EXAM NOTES FOR PTM EXAM SEMESTER 1 2013

Topic 1 – introduction of Portfolio Theory Management

- Risk averse investors will only assume more risk if they are compensated with greater expected returns
- The expected return of a portfolio is the weighted average of the expected returns of individual assets in the portfolio
- The variance (standard deviation) of a portfolio is the function of both the variance (standard deviation) of the returns of the individual asset and the covariance (correlation) among the returns of the assets in the portfolio
- Thus, for the same level of risk, investors can create portfolios with higher returns by diversifying investments across/within many asset classes. The lower the correlations among the assets, the greater the diversification benefits
- Modern portfolio Theory analyses rational portfolio choice based on the efficient use of risk and recognizes the importance of diversification
- It sates that h there exists an identifiable set of risk portfolios that dominate all other portfolios in terms of their expected return and risk characteristics from which ration investors will choose their optimal or efficient portfolios
- Optimal/efficient refers to a portfolio that gives the highest rate of return for a given level of risk, or lowest level of risk for a given rate of return

Key assumptions that underline CAPM

i) Investors select securities using Markowitz mean variance framework
ii) Markets are frictionless i.e. there are no transaction costs or taxes
iii) All investments are infinitely divisible
iv) Investors can lend and borrow at the risk free rate

- The central notion is that only 2 funds should be held by all investors; the market portfolio which consists if all risky assets in the economy and the riskless asset
- In equilibrium, unsystematic risk that can be diversified away is not priced and only systematic risk is relevant to a portfolio‘s return
- The line on which all portfolios that contain there funds are plotted is called the capital market line
- The market portfolio consists of all risky assets, weighed in terms of their market cap

Market efficiency

- An efficient capital market is the one in which security prices adjust to new info rapidly and the current price of a security reflects all currently available in about that security including risk
- Market efficiency is based on the assumptions that:
    i) There is a large no. of traders
    ii) New info enters the market in a random manner
    iii) Investors adjust their estimates of security prices rapidly, but not necessarily correctly, to reflect new info received

iv) Expected returns include risk in the security price

- There are 3 types of efficient market hypothesis:
    i) Weak form: all info to be derived from past trading data already is reflected in stock prices
    ii) Semi-strong form: all publicly available info is already reflected
    iii) Strong form: all info, including insider info is reflected in the prices

- Developed capital markets are highly competitive and lie between weak-form efficiency and strong form efficiency
- This implies that on average, abnormal returns cannot be generated through technical analysis, but may be yielded via fundamental analysis if investors can forecast earning surprises correctly