# Portfolio Rebalancing

# Portfolio rebalancing

- Rebalance the portfolio to
- Meet objectives laid down even in
- Changed conditions

# Portfolio rebalancing

- Risk-return trade-off

- ***Cost of revising the portfolio:***
- Commissions and brokerages
- Bid-ask spread
- ***Non-financial cost***:
- Investment manager may lose his credibility

# Portfolio rebalancing

- ***Costs of trading away from rebalancing (buy and hold strategy):***
- 1. Holding a portfolio or an asset that is overpriced and hence inferior returns.
- 2. Composition of a portfolio may no longer reflect the investor’s objectives
- 3. A poorly diversified portfolio, which is riskier than what an investor can bear

# Pitfalls to be avoided in portfolio rebalancing

- 1. Projecting the past into future without analysis
- 2. Cultural differences

# Project the past into future without analysis

- Tendency to believe that anything that worked well in the past will continue to do so

# Cultural differences

- Behavior and attitudes of successful investors are often remarkably different from what can be expected from a profit-seeking organization.

- Commercial entities reward success and punish failure

# Cultural differences

- Successful investors do not hesitate to stay with the laggard till the profit potential is realized
- They do not sell securities because the returns are poor in one period, if the promise for the future is bright

# Cultural differences

- Another folly is going with the crowd

- Fund managers may find it easy to go with the market and lose money rather than go against it and lose money

# Need for rebalancing

- Many reasons why portfolio of a client may have to be changed

# Change in wealth

- According to utility theory, risk taking ability increases with increase in wealth
- People can afford to take more risk as they grow rich and benefit from its rewards
- But, in practice, may not be true
- As people get rich, they become more concerned about losing the newly got riches than getting richer

# Change in wealth

- Fund manager should observe the changes in the attitude of the investors toward risk and try to understand them in a proper perspective
- If investor turns to be more conservative after huge gains

# Change in time horizon

- Some events take place that may modify the time horizon

- Births, deaths, marriages and divorces impact investment horizon

# Changes in liquidity needs

- Investors may ask the portfolio manager to keep enough scope in portfolio to get some cash as and when they want
- Liquidity requirement reduces investible funds in fixed income and/or growth securities
- Reduces money available to achieve investor’s goal on return

# Changes in taxes

- Rate of tax under long-term capital gains is usually lower than the rate applicable for income
- Change in minimum holding period for long-term capital gains or rates

# Bull and bear markets

- Fluctuations in stock markets provide opportunities for both positive and negative aspects
- Periods where stock return is more than bond return and vice versa.
- Applies to individual securities also

# Central bank policy

- Central bank and other banks enjoy a greater power in influencing liquidity in capital markets
- Monetary and liquidity constraints influence stock markets
- Monetary policy also has immediate effect on money markets, though less effect on long-term bond yields.

# Inflation rate changes

- According to Fama, unexpected changes in the rate of inflation has effects in pricing of stocks in either direction
- When inflation increases beyond expectations, bond investors face a reduced real yield on the bonds.
- Nominal yield then rises so as to counteract the loss, bond prices fall.

# Inflation rate changes

- Significant impact on stock market returns as well.
- More than consumer price index, changes in producer prices provide better signals for future returns.

# Changing return prospects

- Other things being equal, changes in prices accompany changes in return prospects
- With each negative fluctuations in the bond’s price, its yield rises but its total return falls
- These changes eventually lead to the adjustments in the investor’s portfolio

# Transaction cost barrier

- Can never be recovered and cumulative erosion value can at times be harmful
- Consist of more than just commissions
- Actual cost of transacting is the difference between the realized price and the price that must have existed in the absence of the order
- There can be trades that one seeks to carry out, but fails to execute, which provides another tariff, an opportunity cost

# Asset mix rebalancing benefits

# Drifting mix

- Clients and investment managers strive hard, so that asset policy reflects an aversion towards risk as well as reflect a good return prospect

# Drifting mix

- Two sensible views on asset allocation exists.
- 1. Active shift should add value
- 2. Market efficiency which assumes to preclude profitable switching among asset classes

# Portfolio Revision

- Portfolio management, maximum emphasis on portfolio analysis and selection
- Optimal portfolio
- Portfolio revision is equally important

# Need

- Markets continually change
- Conditions change what is optimal
- Revision to ensure optimality

# Need

- 1. Availability of additional funds for investment
- 2. Change in risk tolerance
- 3. Change in the investment goals

# Need

- 4. Need to liquidate a part of the portfolio to provide funds for some alternative use

- Need from changes in the *financial market* or changes in the *investor's position* namely his financial status and preference

# Portfolio

- Portfolio is a mix of securities
- Two variables:
- 1. Securities included in the portfolio
- 2. Proportion of total funds invested in each security

# Portfolio Revision

- Involves

- Either changing the securities currently included in the portfolio

- Or altering the proportion of funds in the securities

# Objective

- Same as portfolio selection
- Maximising the return for a given level of risk
- Or
- Minimizing the risk for a given level of return

# Constraints in Portfolio Revision

- Adjusting the existing portfolio in accordance with the changes in the financial markets and the investor’s position

- Involves purchase and sale of securities

# Constraints in Portfolio Revision

- Transaction cost
- Taxes on capital gains
- Intrinsic difficulty – no clear methodology

# Portfolio revision strategies

# Active Revision

- Frequent and substantial
- ***Objective: Beat the market***
- Believe markets are not continuously efficient
- Securities mispricing at times gives an opportunity for beating market

# Active Revision

- Believe that different investors have divergent or heterogeneous expectations on markets

- Practitioners of active revision are confident of developing better estimates of the true risk and return of securities than rest of the market

# Active Revision

- Combines both fundamental and technical analysis
- Demand on time, skills and resources high
- Higher transaction cost

# Passive Revision

- Minor and infrequent
- Believes in market efficiency and homogeneity of expectations among investors
- According to predetermined goals
- Formula plans normally

# Formula Plans

- Prices of securities fluctuate
- Buy low and sell high

# Formula Plans

- Investors may not profit from price fluctuation
- But investors hesitate, prices may fall further or prices may not move upwards again
- Similarly, when prices rise, do not sell, thinking it may rise further

# Formula Plans

- Represent an attempt to exploit the price fluctuations in the market and make them a source of profit
- Make decision on timing of buying and selling automatic and eliminate the emotions

# Formula Plans

- Predetermined rules on when to buy or sell
- How much to buy and sell
- Calls for action with changes in securities market

# Formula Plans

- Demands the division of investor’s funds into:
- Aggressive portfolio - shares
- Conservative or defensive portfolio - bonds

# Formula Plans - Types

- Constant dollar value plan
- Constant ratio plan
- Dollar cost averaging

# Constant Dollar Value Plan

- When share prices fluctuate, value of aggressive portfolio changes

- When prices increase, total value of aggressive portfolio increases

- Sell some of the shares in the aggressive portfolio to the level of the original investment and invest it in bonds

# Constant Dollar Value Plan

- When share prices fall, total value of the aggressive portfolio falls

- To keep the total value of aggressive portfolio, funds are transferred from bonds to shares

# Constant Dollar Value Plan

- Effectively, investor buys when prices are low, sells when prices are high
- Action points to be carefully determined in advance
- Like 10%, 15% or 20%

# Constant Ratio Plan

- Variation of constant dollar value plan
- Ratio between aggressive portfolio and defensive portfolio predetermined like 1:1 or 1.5:1, etc
- Purpose is to keep the ratio constant

# Constant Ratio Plan

- Revision point is also predetermined like +/- 10%

# Dollar Cost Averaging

- Stock prices fluctuate up and down in cycles

- Dollar cost averaging utilises this cyclic movement to construct a portfolio at low cost

# Dollar Cost Averaging

- Plan stipulates that the investor invests a constant sum, say SAR 5,000 at periodic intervals such as a month, two months, quarter, etc

- Irrespective of price

- Periodic investment continued over a fairly long time to cover a complete cycle of share price movements

# Dollar Cost Averaging

- Investor can lower average cost per share than the average price prevailing in the market over the period
- More shares will be purchased when prices are low
- Less shares are purchased when prices are high

# Dollar Cost Averaging

- Plan does not envisage withdrawal of funds over the portfolio build time

- After building the portfolio, one of the formula plans can be followed

# Limitations of Formula Plans

- Not flexible
- No indication on which securities from the portfolio are to be sold or which securities are bought
- Only active portfolio strategy can provide answer to this question

# Practical problems in portfolio revision

- 1. Risk bearing ability
- 2. Investment planning horizon
- 3. Changes in objectives/asset composition

# Risk bearing ability

- Portfolio adjustments are complex
- Inclusion of the concept of risk in any statement of portfolio objectives raises certain practical issues
- How to express risk tolerance in practice?
- One approach is to express in terms of portfolio's volatility relative to the market, known as portfolio beta

# Risk bearing ability

- Portfolio beta is computed by using the beta of the individual securities in the portfolio weighted by the market value of each security in the total portfolio
- Once the risk tolerance is quantitatively defined, portfolios that are efficient can be constructed to produce the maximum return at the given level of risk

# Risk bearing ability

- But investors may have difficulty in expressing their risk-tolerances in terms of portfolio volatility
- Another approach would be to state the desired level of return and then seek to determine the minimum risk to be assumed to reach the desired return

# Investment planning horizon

- An investor has to specify clearly the time horizon over which he expects the results to be achieved
- Shorter the time frame, lower the probabilities of achieving expected returns
- Standard deviation of expected annual returns of a portfolio is greater for one year than for 4 to 5 years

# Investment planning horizon

- A client who expects his portfolio manager to be performing wizard, even in a very short time frame may be disappointed with the results.
- When portfolio revision take place, enough time has to be provided for the revised strategy to work

# Selection and revision of equity portfolios

- 1. Securities are selected individually and little consideration is given to their interrelationships when they are combined in a portfolio.
- Selection may be made on their perceived undervaluation in the market place or because of their superior financial performance.

# Selection and revision of equity portfolios

- Changes are made when prices change and the security is no longer undervalued or perceived undervaluation subsequently proved incorrect or fundamental characteristics change

# Selection and revision of equity portfolios

- 2. Modern portfolio theory approach
- Risk in individual securities (unsystematic risk) is not rewarded as market is efficient and securities are rarely mispriced
- Invest in index
- Rebalance when index changes

# Selection and revision of equity portfolios

- 3. Estimates are made about risk and return of individual securities
- Portfolio optimization models are used in order to construct an equity portfolio to give required return at the lowest risk level or highest return at a specified risk level

# Selection and revision of equity portfolios

- 4. Increasingly used in recent years.
- Portfolios are structured by classifying stocks into sectors, with the weight of each sector in the market portfolio
- Rationale for structuring and restructuring portfolios by sectors is based on the concept that broad economic trends and movements in major sectors of the economy influence prices

- Portfolio management theories have undergone a lot of changes. Practices have moulded theories and theories have given shape to varying practices.
- Hence, portfolio revisions are highly challenging and call for a lot of systematic, meticulous and patient effort.