CBCS SCHEME

USN | | | | | | | | | |

18MBAFM302

Third Semester MBA Degree Examination, Jan./Feb. 2021
Investment Management

Time: 3 hrs. Max. Marks:100

Note: 1. ***Answer any FOUR full questions from Q.No.1 to 7.***
2. ***Q.No. 8 is compulsory.***
3. ***Use of P.V. tables are permitted.***

Solutions

1.

1 a. What does β = + 2.0 indicate? **(03 Marks)**

The beta (β) of an investment security (i.e. a stock) is a measurement of its volatility of returns relative to the entire market. It is used as a measure of risk and is an integral part of the Capital Asset Pricing Model (CAPM). A company with a higher beta has greater risk and also greater expected returns.
High β – A company with a β that's greater than 1 is more volatile than the market.
Since Beta is Greater than 2, it indicates the market is volatile. It indicates 1 % in stock return causes more than 2 % change in index (market return)

b) Explain the various stages in investment process in detail?

An investment process is a set of guidelines that govern the behaviour of investors in a way which allows them to remain faithful to the tenets of their investment strategy, that is the key principles which they hope to facilitate outperformance.

There are 5 investment process steps that help you in selecting and investing in the best asset class according to your needs and preferences

Step 1- Understanding the client

The first and the foremost step of investment process is to understand the client or the investor his/her needs, his risk taking capacity and his tax status. After getting an insight of the goals and restraints of the client, it is important to set a benchmark for the client's portfolio management process which will help in evaluating the performance and check whether the client's objectives are achieved.

Step 2- Asset allocation decision

This step involves decision on how to allocate the investment across different asset classes, i.e. fixed income securities, equity, real estate etc. It also involves decision of whether to invest in domestic assets or in foreign assets. The investor will make this decision after considering the macroeconomic conditions and overall market status.

Step 3- Portfolio strategy selection
Third step in the investment process is to select the proper strategy of portfolio creation. Choosing the right strategy for portfolio creation is very important as it forms the basis of selecting the assets that will be added in the portfolio management process. The strategy that conforms to the investment policies and investment objectives should be selected.

There are two types of portfolio strategy-

Active Management
Passive Management
Active portfolio management process refers to a strategy where the objective of investing is to outperform the market return compared to a specific benchmark by either buying securities that are undervalued or by short selling securities that are overvalued. In this strategy, risk and return both are high. This strategy is a proactive strategy it requires close attention by the investor or the fund manager.

Passive portfolio management process refers to the strategy where the purpose is to generate returns equal to that of the market. It is a reactive strategy as the fund manager or the investor reacts after the market has responded.

Step 4- Asset selection decision
The investor needs to select the assets to be placed in the portfolio management process in the fourth step. Within each asset class, there are different sub asset-classes. For example, in equity, which stocks should be chosen? Within the fixed income securities class, which bonds should be chosen?

Also, the investment objectives should conform to the investment policies because otherwise the main purpose of investment management process would become meaningless.

Step 5- Evaluating portfolio performance
This is the final step in the investment process which evaluates the portfolio management performance. This is an important step as it measures the performance of the investment with respect to a benchmark, in both absolute and relative terms. The investor would determine whether his objectives are being achieved or not.

Conclusion
After all the above points have been followed, the investor needs to keep monitoring the portfolio management performance at an appropriate interval. If the investor finds that any asset is not performing well, he/she should ‘re balance’ the portfolio. Re balancing means adding or removing (or better call it adjusting) some assets from the portfolio to maintain the target level. Re balancing helps the investor to maintain his/her level of risk and return.

2a) Fund of Funds
A fund of funds (FOF)—also known as a multi-manager investment—is a pooled investment fund that invests in other types of funds. In other words, its portfolio contains different underlying portfolios of other funds. These holdings replace any investing directly in bonds, stocks, and other types of securities.

FOFs usually invest in other mutual funds or hedge funds. They are typically classified as "fettered," or only able to invest in funds managed by the FOF's managing company, or "unfettered," or able to invest in funds across the market.

2b) **Define risk, explain different types of systematic and unsystematic risks?**

Risk is defined in financial terms as the chance that an outcome or investment's actual gains will differ from an expected outcome or return. Risk includes the possibility of losing some or all of an original investment.

Different types of Systematic and unsystematic risks

Types of Risk

Broadly speaking, there are two main categories of risk: systematic and unsystematic. Systematic risk is the market uncertainty of an investment, meaning that it represents external factors that impact all (or many) companies in an industry or group. Unsystematic risk represents the asset-specific uncertainties that can affect the performance of an investment.

Below is a list of the most important types of risk for a financial analyst to consider when evaluating investment opportunities:

Systematic Risk – The overall impact of the market
Unsystematic Risk – Asset-specific or company-specific uncertainty
Political/Regulatory Risk – The impact of political decisions and changes in regulation
Financial Risk – The capital structure of a company (degree of financial leverage or debt burden)
Interest Rate Risk – The impact of changing interest rates
Country Risk – Uncertainties that are specific to a country
Social Risk – The impact of changes in social norms, movements, and unrest
Environmental Risk – Uncertainty about environmental liabilities or the impact of changes in the environment
Operational Risk – Uncertainty about a company's operations, including its supply chain and the delivery of its products or services
Management Risk – The impact that the decisions of a management team have on a company
Legal Risk – Uncertainty related to lawsuits or the freedom to operate
Competition – The degree of competition in an industry and the impact choices of competitors will have on a company

3a) What is Markowitz Efficient Frontier?

The Markowitz efficient set, also called the efficient frontier, is a mathematical concept that reflects the combinations or portfolios that generate the maximum expected return for various levels of risk

An efficient frontier is a set of investment portfolios that are expected to provide the highest returns at a given level of risk. A portfolio is said to be efficient if there is no other portfolio that offers higher returns for a lower or equal amount of risk. Where portfolios are located on the efficient frontier depends on the investor's degree of risk tolerance.

3b) Explain the various levels of Efficient Market Hypothesis?

Efficient Market Hypothesis (EMH) Definition

The Efficient Market Hypothesis (EMH) essentially says that all known information about investment securities, such as stocks, is already factored into the prices of those securities1. Therefore, assuming

this is true, no amount of analysis can give an investor an edge over other investors, collectively known as "the market."

EMH does not require that investors be rational; it says that individual investors will act randomly, but as a whole, the market is always "right." In simple terms, "efficient" implies "normal." For example, an unusual reaction to unusual information is normal. If a crowd suddenly starts running in one direction, it's normal for you to run in that direction as well, even if there isn't a rational reason for doing so.
Defining the Forms of EMH
There are three forms of EMH: weak, semi-strong, and strong1. Here's what each says about the market.

Weak Form EMH: Suggests that all past information is priced into securities. Fundamental analysis of securities can provide an investor with information to produce returns above market averages in the short term, but there are no "patterns" that exist. Therefore, fundamental analysis does not provide long-term advantage and technical analysis will not work.

Semi-Strong Form EMH: Implies that neither fundamental analysis nor technical analysis can provide an advantage for an investor and that new information is instantly priced in to securities.

Strong Form EMH. Says that all information, both public and private, is priced into stocks and that no investor can gain advantage over the market as a whole. Strong Form EMH does not say some investors or money managers are incapable of capturing abnormally high returns because that there are always outliers included in the averages.
EMH does not say that no investors can outperform the market; it says that there are outliers that can beat the market averages; however, there are also outliers that dramatically lose to the market. The majority is closer to the median. Those who "win" are lucky and those who "lose" are unlucky.

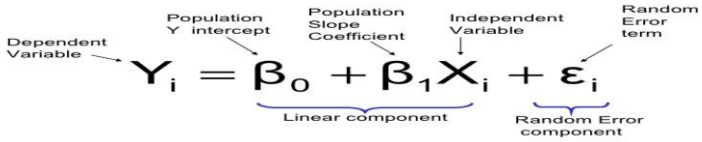
4a) What is Technical analysis?
Technical analysis is a means of examining and predicting price movements in the financial markets, by using historical price charts and market statistics. It is based on the idea that if a trader can identify previous market patterns, they can form a fairly accurate prediction of future price trajectories.

4b) Explain Dow Theory with reference to the hypothesis and various trends?
The Dow theory is a financial theory that says the market is in an upward trend if one of its averages (i.e. industrials or transportation) advances above a previous important high and is accompanied or followed by a similar advance in the other average. For example, if the Dow Jones Industrial Average (DJIA) climbs to an intermediate high, the Dow Jones Transportation Average (DJTA) is expected to follow suit within a reasonable period of time.
There are six main components to the Dow theory.
The Market Discounts Everything
There Are Three Primary Kinds of Market Trends
Primary Trends Have Three Phases
Indices Must Confirm Each Other
Volume Must Confirm the Trend
Trends Persist Until a Clear Reversal Occurs

5a) What is the formula used for Characteristic Regression Line

A characteristic line is a straight line formed using regression analysis that summarizes a particular security's systematic risk and rate of return. The characteristic line is also known as the security characteristic line (SCL).

The characteristic line is created by plotting a security's return at various points in time. The y-axis on the chart measures the excess return of the security. Excess return is measured against the risk-free rate of return. The x-axis on the chart measures the market's return in excess of the risk free rate.



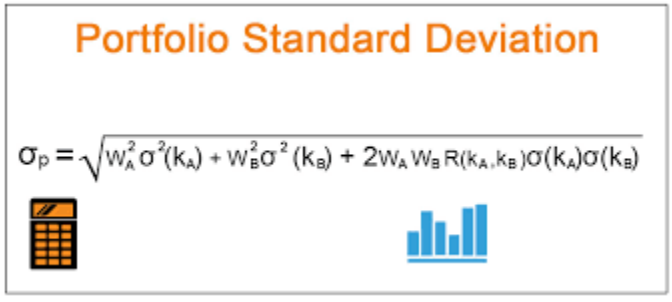
5b) Explain the various Bond portfolio strategies?
"Alternative Bond Portfolio Strategies:
1. Passive portfolio strategies: Buy and hold, Indexing. Buy and hold strategy simply involves buying a bond and holding it until maturity. Bond investors would examine such factors as quality ratings, coupon levels, terms to maturity, call features and sinking funds. Indexing involves attempting to build a portfolio that will match the performance of a selected bond portfolio index

2. Semi-Active Management Strategy: It refers to bond portfolio management techniques that are used to service a prescribed set of liabilities. It can be Pure Cash Matched Dedicated Portfolios 9 conservative approach) or Dedication With Reinvestment or can be both.

3. Active management strategies: Potential sources of return from fixed income portfolio: Coupon income, Capital gain, Reinvestment income. Fundamental active strategies includes, Interest rate expectations strategy, Yield Curve strategies, Valuation analysis, Credit analysis, use of Bond swaps

4. Matched-funding techniques: Horizon matching. It is a combination of cashmatching dedication and immunization. Important decision is the length of the horizon period.

6a) Mention the portfolio standard deviation formula?



6b) Explain in detail the various types of mutual funds ?

Types of Mutual Funds

Mutual funds are divided into several kinds of categories, representing the kinds of securities they have targeted for their portfolios and the type of returns they seek. There is a fund for nearly every type of investor or investment approach. Other common types of mutual funds include money market funds, sector funds, alternative funds, smart-beta funds, target-date funds, and even funds of funds, or mutual funds that buy shares of other mutual funds.

Equity Funds

The largest category is that of equity or stock funds. As the name implies, this sort of fund invests principally in stocks. Within this group are various subcategories. Some equity funds are named for the size of the companies they invest in: small-, mid-, or large-cap. Others are named by their investment approach: aggressive growth, income-oriented, value, and others. Equity funds are also categorized by whether they invest in domestic (U.S.) stocks or foreign equities. There are so many different types of equity funds because there are many different types of equities. A great way to understand the universe of equity funds is to use a style box, an example of which is below.

Fixed-Income Funds

Another big group is the fixed income category. A fixed-income mutual fund focuses on investments that pay a set rate of return, such as government bonds, corporate bonds, or other debt instruments. The idea is that the fund portfolio generates interest income, which it then passes on to the shareholders.

Index Funds

Another group, which has become extremely popular in the last few years, falls under the moniker "index funds." Their investment strategy is based on the belief that it is very hard, and often expensive, to try to beat the market consistently. So, the index fund manager buys stocks that correspond with a major market index such as the S&P 500 or the Dow Jones Industrial Average (DJIA). This strategy requires less research from analysts and advisors, so there are fewer expenses to eat up returns before they are passed on to shareholders. These funds are often designed with cost-sensitive investors in mind.

Balanced Funds

Balanced funds invest in a hybrid of asset classes, whether stocks, bonds, money market instruments, or alternative investments. The objective is to reduce the risk of exposure across asset classes.This kind of fund is also known as an asset allocation fund. There are two variations of such funds designed to cater to the investors objectives.

Money Market Funds

The money market consists of safe (risk-free), short-term debt instruments, mostly government Treasury bills. This is a safe place to park your money. You won't get substantial returns, but you won't have to worry about losing your principal. A typical return is a little more than the amount you would earn in a regular checking or savings account and a little less than the average certificate of deposit (CD). While money market funds invest in ultra-safe assets, during the 2008 financial crisis, some money market funds did experience losses after the share price of these funds, typically pegged at $1, fell below that level and broke the buck.

Income Funds

Income funds are named for their purpose: to provide current income on a steady basis. These funds invest primarily in government and high-quality corporate debt, holding these bonds until maturity in order to provide interest streams. While fund holdings may appreciate in value, the primary objective of these funds is to provide steady cash flow to investors. As such, the audience for these funds consists of conservative investors and retirees. Because they produce regular income, tax-conscious investors may want to avoid these funds.

7a) Basic formula for Jensen's Index measure?

Risk Adjusted Performance: Jensen

3) Jensen's Measure

$$\alpha_p = \bar{r}_p - [\bar{r}_f + \beta_p (\bar{r}_m - \bar{r}_f)]$$

α_p = Alpha for the portfolio
$\bar{r}_p$ = Average return on the portfolio
β_p = Weighted average Beta
$\bar{r}_f$ = Average risk free rate
$\bar{r}_m$ = Avg. return on market index port.

7b) Explain the 4 types of chart pattern in Technical Analysis?
Types of Charts

Technical analysts use a variety of charts based on the information they seek. However, there are three types of charts that are most commonly used. They are:

Line charts
A line chart is probably the most common type of chart. This chart tracks the closing prices of the stock over a specific period.

Each closing price point is represented by a dot. And all the dots are connected by lines to get the graphical representation.

Bar charts
A bar chart is quite similar to a line chart. However, it offers much more information. Instead of a dot, each plot point in the graph is represented by a vertical line. This line has two horizontal lines extending from both the sides.

Candlestick charts
Candlestick charts are very popular among technical analysts. They offer a great deal of information in a very precise manner. As the name suggests, the price movements for each day are represented in the shape of a candlestick.

It is similar to a bar chart because it represents the four data points: high, low, open and close.

While bar charts give volatility information only for a single trading day, candlestick charts can offer this information for a much larger time period. In addition, the candlesticks come in different colours based on the price movements.
A falling candlestick is generally represented by a black or red body while a rising candlestick is represented by a white or clear body.

Renko Chart

A Japanese invention, Renko charts, one of the major types of charts in technical analysis, focus only on price changes and use price bricks to represent a fixed price move. They filter out minor price movements which make it easier to spot trends in prices. Also, this feature makes the chart appearance more uniform.
A Renko chart technical analysis is pretty effective in identifying support and resistance levels. You get a trading signal when there is a change in the direction of trend and the bricks alternate colours.

Heikin Ashi Chart

Heikin Ashi is another type of popular technical chart that originated in Japan is quite similar to candlestick chart. With this chart, you can visualise the uptrend and downtrend quite clearly. When there are continuous green HA handles without lower shadow, it’s a reflection of a strong trend.