risk -smaller return.
- On the safe side of the spectrum, the risk free rate of return is represented by the return on government securities, as their chance of default is essentially zero. Thus, if the Risk free rate is 6% at any given time, for instance, this means that investors can earn 6% per year on their assets, essentially without risking anything.

2. Diversification

- Mixing a wide variety of investments within a portfolio.

- Rationale –Balancing of risk and returns yielding higher returns and a lower risk than any individual investments found within the portfolio.

- Goal of diversification :
  - to minimize the impact that the performance of any one security will have on the performance of the whole portfolio.
  - As such, diversification lowers the risk associated with the portfolio.
- While diversification is a straightforward concept, the practical application can be quite complicated. Indeed, there are numerous complex formulas to demonstrate how diversification works. Here are the three main practices which can help to ensure optimal diversification of a portfolio:
  1. Divide your portfolio among multiple investment vehicles, such as cash, stocks, bonds, mutual funds, and more.
  2. Vary the level of risk in the securities in which you invest. Pick investments with varied risk levels. This will help to ensure that large losses are offset by gains in other areas.
  3. Vary your securities according to industry. This helps to reduce the impact of risk that are industry-specific.

Still diversification is not a fool proof guarantee against loss. Virtually any investments takes on a certain degree of risk, regardless of how much diversification you employ.

3. Cost Averaging Investments

- This is a method in which a fixed sum is invested on a regular basis, irrespective of the markets trends. Thus more shares are bought when the market price are low and less when they are high.
- This result in fewer shares being purchased when prices are high, and more shares purchased when prices are low. Over time, the cost per share tends to average out. Through this process, an investor reduces his or her risk of investing a large amount in a single investment at the wrong time.
- It is a strategy that also benefits investors who do not begin the investment process with a significant sum of money to invest. If you are able to invest smaller amounts regularly, you can ensure that you take advantage of growth over the long term. It is not perfect, however, it prevents a loss in a market which is suffering from steady declines. Still, over the long term, this strategy tends to be an effective one.

4. Assets Allocation

- Asset allocation is an investment strategy that aims to balance risk and

reward by apportioning a portfolio assets recording to an individual's goals, risk tolerance and investment horizon. The three main asset classes equities, fixed income, and cash and equivalents- have different levels of risk and return, so each will behave differently over time.

- The concept of asset allocation is that older investors tend to look for lower levels of risk. After retiring, an investor may need to depend upon savings as the only source of income. Individuals at or nearing retirement age tend to invest more conservatively, as it is crucial that they preserve their assets at this stage.
- There are a number of general principles but the most common approach is to shift emphasis towards lower risk instrument (like bonds and treasuries) as one gets closer to retirement.

5. Random Walk Theory

- The random walk theory suggests that changes in stock prices have the same distribution and are the independent of each other, the past movement or trend of a stock price or market cannot be used to predict its future movement. In short, this is the idea that stocks take a random and unpredictable path.

6. **Efficient Market Hypothesis**

Share prices reflect all information.

Impossible to purchase low or sell high

Technical analysts dispute this theory

7. Portfolio Optimization

Investors behave rationally minimizing risk and maximizing returns

8. Capital Assets Pricing Model- CAPM

Expected return of a particular security or a portfolio is equal to the rate on a risk free security plus a risk premium.

Formula:

Required Return or expected Return=

Risk free Rate+ Beta*(Market Return-Risk free Rate)

9. Cost of Capital

Cost of Capital=Cost of Equity +Cost of Debt,where both are multiplied by appropriate weightage.

Cost of Equity=Risk Free rate of Return +ß(Expected Market Return-Risk Free Return)

DECISIONS IN FINANCE

1. Financing Decisions

When, wherefrom and How
Optimum Capital Structure

Other Factors : Control , Flexibility, Loan agreement terms, legal aspects etc.

2. Investment Decision

Capital Budgeting
Allocation of Capital

Important aspects of Investment Decision : Prospective Benefits and a cut off rate (Opportunity Cost) against which prospective benefits could be compared.

Evaluation Criteria:

Discounted Cash Flow:
Non Discounted Cash Flow

Discounted Cash Flow: NPV,IRR and Profitability Index

Formulae:
NPV=Using Present Value Tables
IRR=Discount rate at which NPV is zero
Profitability Index=Present Value of Inflow/Initial Cash Outflow

Non –Discounted Cash Flow:

Pay Back
Discounted Pay Back
Accounting Rate of Return

Formulae:
Pay Back Period=Initial Investment/Annual Cash Flow
Discounted Pay Back Period=Number of periods taken in recovering the investment outlay on present value basis
Accounting Rate of Return: Average rate of Return=Average Income/Average Investment
In this method, accounting rate of return is compared with the minimum rate established by the Management.

3. Return on Capital Employed (ROCE)

ROCE=EBIT+ Capital Employed

Capital Employed=Total Assets –Current Liabilities

4. Dividend Decisions

Dividend Payout Ratio and Retention Ratio

5. Dividend Yield

Dividend Yield=Dividend Paid/Stock Price

6. Liquidity Decisions

Proper trade off between Profitability and liquidity

FINANCIAL STATEMENT ANALYSIS

As per Schedule III

Balance Sheet
Profit & Loss Account
Cash Flow Statement
A Statemnt of Changes in Equity
Explanatory Note

PERFORMANCE ANALYSIS

Types of Ratios

Liquidity Ratios:

Indicate ability to meet current obligations.Liquidity should be neither Excess nor short

Leverage Ratios: Indicate mix of funds provided by owners and lenders

Activity Ratio:Efficiency with which funds are managed and Utilized

Profitability Ratio:To measure the operating efficiency of the enterprise

(i) Current Ratio

(ii) Quick ratio

(iii) Cash ratio

(iv) Interval Measure

CAPITAL STRUCTURE ANALYSIS

- **Leverage Ratios**

- **Debt Ratio**

- **Debt Equity Ratio**

- **Coverage Ratio**

- **Activity Ratio**

- **Inventory Turnover Ratio**

- **Debtor Turnover Ratio**

- **Average Collection period**

- **Aging Schedule**

- **Assets Turnover**

- **Fixed Assets Turnover Ratio**

- **Current Assets Turnover Ratio**

- **Working Capital Turnover Ratio**

- **Profitability ratio**

- **Gross Profit Margin**

- **Net profit Margin**

- **Net Profit Margin Based on (NOPAT)**

- **Operating Expense Ratio**

- **Return on Equity (ROE)**

- **Return on Investment (ROI)**

- **Earnings Per Share**

- **Dividend Per Share**

- **Dividend- Pay-out Ratio**

- **Dividend Yield and Earnings Yield**

- **Price Earning ratio**

- **Market Value to Book Value ratio**

- **Du Point Analysis Chart;**

  Ability of a company to increase its return on equity ratio.

  ROE=Profit Margin X Assets Turnover X Financial Leverage

CREDIT ANALYSIS

CASH FLOW ANALYSIS

- **Operating Activities**

- **Investment Activities**

- **Financing Activities**