# TYPES OF RISKS AND RISK MANAGEMENT BY BANKS

Submitted by

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# MEANING OF RISK

Risk is potential that a selected action or activity will lead to a loss. It is treated as an undesirable outcome. Risk mean uncertainty. In other words it refers to possibility or chance of meeting a danger.

# DEFINITION OF RISK

Risk is a measurable uncertainty-

Frank knight

The risk can be thought of as the degree of variations in the possible outcome from uncertain event , or as the variation in the possible outcomes -

Federation Insurance Institute

# Types of Risk

## Systematic Risk

- Uncontrollable by an organisation
- Macro in nature

## Unsystematic Risk

- Controllable by an organisation
- Micro in nature

# Systematic Risk

1. 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.
2. It is a macro in nature as it affects a large number of organizations operating under a similar stream or same domain. It cannot be planned by the organization.

## Systematic Risk

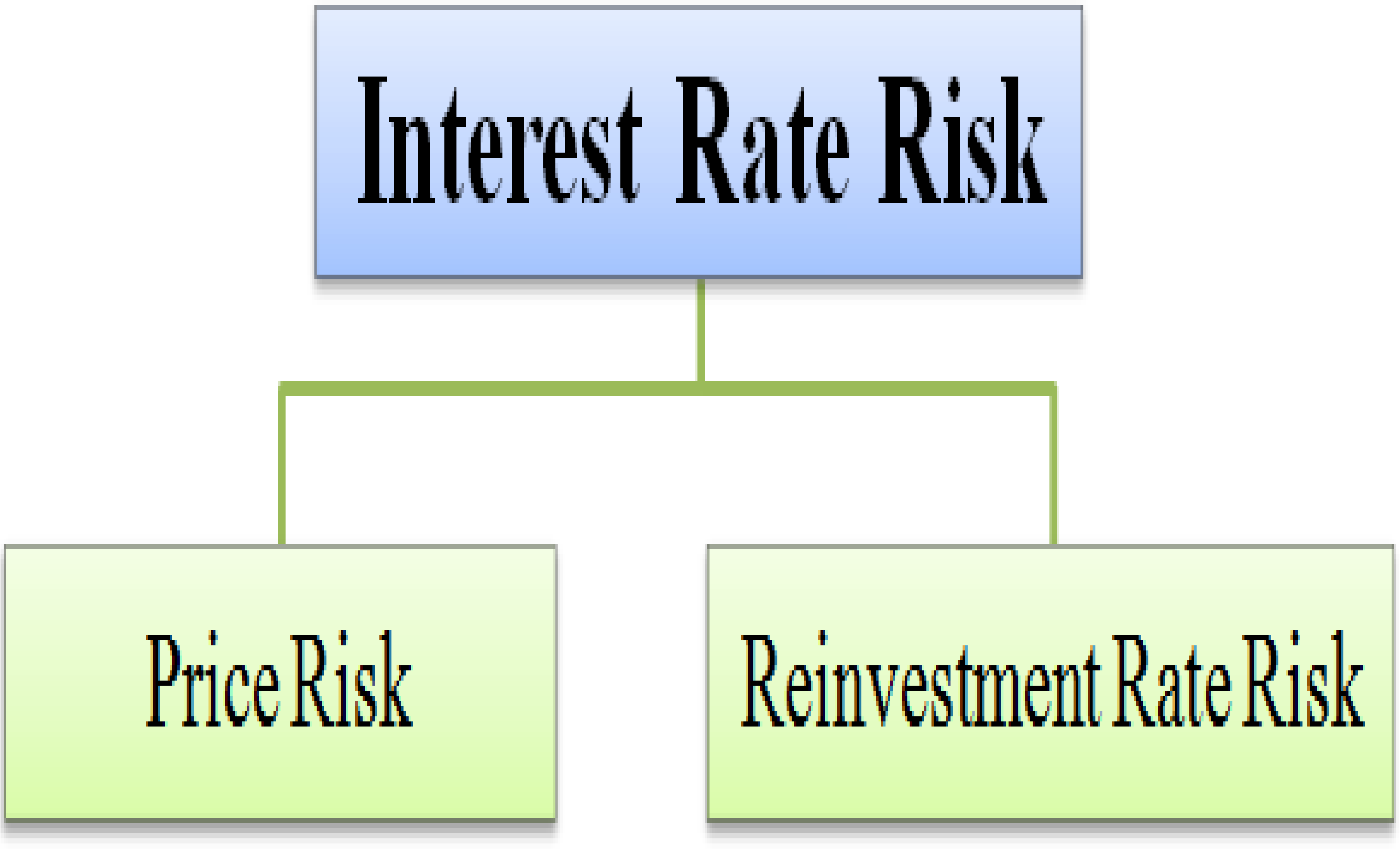
- Uncontrollable by an organisation
- Macro in nature

- Interest Rate Risk
- Market Risk
- * Purchasing Power / Inflationary Risk

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

# 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.


Interest Rate Risk
Price Risk
Reinvestment Rate Risk

# Interest rate risk

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

- Price risk arises due to the possibility that the price of the shares, commodity, investment, etc. may decline or fall in the future.
- 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.

# 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.


Market Risk
Absolute Risk
Relative Risk
Directional Risk
Non-Directional Risk
Basis Risk
Volatility Risk

# Market risk

- 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.
- 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.

# Market risk

- 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.
- 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

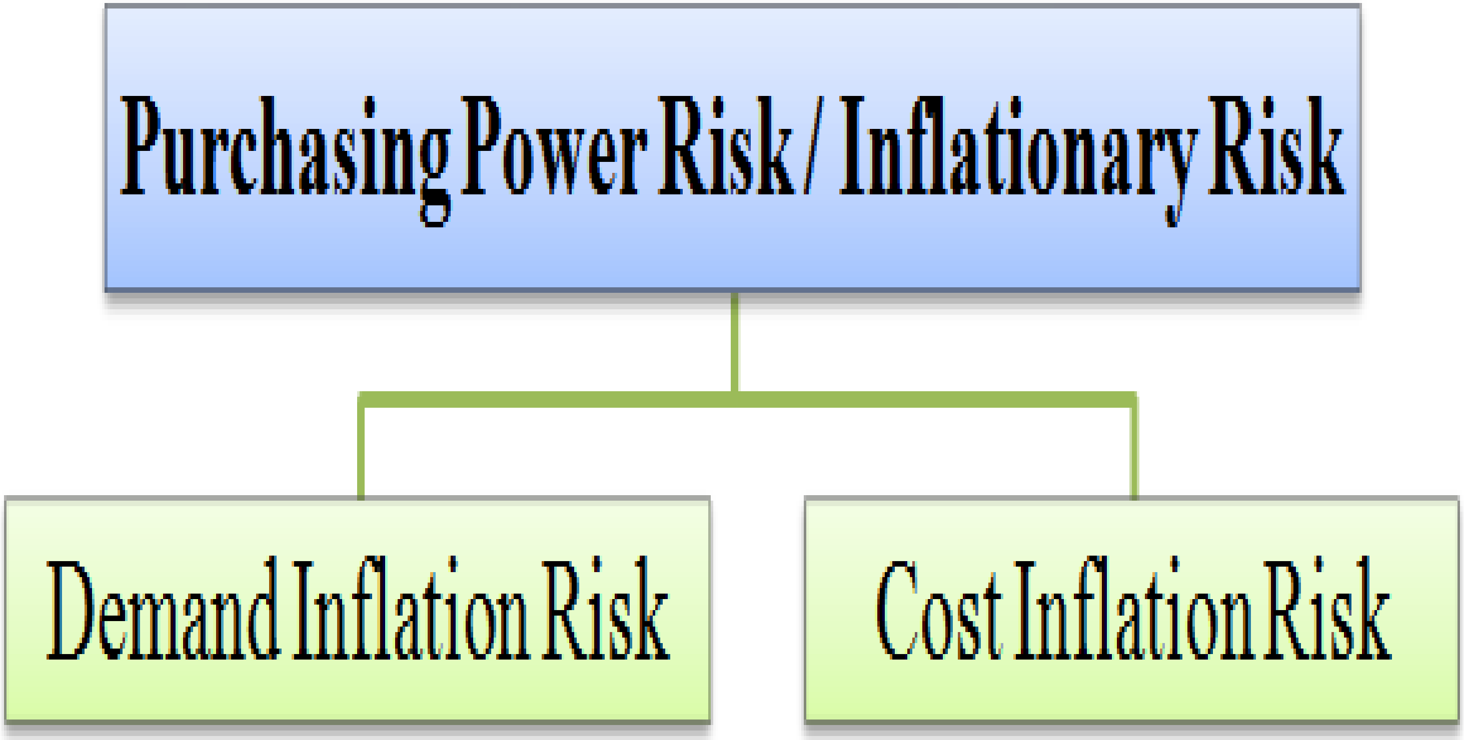
# Market risk

- 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.
- 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.

# 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.

# Purchasing Power or Inflationary Risk



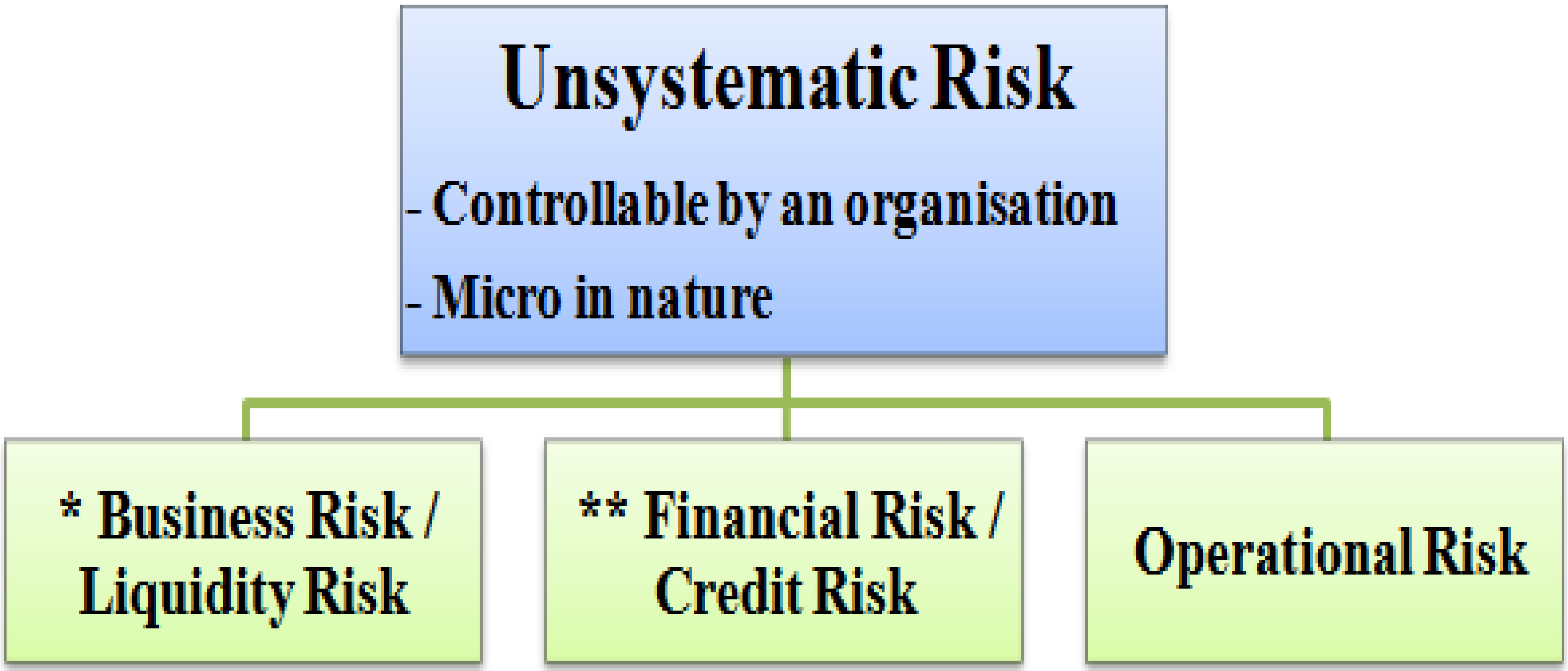
# Purchasing Power or Inflationary Risk

- 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.
- 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.

## 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.

# Unsystematic Risk

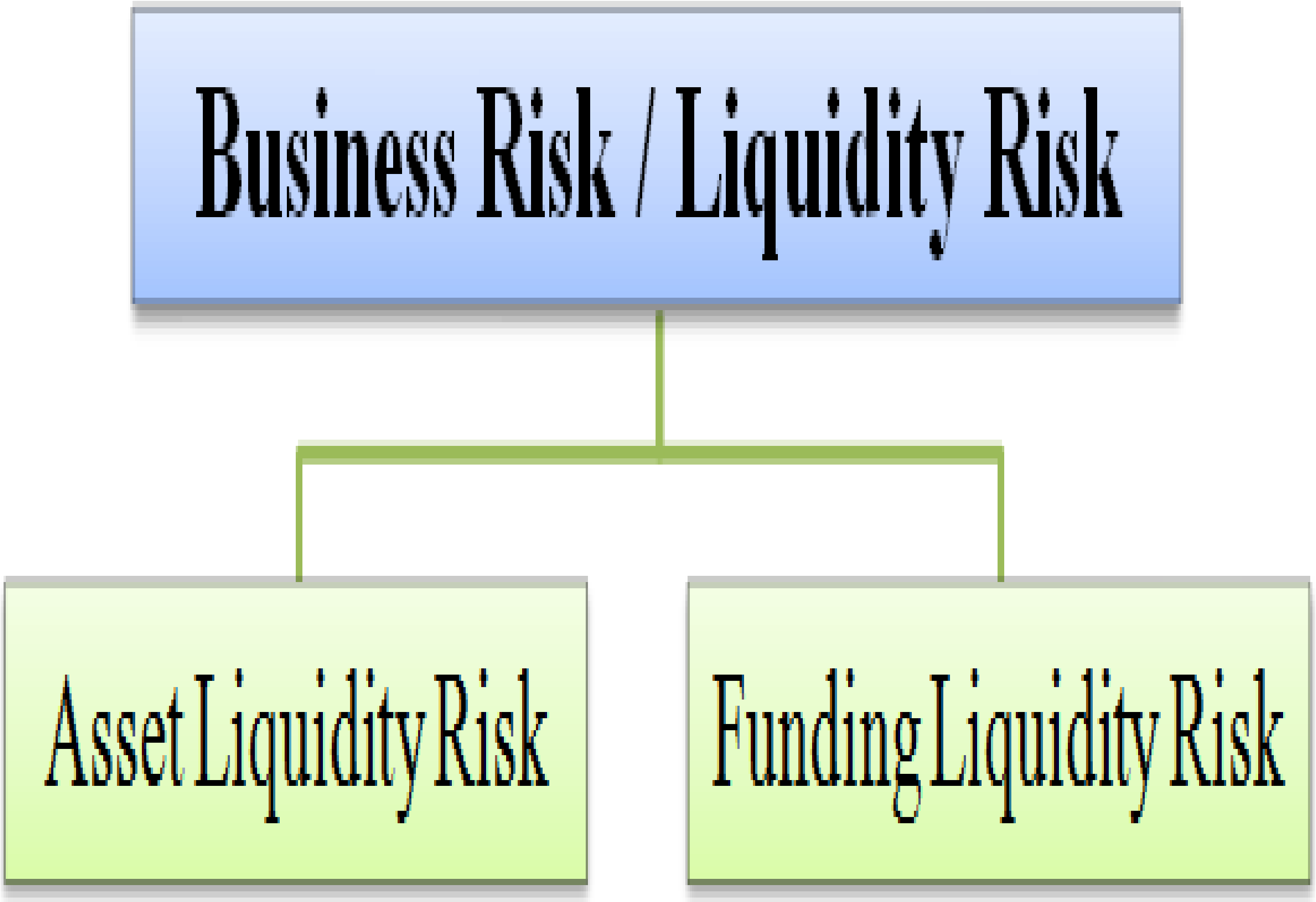



* Note: In context of types of risk in finance, business risk and liquidity risk are same.

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

# 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.


Business Risk / Liquidity Risk
Asset Liquidity Risk
Funding Liquidity Risk

# Business Risk

- 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.
- 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).

# 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:

- Owned funds. For e.g. share capital.
- Borrowed funds. For e.g. loan funds.
- Retained earnings. For e.g. reserve and surplus.

# Financial or credit risk

# Operational risk

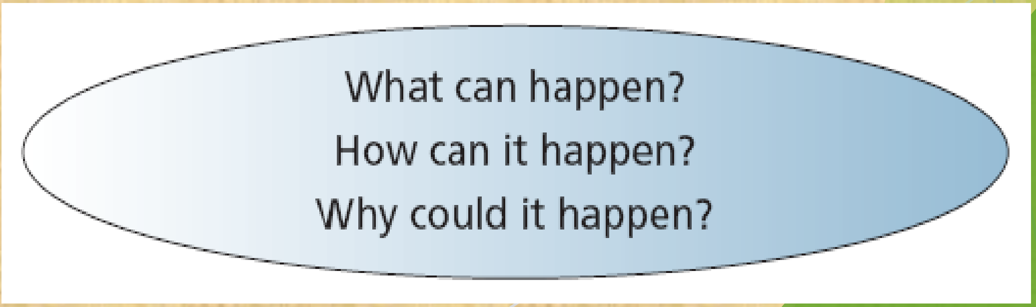
Operational risks are the business process risks failing due to human errors. This risk will change from industry to industry. It occurs due to breakdowns in the internal procedures, people, policies and systems.

# MEANING OF RISK MANAGEMENT

Risk management is the identification, assessment, and prioritization of risks(defined in  as *the effect of uncertainty on objectives*) followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities.

# STEPS IN RISK MANAGEMENT

- Identification of source of risk: Risk cannot be managed unless it is first identified. The risk manager is to locate the source or causes of risks. The aim of risk identification is to identify possible risks that may affect, either negatively or positively, the objectives of the business and the activity under analysis.



- Measurement of risk: The risk manager makes a loss study using historical data to eliminate future losses. The past experience and historical data enable a manager to decide in advance how many and to what size of losses may occur in future as a result of outcomes of an uncertain event. It involves:
- Analyze the risk
- Determine the existing controls
- Determine the consequences

- Treatment of risk: Risk treatment involves identifying options for treating or controlling risk, in order to either reduce or eliminate negative consequences, or to reduce the likelihood of an adverse occurrence. Risk treatment should also aim to enhance positive outcomes. Options for risk treatment can be:
- Avoid the risk
- Change the likelihood of occurrence of uncertain event
- Change the consequences
- Share the risk
- Retain the risk

- Selection of suitable method of risk handling: There are various techniques of risk handling such as avoidance, prevention, reduction etc. It is essential to select an appropriate method to take care of risk.
- Implementing the selected method: After the selection of suitable method, it is necessary to implement the selected method to cover the risk. Various factors like cost of insurance, financial condition , amount of loss require proper attention while implementing an appropriate method.

- Evaluation: Feedback process is evaluation of results of selected methods. Evaluation of results of adopted method must be done after a certain interval. Corrective actions or measures must be taken to eliminate the bad results or effects of implementation.

# Basic Principles for Risk Management

Board and senior Management oversight

"The ***overall responsibility*** of risk management vests in the Board of Directors, which shall formulate policies in various areas of operations of the bank. The senior management is, interalia, responsible for ***devising risk management strategy and well-defined policies*** and procedures for mitigating/controlling risks, which should be duly approved by the Board. The senior management is also responsible for the ***dissemination, implementation, and compliance*** of approved policies and procedures."

# Basic Principles for Risk Management

- Integration of Risk Management

  “At operational level, risk assessment may be made on portfolio or business line basis, however, at the top level the management need to adopt a holistic approach in assessing and managing risk profile of the bank.”

- Business Line Accountability

  “Irrespective of a separate risk review or management function individuals heading various business lines or units are also accountable for the risk they are taking.”

# Basic Principles for Risk Management

- Risk Evaluation/Measurement

  "Wherever possible risks should be quantitatively measured, reported, and mitigated."

- Independent review

  "The ***risk review function*** should be independent of those who ***approve and take risk***. The review should include, interalia, stress tests exposing the portfolio to unanticipated movements in key variables or major systemic shocks."

- Contingency planning

  "Banks should have contingency plans for any unexpected or worst case scenarios."

# Managing Credit Risk

Board and Senior Management Oversight

- BoD to approve credit risk strategy and other significant policies
- SM to develop and establish credit risk policies & credit administration procedures and guide staff

- Setting up ***appropriate*** organization structure and specify duties/responsibilities
- Credit management discipline

# Managing Credit Risk

- Credit Origination
  - Assess risk profile before extending credit
  - Cash flows and repayment capacity
  - Appropriate utilization of credit
- Limit Setting
- Credit Administration
  - Documentation, Disbursement, Monitoring, Repayment, Credit Files, Collateral Documents

# Managing Credit Risk

- Measuring Credit Risk
- Internal Risk Rating
- Rating Review
- Credit Risk monitoring & Control
- Risk Review
- Delegation of Authority
- Managing Problem Credits

# Managing Market Risk

- Board and Senior Management Oversight
- Organizational Structure
- Risk Management Committee
- Asset-Liability Committee
- Middle Office
- Risk Measurement

# Managing Market Risk

- Risk Measurement
  - Repricing Gap Models
  - Measuring Risk to Economic Value
  - Value at Risk
- Risk Limits
  - Gap Limits
  - Factor Sensitivity Limits

# Managing Liquidity Risk

- Board and Senior Management Oversight
- Early warning indicators of liquidity risk
- Liquidity Risk Strategy
  - Composition of Assets & Liabilities
  - Diversification and Stability of Liabilities
- ALCO/Investment Committee
- Liquidity Risk Management Process

# Managing Liquidity Risk

- Liquidity Risk Measurement & Monitoring
  - Contingency Funding Plans (CPF)
  - Use of CPF for Routine Liquidity Management
  - Use of CPF for Emergency & Distress Environment
- Cash Flow Projections
- Liquidity Ratios and Limits

# Managing Operational Risk

- Operational Risk Management Principles
  - Ultimate accountability  with BoD
  - BoD to ensure effective & integrated OpRisk Management Framework
  - BoD and SM to identify and define all categories of Operational Risk
  - Document and communicate OpRisk policies and procedures
  - Integrated business and support functions
  - Diligence of business line

# Managing Operational Risk

- Risk Assessment and Quantification
- Risk Management and Mitigation
- Risk Monitoring
  - Key Risk Indicators (KRIs)
- Risk Reporting
- Establish Control Mechanism
- Contingency Planning

# Reasons for rise of risk management

- Increase in size, diversification, spread of activities of business has grown.
- Increase in business relations with supplier, consumers, employees and govt.
- Physical hazards have increased and changed in shape due to raw material process, products, machine etc. Are coming into production.
- Increased large investment have also increased the importance of protection and prevention
- Competition has also increased.


THANK
YOU