

PTSA - ASSIGNMENT

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- Roll number 22

Q1) D.

Q2) B.

Q3) D.

Q4) A.

Q5) B.

Q6) B

Q7) A.

Q8) C

Q9) Willingness to take risks is the amount of risk that an investor is comfortable taking or the degree of uncertainty that an investor is able to handle. It often varies with age, income, and financial goals. Risk capacity is the amount of risk that the investor can take in order to reach their financial goals. The rate of return necessary to reach these goals can be estimated by examining time frames and income requirements. The two may not always be in alignment; an investor may have the ability to take on risk but may be extremely risk-averse and unwilling to expose himself to any potential loss. Typically, an investor with a longer time horizon has a greater ability to bear risk as there is more scope to recover losses over the time horizon. Similarly, an investor with large wealth relative to its liabilities will typically be able to withstand greater risk. For example, a very wealthy investor who can sustain the event of a portfolio loss has the ability to take on a lot of investment risk. The willingness to take on risk has to be consistent with the ability to take on risk. There may be instances where there is a conflict between the willingness and ability to take on risk. In case of such a conflict, the advisor should not aim to change the client's willingness to take on risk. The prudent approach is to find a risk tolerance level that is lower than the ability and willingness to assume risk.

Q10) 1) Introduction: In this, basic overview of the client is given.

2) Statement of purpose: states the purpose of the IPS.

3) Statement of duties and responsibilities: consists of detailed duties and responsibilities of the client, investment managers, and holder of client's assets.

4) Procedures: explains the steps to take to keep IPS current and actions to be taken in case of contingencies.

5) Investment objectives: The client's objective is mentioned here.

6) Investment constraints: the constraints which come in between achieving client objectives are mentioned here.

7) Investment guidelines: explains how the IPS has to be executed along with any particular interest in asset securities of the client.

8) Evaluation: contains ways to collect feedback on investment results.

9) Appendix: asset allocation strategy and rebalancing policy are mentioned over here.

Q11) 1) The IPS should state what the likely requirements are to withdraw funds from the portfolio. When the client does have such a requirement, the manager should allocate part of the portfolio to cover the liability. This part of the portfolio will be invested in assets that are liquid—that is, easily converted to cash—and have low risk when the liquidity need is actually present so that their value is known with reasonable certainty.

2) The IPS should state the time horizon over which the investor is investing. It may be the period over which the portfolio is accumulating before any assets need to be withdrawn; will

affect the nature of investments used in the portfolio. Risky investments are not suitable for short time horizon as there is not much time to cover losses, if in case, for example.

3) Tax status varies among investors. Some investors will be subject to taxation on investment returns and some will not. Gains may be subject to a lower rate of tax or part or all of the gain may be exempt from taxation. Furthermore, income may be taxed as it is earned, whereas gains may be taxed when they are realized. Hence, in such cases there is a time value of money benefit in the deferment of taxation of gains relative to income. the portfolio should reflect the tax status of the client.

4) The IPS should state any legal and regulatory restrictions that constrain how the portfolio is invested. When an individual has access to material nonpublic information about a particular security, this situation may also form a constraint. The IPS should note this constraint so that the portfolio manager does not inadvertently trade the stock on the client's behalf.

5) A client may have considerations derived from his or her religion or ethical values that could constrain investment choices. Similarly, an investor may wish to avoid investments that he or she believes are inconsistent with their faith. a client may have personal objections to certain products (e.g., weapons, tobacco, gambling) or practices (e.g., environmental impact of business activities, human impact of government policies, labor standards), which could lead to the exclusion of certain companies, countries, or types of securities from the investable universe as well as the client's benchmark. When the portfolio represents only part of the client's total wealth, there may be aspects or portions of wealth not under the control of the manager that have implications for the portfolio. A client's income may rely on a particular industry or asset class. Appropriate diversification requires that industry or asset class to be de-emphasized in the client's investments.

Q12) ESG considerations can be integrated into an investment policy by exclusionary screening, best-in-class selection, active ownership, thematic and impact investing and ESG integration in security analysis. In exclusionary screening, we exclude certain sectors or companies that deviate from accepted standards or norms. Exclusion based on values, such as exclusion of gambling, alcohol and tobacco-related companies, relate to an investor's moral or ethical beliefs in a company's or sector's business. best-in-class selection is where investors seek to identify companies within an industry that rank (or score) most favorably based on ESG considerations. Under this approach, investor portfolios would include only securities of those companies that exceed a certain threshold when evaluating ESG considerations. active ownership is the practice of entering into a dialogue with companies (including with respect to ESG issues. This is a different approach than best-in-class selection, where securities companies that do not meet investor standards are excluded. Thematic investing and impact investing focus on investment in objectives, themes, and trends that relate positively to ESG issues. ESG integration refers to the integration of qualitative and quantitative ESG factors into traditional security and industry analysis. The focus of ESG integration is to identify risks and opportunities arising from ESG factors and to determine whether a company is properly managing its ESG resources in accordance with a sustainable business model.

Q13) Diversification ratio = $\text{stdev of equally weighted portfolio} / \text{stdev of avg n stocks} = \sqrt{324/625} = 72\%$

Q14)

Investor

Risk Tolerance

Investment Horizon

Liquidity Needs

Income Needs

Individuals

LOW

LOW

MEDIUM

HIGH

Banks

LOW

HIGH

HIGH

MEDIUM

Endowments

MEDIUM

HIGH

MEDIUM

MEDIUM

Insurance

HIGH

HIGH

LOW

HIGH

Mutual Funds

HIGH

LOW

HIGH

LOW

Defined Benefit Pensions

LOW

HIGH

HIGH

HIGH

Q15) A defined benefit pension is a pension plan in which an employer contributes with a guaranteed lump-sum on employee's retirement that is determined based on the employee's salary history, age, number of years of service and other various factors. At retirement, employees are entitled to receive the pension funds as a lump sum or a monthly payment upon discretion. A defined contribution pension is referred to as a savings and investment plan that provides income after an employee has ceased employment. It is a retirement plan in which both the employee and the employer make periodic contributions. These contributions are tax deferred until the withdrawals are being made. In defined contribution pension plans, there is no guaranteed fixed pension. A defined contribution pension can even be started at a very young age.

Unit 4

Q1) D.

Q2) D.

Q3) A

Q4) D.

Q5) B.

Q6) B.

Q7) C

Q8) C.

Q9) A.

Q10) C.

Q11) 1) Threat of entry: how difficult it would be for new competitors to enter the industry.

Industries that are easy to enter will generally be more competitive than industries with high barriers to entry.

2) power of suppliers: able to raise prices or restrict the supply of key inputs to a company. For example, workers at a heavily unionized company may have greater bargaining power as suppliers of labor than workers at a comparable non-unionized company.

3) power of buyers: can affect the intensity of competition by exerting influence on suppliers regarding prices. For example, auto parts companies generally sell to a small number of auto manufacturers, which allows those customers, the auto manufacturers, to be tough negotiators when it comes to setting prices.

4) threat of substitutes: can negatively affect demand if customers choose other ways of satisfying their needs. For example, consumers may trade down from premium beers to discount brands during recessions.

5) rivalry among existing competitors: Industries that are fragmented among many small competitors, have high fixed costs, provide undifferentiated products, or have high exit barriers usually experience more intense rivalry than industries without these characteristics.

Q12)

Q13) Stock Split: involves an increase in the number of shares outstanding and decrease in share price. Example: two-for-one stock split in which each shareholder is issued an additional share for each share currently owned.

Reverse stock split: involves a reduction in the number of shares outstanding and increase in share price. In a one-for-two reverse stock split, each shareholder would receive one new share for every two old shares held.

Share repurchases: is a transaction in which a company uses cash to buy back its own shares. Shares that have been repurchased are not considered for dividends, voting, or computing earnings per share.

Cash dividend: a cash distribution made to a company's shareholders is called as cash dividends.

Extra dividend: dividends which are not regularly paid or is an extra payment over the regular dividends.

Stock dividend: dividends is distributed as additional common shares outstanding instead of cash.

Q14) Free cashflow to equity is a measure of how much cash is available for the equity shareholders after all expenses, reinvestments and debts are paid. It is a measure of equity capital usage. It is composed of net income, working capital, debt and capital expenditures. It is most often used to determine the value of the company especially when the company does not pay out dividends. Free cashflow to equity can be used to determine if dividend payments and stock repurchases are paid for with free cash flow to equity or

some other form of financing. Investors want to see a dividend payment and share repurchase that is fully paid by Free cashflow to equity.

Q15) Dividend at year 1 = $12 \times 1.12 = 13.44$

Dividend at year 2 = $13.44 \times 1.09 = 14.6496$

Dividend at year 3 = $14.6496 \times 1.09 = 15.968064$

Dividend at year 4 = $15.968064 \times 1.08 = 17.24550912$

Dividend at year 5 = $17.24550912 \times 1.05 = 18.10778458$

$V_4 = 18.10778458 / 0.05 = 362.1556916$

$V_0 = ((362.1556916 / 1.08) / 1.09^2) / 1.12 = 252$

Q16) Enterprise value = MV of equity + MV of debt – Cash and marketable securities (we use book value of other debt)

$EV = (160000 \times 50) + (7000000 + 10000000) - 200000 = 96000000$

$EV/EBITDA = 95000000 / 10000000 = 9.60$

Q17) $PE = \text{Payout ratio} \times (1+g) / (k_e - g) = 0.4 \times (1+0.04) / (0.12 - 0.04) = 5.2$

Unit 3

Q1) $W(P) = 0.2^2 - (0.5 \times 0.2 \times 0.25) / (0.2^2 + 0.25^2 + (2 \times 0.5 \times 0.2 \times 0.25)) = 28.57\%$

$W(Q) = 1 - 28.57\% = 71.43\%$

Q2) at min variance, $w = \text{stdev of asset} / \text{total stdev (as } \rho = -1)$

$W(L) = 0.18 / 0.33 = 54.55\% \quad W(M) = 1 - (0.18 / 0.33) = 45.45\%$

Q3) Portfolio return = $(1/3) \times (27+24+22) = 24.33$

Risk = $((1/3) \times 33)^2 + ((1/3) \times 28)^2 + ((1/3) \times 26)^2 + (2 \times (1/3) \times (1/3) \times 33 \times 28 \times 0.2) + (2 \times (1/3) \times (1/3) \times 28 \times 26 \times 0.32) + (2 \times (1/3) \times (1/3) \times 33 \times 26 \times 0.5) = 471.39$