

**Lecture notes on topic**

# **RISK**

For MBA 3<sup>rd</sup> semester  
(Finance specialization)

**Subject: Security Analysis and Portfolio Management**

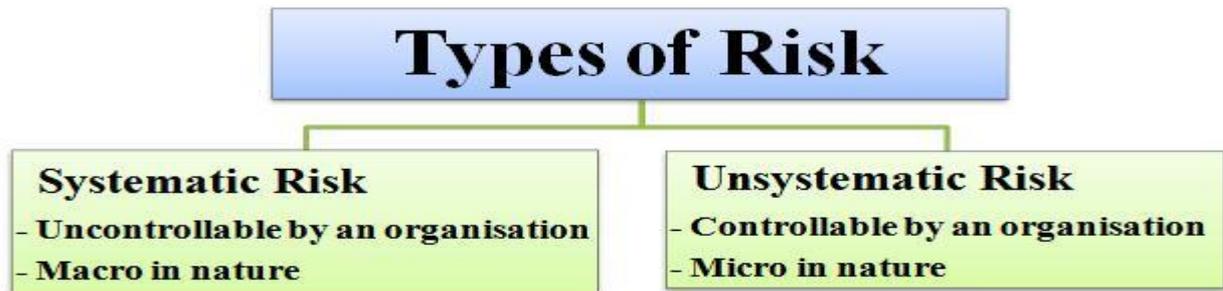
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Risk implies the extent to which any chosen action or an inaction that may lead to a loss or some unwanted outcome. Risk is defined in finance that a choice may have an influence on the outcome that exists or has existed. It includes the possibility of losing something in investment due to uncertainty.

However, in security and portfolio management risk relates to any material loss attached to the investment that may affect the productivity, profitability, tenure, legal issues, etc. of the investment.

In finance sector, different types of risk can be classified under two main groups, viz.,



The meaning of systematic and unsystematic risk in finance:

1. Systematic risk is uncontrollable by an organization and macro in nature.
2. Unsystematic risk is controllable by an organization and micro in nature.

### A. Systematic Risk

Systematic risk is due to the influence of external factors on an organization. Such factors are normally uncontrollable from an organization's point of view. It is a macro in nature as it affects a large number of organizations operating under a similar stream. Systematic risk occurs due to macroeconomic factors. It is also called market risk or non-diversifiable or volatility risk. All investments and securities suffer from such type of risk. One can't eliminate such a risk by holding more number of shares.

The types of systematic risk are depicted and listed below.

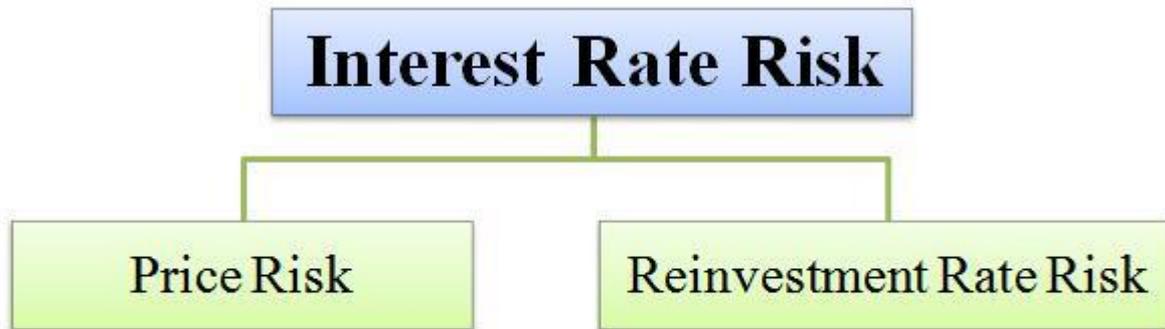


\* **Note:** In context of types of risk in finance, purchasing power risk and inflationary risk are same.

## 1. Interest rate risk

Interest-rate risk arises due to variability in the interest rates from time to time. It particularly affects debt securities as they carry the fixed rate of interest.

The types of interest-rate risk are depicted and listed below.



The meaning of price and reinvestment rate risk is as follows:

1. Price risk arises due to the possibility that the price of the shares, commodity, investment, etc. may decline or fall in the future.
2. Reinvestment rate risk results from fact that the interest or dividend earned from an investment can't be reinvested with the same rate of return as it was acquiring earlier.

## 2. Market risk

Market risk is associated with consistent fluctuations seen in the trading price of any particular shares or securities. That is, it arises due to rise or fall in the trading price of listed shares or securities in the stock market.

The types of market risk are depicted and listed below.



The meaning of different types of market risk is as follows:

1. Absolute risk is without any content. For e.g., if a coin is tossed, there is fifty percentage chance of getting a head and vice-versa.
2. Relative risk is the assessment or evaluation of risk at different levels of business functions. For e.g. a relative-risk from a foreign exchange fluctuation may be higher if the maximum sales accounted by an organization are of export sales.

3. Directional risks are those risks where the loss arises from an exposure to the particular assets of a market. For e.g. an investor holding some shares experience a loss when the market price of those shares falls down.
4. Non-Directional risk arises where the method of trading is not consistently followed by the trader. For e.g. the dealer will buy and sell the share simultaneously to mitigate the risk
5. Basis risk is due to the possibility of loss arising from imperfectly matched risks. For e.g. the risks which are in offsetting positions in two related but non-identical markets.
6. Volatility risk is of a change in the price of securities as a result of changes in the volatility of a risk-factor. For e.g. it applies to the portfolios of derivative instruments, where the volatility of its underlying is a major influence of prices.

### 3. Purchasing power or inflationary risk

Purchasing power risk is also known as inflation risk. It is so, since it emanates (originates) from the fact that it affects a purchasing power adversely. It is not desirable to invest in securities during an inflationary period.

The types of power or inflationary risk are depicted and listed below.



The meaning of demand and cost inflation risk is as follows:

1. Demand inflation risk arises due to increase in price, which result from an excess of demand over supply. It occurs when supply fails to cope with the demand and hence cannot expand anymore. In other words, demand inflation occurs when production factors are under maximum utilization.
2. Cost inflation risk arises due to sustained increase in the prices of goods and services. It is actually caused by higher production cost. A high cost of production inflates the final price of finished goods consumed by people.

### B. Unsystematic Risk

Unsystematic risk is due to the influence of internal factors prevailing within an organization. Such factors are normally controllable from an organization's point of view.

It is a micro in nature as it affects only a particular organization. It can be planned, so that necessary actions can be taken by the organization to mitigate (reduce the effect of) the risk.

The types of unsystematic risk are depicted and listed below.



\* **Note:** In context of types of risk in finance, business risk and liquidity risk are same.  
 \*\* **Note:** In context of types of risk in finance, financial risk and credit risk are same.

## 1. Business or liquidity risk

Business risk is also known as liquidity risk. It is so, since it emanates (originates) from the sale and purchase of securities affected by business cycles, technological changes, etc.

The types of business or liquidity risk are depicted and listed below.



The meaning of asset and funding liquidity risk is as follows:

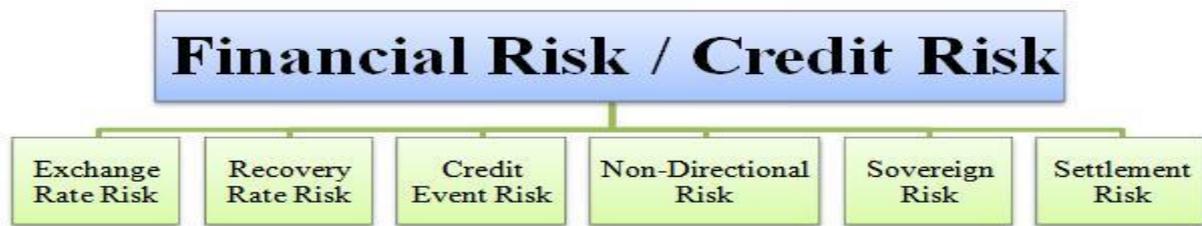
1. Asset liquidity risk is due to losses arising from an inability to sell or pledge assets at, or near, their carrying value when needed. For e.g. assets sold at a lesser value than their book value.
2. Funding liquidity risk exists for not having an access to the sufficient-funds to make a payment on time. For e.g. when commitments made to customers are not fulfilled as discussed in the SLA (service level agreements).

## 2. Financial or credit risk

Financial risk is also known as credit risk. It arises due to change in the capital structure of the organization. The capital structure mainly comprises of three ways by which funds are sourced for the projects. These are as follows:

1. Owned funds. For e.g. share capital.
2. Borrowed funds. For e.g. loan funds.
3. Retained earnings. For e.g. reserve and surplus.

The types of financial or credit risk are depicted and listed below.



The meaning of types of financial or credit risk is as follows:

1. Exchange rate risk is also called as exposure rate risk. It is a form of financial risk that arises from a potential change seen in the exchange rate of one country's currency in relation to another country's currency and vice-versa. For e.g. investors or businesses face it either when they have assets or operations across national borders, or if they have loans or borrowings in a foreign currency.
2. Recovery rate risk is an often neglected aspect of a credit-risk analysis. The recovery rate is normally needed to be evaluated. For e.g. the expected recovery rate of the funds tendered (given) as a loan to the customers by banks, non-banking financial companies (NBFC), etc.
3. Credit event risk arises when one fails to fulfilled their obligation, credit event is a sudden change in borrower's capacity to meet its payment.
4. Non-Directional risk arises where the method of trading is not consistently followed by the trader. For e.g. the dealer will buy and sell the share simultaneously to mitigate the risk
5. Sovereign risk is associated with the government. Here, a government is unable to meet its loan obligations, reneging (to break a promise) on loans it guarantees, etc.
6. Settlement risk exists when counterparty does not deliver a security or its value in cash as per the agreement of trade or business.

### 3. Operational risk

Operational risks are the business process risks failing due to human errors. This risk will change from industry to industry. It occurs due to breakdowns in the internal procedures, people, policies and systems.

The types of operational risk are depicted and listed below.



The meaning of types of operational risk is as follows:

1. Model risk is involved in using various models to value financial securities. It is due to probability of loss resulting from the weaknesses in the financial-model used in assessing and managing a risk.

2. People risk arises when people do not follow the organization's procedures, practices and/or rules. That is, they deviate from their expected behavior.
3. Legal risk arises when parties are not lawfully competent to enter an agreement among themselves. Furthermore, this relates to the regulatory-risk, where a transaction could conflict with a government policy or particular legislation (law) might be amended in the future with retrospective effect.
4. Political risk occurs due to changes in government policies. Such changes may have an unfavorable impact on an investor. It is especially prevalent in the third-world countries.