UNIT III

Subject Name	Subject Code	Semester	Prepared by
INVESTMENT MANAGEMENT	18BBA41C	IV	Dr.S.Akilandeswari, Assistant Professor

Risk- Kinds

In finance, risk refers to the degree of uncertainty and/or potential financial loss inherent in an investment decision. In general, as investment risks rise, investors seek higher returns to compensate themselves for taking such risks. Every saving and investment product has different risks and returns.

Kinds 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

Risk is divided into two types:

1. Systematic Risk
2. Unsystematic Risk

Risk Adjustment

Since different investments have different degrees of uncertainty or volatility, financial analysts will "adjust" for the level of uncertainty involved. Generally speaking, there are two common ways of adjusting: the discount rate method and the direct cash flow method.

1 Discount Rate Method

The discount rate method of risk-adjusting an investment is the most common approach, as it's fairly simple to use and is widely accepted by academics. The concept is that the expected future cash flows from an investment will need to be discounted for the time value of money and the additional risk premium of the investment.

2 Direct Cash Flow Method

The direct cash flow method is more challenging to perform but offers a more detailed and more insightful analysis. In this method, an analyst will directly adjust future cash flows by applying a certainty factor to them. The certainty factor is an estimate of how likely it is that the cash flows will actually be received. From there, the analyst simply has to discount the cash flows at the time value of money in order to get the net present value (NPV) of the investment. Warren Buffett is famous for using this approach to valuing companies.

3.Risk Management

There are several approaches that investors and managers of businesses can use to manage uncertainty. Below is a breakdown of the most common risk management strategies:

1. Diversification

Diversification is a method of reducing unsystematic (specific) risk by investing in a number of different assets. The concept is that if one investment goes through a specific incident that causes it to underperform, the other investments will balance it out.

2. Hedging

Hedging is the process of eliminating uncertainty by entering into an agreement with a counterparty. Examples include forwards, options, futures, swaps, and other derivatives that provide a degree of certainty about what an investment can be bought or sold for in the future. Hedging is commonly used by investors to reduce market risk, and by business managers to manage costs or lock-in revenues.

3. Insurance

There is a wide range of insurance products that can be used to protect investors and operators from catastrophic events. Examples include key person insurance, general liability insurance,

property insurance, etc. While there is an ongoing cost to maintaining insurance, it pays off by providing certainty against certain negative outcomes.

4. Operating Practices

There are countless operating practices that managers can use to reduce the riskiness of their business. Examples include reviewing, analyzing, and improving their safety practices; using outside consultants to audit operational efficiencies; using robust financial planning methods; and diversifying the operations of the business.

5 Deleveraging

Companies can lower the uncertainty of expected future financial performance by reducing the amount of debt they have. Companies with lower leverage have more flexibility and a lower risk of bankruptcy or ceasing to operate.

It's important to point out that since risk is two-sided (meaning that unexpected outcome can be both better or worse than expected), the above strategies may result in lower expected returns (i.e., upside becomes limited).

Measures of Risk- Returns

Return

Returns are always calculated as annual rates of return, or the percentage of return created for each unit (dollar) of original value. If an investment earns 5 percent, for example, that means that for every $100 invested, earn $5 per year (because $5 = 5% of $100).

Returns are created in two ways: the investment creates income or the investment gains (or loses) value. To calculate the annual rate of return for an investment, it is necessary to know the income created, the gain (loss) in value, and the original value at the beginning of the year.

While information about current and past returns is useful, investment professionals are more concerned with the expected return for the investment, that is, how much it may be expected to earn in the future. Estimating the expected return is complicated because many factors (i.e., current economic conditions, industry conditions, and market conditions) may affect that estimate.

Returns are the value created by an investment, through either income or gains. Returns are also your compensation for investing, for taking on some or all of the risk of the investment, whether it is a corporation, government, parcel of real estate, or work of art.

Returns are the benefits from investing, but they must be larger than its costs.

Risk

Investment risk is the idea that an investment will not perform as expected, that its actual return will deviate from the expected return. Risk is measured by the amount of volatility, that is, the difference between actual returns and average (expected) returns. This difference is referred to as the standard deviation. Returns with a large standard deviation (showing the greatest variance from the average) have higher volatility and are the riskier investments.

There are

economic risks,

industry risks,

company risks,

asset class risks,

market risks.

Economic risks are risks that something will upset the economy as a whole. The economic cycle may swing from expansion to recession, for example; inflation or deflation may increase, unemployment may increase, or interest rates may fluctuate. These macroeconomic factors affect everyone doing business in the economy. Most businesses are cyclical, growing when the economy grows and contracting when the economy contracts.

Consumers tend to spend more disposable income when they are more confident about economic growth and the stability of their jobs and incomes. They tend to be more willing and able to finance purchases with debt or with credit, expanding their ability to purchase durable goods. So, demand for most goods and services increases as an economy expands, and businesses expand too. An exception is businesses that are countercyclical. Their growth accelerates when the economy is in a downturn and slows when the economy expands. For example, low-priced fast food chains typically have increased sales in an economic downturn because people substitute fast food for more expensive restaurant meals as they worry more about losing their jobs and incomes.

Industry risks usually involve economic factors that affect an entire industry or developments in technology that affect an industry's markets. An example is the effect of a sudden increase in the price of oil (a macroeconomic event) on the airline industry. Every airline is affected by such an event, as an increase in the price of airplane fuel increases airline costs and reduces profits. An industry such as real estate is vulnerable to changes in interest rates. A rise in interest rates, for example, makes it harder for people to borrow money to finance purchases, which depresses the value of real estate.

Company risk refers to the characteristics of specific businesses or firms that affect their performance, making them more or less vulnerable to economic and industry risks. These characteristics include how much debt financing the company uses, how well it creates economies of scale, how efficient its inventory management is, how flexible its labor relationships are, and so on.

The asset class that an investment belongs to can also bear on its performance and risk. Investments (assets) are categorized in terms of the markets they trade in. Broadly defined, asset classes include

corporate stock or equities (shares in public corporations, domestic, or foreign);

bonds or the public debts of corporation or governments;

commodities or resources (e.g., oil, coffee, or gold);

derivatives or contracts based on the performance of other underlying assets;

real estate (both residential and commercial);

fine art and collectibles (e.g., stamps, coins, baseball cards, or vintage cars).

Within those broad categories, there are finer distinctions. For example, corporate stock is classified as large cap, mid cap, or small cap, depending on the size of the corporation as measured by its market capitalization (the aggregate value of its stock). Bonds are distinguished as corporate or government and as short-term, intermediate-term, or long-term, depending on the maturity date.

Valuation of securities

Valuation of securities is a broad topic, since securities range from stocks and bonds to derivative contracts of various types such as options. In terms of accounting and valuation practice, these financial instruments may require valuation for financial reporting, commercial, or regulatory purposes.

Broadly defined, a security (an abbreviation for financial security) is a financial instrument of one type or another with a recognized financial worth. Generally, a security has the potential to generate some future return above face value. Thus, the value of any given security is the present value of future returns associated with it, adjusted for the time value of money.

Securities valuation for some of the more exotic financial instruments (such as mortgage-backed securities) is a specialized field which departs from the traditional valuation methods used to determine the value of business assets. This article will take a limited view of the valuation of securities, meaning it will focus on those instruments that can be valued using one or more of the three classic valuation approaches (market, income, and cost), and on two common types of corporate securities: stocks and bonds. Valuation of these corporate securities is fairly straightforward, generally relying on readily available information and standard formulas for valuation of securities.

Valuation Of Securities: Valuing Stocks

A stock is a partial ownership or equity stake in a business entitling the owner to dividends, a share of the profits generated by the company. The main factor which influences a company's stock price is the return on equity, or invested capital, to the shareholder. The return comes in the form of dividends or net earnings of the company. The value of each share is therefore a function of the company's dividend-paying capacity or its earnings capacity. Dividends may vary from earnings depending on the amount of profits retained by the company for purposes of liquidity, expansion, or capital improvements.

Income Method For Valuing Stock

Shares that are not traded on the market (i.e., private company shares) will have an associated book value; this value is the fraction of the enterprise value of the company associated with each share of stock. The market price of these shares will generally differ from the book value on the basis of investors' perceptions regarding future earning potential and growth prospects for the company,

industry prospects, and the company's intangible assets such as trademarks and intellectual property.

Value in this scenario would be determined using the income approach, where the future cash flows and costs of capital for the business are forecasted and the terminal value is calculated. The cash flows and terminal value are then adjusted to the present value, debts are subtracted, and the value derived is divided by the number of shares outstanding, yielding the value per share. This approach can also be applied to publicly-traded stocks, to yield a comparison to the current stock price.

An alternative income approach is to forecast the future dividends a shareholder can expect to receive from a stock. This approach is limited to more established, mature companies that pay dividends. Using this approach, the value of future dividends is adjusted to present value. Debts are not subtracted, because under this scenario, only the cash flows anticipated to accrue to the shareholder are being valued.

Market Method For Valuing Stock

The second method for valuing stocks is the market approach. This is the classic approach for stock valuation. Using this method, the Subject Company can be compared to comparable businesses that have sold, and the present value of those sales can be calculated based on the multiples used in prior transactions.

Another approach using the market method is to find similar companies that are currently publicly traded to use as comparables.

The third valuation approach, the cost approach, is not relevant or used in the valuation of stock. The information required to calculate the cost of replicating the assets of the company is typically not available, and for many public companies, a large portion of overall value is derived from intangible assets, which the cost method cannot explicitly capture.

Both of the market methods for securities valuation rely on having accurate information about the Subject Company's financial performance. This can be established using the same information used for a typical business valuation.

Valuation of Securities: Valuing Bonds

While stocks represent an ownership share or equity stake in a company, bonds represent debt of a company or another entity such as a municipal government. A bondholder has essentially lent money to the company at a specified rate of interest, with the principal to be repaid at a specified date in the future.

Bonds are easily valued because the cash flows are clearly identifiable. The cash flows associated with a bond are the coupon payments on the bond and the maturity principal value of the bond—the amount that the company will repay to the bondholder at the end of the loan period when the bond matures. The coupon payment is the predefined rate of interest the issuer will pay on the loan the bond represents; this rate is usually fixed for the life of the bond.

Bond yields can vary substantially; typically the bond yield is comparable to the yields of bonds of similar quality. If a bond sells at a discount, that will increase the yield; conversely, if it sells at a premium, it will decrease the yield. In an efficient market, the yield, market rate of discount, and the investors' required rate of return are all equal.

Because the dates of the anticipated cash flows for bonds are predefined, the process for valuing a bond is straightforward. Cost of capital is calculated to account for the time value of money and risk profile of a borrower, then the bond is valued using the income approach and discounted by the cost of capital. For the valuation of bonds, neither the market nor the cost approaches are relevant unless one has to deal with a distressed situation where a borrower's assets might need to be sold in bankruptcy to satisfy creditors.

Valuation of preference and Equity Shares.

Preference Shares are issued by corporations or companies with the primary aim of generating funds. In general, in case of any exit event, preference shareholders have preferential rights for payment of dividend and the liquidation preference over common shareholders.

1. **Income Approach**:The discounted cash flow (DCF) analysis is the primary methodology used for Valuation of compulsorily convertible preference shares and the redeemable preferred shares. Two inputs to the DCF model are cash-flows and the discount factor. Cash can flows take any form i.e. dividends, coupon, redemption, or maturity amount, underlying equity shares upon conversion at triggering event or at the end of the term.

A Valuer must assess the availability of cash-flows, triggering condition and the likelihood of each event which can impact the cash flows available during and/or at the end of the period as indicated in the term sheet of preference shares.

2**. Market Approach**:Our quick assessment of the listed preference shares market in India indicates that the market lacks the depth. Most of the preference shares are privately placed and full feature disclosure is not available in the public domain. Further, trade information/ frequency in case of listed preference shares is low. This poses a challenge to carrying out any meaningful analysis based on comparable transaction method. Therefore, market approach is seldom applicable in case of preferred shares valuation.

3. **Cost Approach**: It allows recognizing financial asset/ liabilities through the amortized cost method, under specific circumstances, when the concept of SPPI (Solely held to collect principal and interest) is fully satisfied.

4. The Option Pricing Method (OPM) is most commonly used for allocation of enterprise value among different security classes. OPM treats securities, including debt, common and preferred stock, as a series of call options on the enterprise's value, with exercise prices based on the securities'respective liquidation preferences, redemption premium and/or conversion terms. Thus, the common stock is a call option with a claim on the enterprise at an exercise price equal to the remaining value immediately after the liquidation preferences are fulfilled and considering the relevant rights of the preferred stock (e.g., participation) as well as the potential dilution from other outstanding securities such as options and warrants.

Valuation of Equity Shares

1.Net Asset Value (NAV) Method

2. Discounted Cash Flow Method

3. Profit or Dividend Yield Method

4. PE Ratio Method

1.Net Asset Value (NAV) Method

Net Asset represent Net worth of the Company. After reduction of preference share Capital value from net worth of the Company we get value of company to the Equity share holders. Figures of net assets from last audited balance sheet can be taken.

2. Discounted Cash Flow Method (DCF)

Discounted Cash Flow Method (DCF) is a complex calculation however it considers not just Companies present situation but also take in to figure, future of the Company. DCF also works for start-up Companies Valuations which do not have track records but has valuation based on business idea & current resources.

Value of firm derived by discounting future cash flows to the company by expected rate of return of Equity & Debt holders. Valuation through DCF imbibe expectation of owners & lenders by considering expected rate of return of both Equity & Debt holders.

DCF becomes more relevant since any decision related to investment is taken considering future return on it & DCF figures out valuation based on future cash flows of the Company.

3.Profit OR Divided Yield Method

Profit after tax or dividend is divided by Normal rate of return to derive Capitalized Value & the same is divided by number of shares to get value per share.

Capitalize Value = (Profit / Dividend) / Normal Rate of Return

Value per Share = Capitalize Value / Number of shares

4. Price-Earnings Ratio Method

This method is generally used to calculate listed Company Share Value. It uses Earning Per Share (EPS) & Market Price of Share (MPS) to calculate value of share.

PE Ratio is determined as follow- MPS/ EPS

Value per share – EPS x P/E Ratio

The Contents in this E-Material is taken from the text and reference book as given in the syllabus.