**RISK MANAGEMENT AND INSURANCE**

**Code 16MBAFM403 IV Semester**

Part A

1.

a. Risk management is the identification, evaluation, and prioritization of risks (defined in ISO 31000 as *the effect of uncertainty on objectives*) followed by coordinated and economical application of resources to minimize, monitor, and control the probability or impact of unfortunate events[1] or to maximize the realization of opportunities. Risk management's objective is to assure uncertainty does not deflect the endeavor from the business goals.[2]

b. The principal risk management objectives

i. Analysing and managing all risks (financial, human, information system, strategic risks…) to avoid vertical segmentation effects and all potential impacts from such risks (financial and non-financial impacts such as reputation, know-how…). The scope of analysis covers the FRR and its stakeholders: its custodian/account- des Dépôts), external asset managers, index providers and other suppliers. One of the sources of added value of this approach lies in aggregating all of the major risks and ensuring the global consistency of the risk analysis and organisational action plans.
ii. Alerting the Executive Board of the potential occurrence of major risks and risks deemed to be unacceptable.
iii. Propose and coordinate the roll-out of action plans designed to reduce or change the profile of these risks.
iv. Assist with the dissemination of best practices and a risk management culture within the FRR.
v. Give the Executive Board an independent opinion on the management indices chosen by the Finance Division of the Fund for its own management.
vi. Propose or validate risk thresholds by major risk type or area of activity.
vii. Prior to launch, analyze new investment processes from the perspective of financial and operational risks. Set limits for these new investment processes.

c. Risk management process

All risk management processes follow the same basic steps, although sometimes different jargon is used to describe these steps. Together these 5 risk management process steps combine to deliver a simple and effective risk management process.

**Step 1: Identify the Risk.** You and your team uncover, recognize and describe risks that might affect your project or its outcomes. There are a number of techniques you can use to find project risks. During this step you start to prepare your Project Risk Register.

**Step 2: Analyze the risk**. Once risks are identified you determine the likelihood and consequence of each risk. You develop an understanding of the nature of the risk and its potential to affect project goals and objectives. This information is also input to your Project Risk Register.

**Step 3: Evaluate or Rank the Risk.** You evaluate or rank the risk by determining the risk magnitude, which is the combination of likelihood and consequence. You make decisions about whether the risk is acceptable or whether it is serious enough to warrant treatment. These risk rankings are also added to your Project Risk Register.

**Step 4: Treat the Risk.** This is also referred to as Risk Response Planning. During this step you assess your highest ranked risks and set out a plan to treat or modify these risks to achieve acceptable risk levels. How can you minimize the probability of the negative risks as well as enhancing the opportunities? You create risk mitigation strategies, preventive plans and contingency plans in this step. And you add the risk treatment measures for the highest ranking or most serious risks to your Project Risk Register.

**Step 5: Monitor and Review the risk.** This is the step where you take your Project Risk Register and use it to monitor, track and review risks.

2.

a. The origin of the word ―risk‖ can be traced to the Latin word ―Rescum‖ meaning danger at sea or that which cuts. Managing business in a highly volatile environment is like navigating a ship on stormy seas. A modern business is confronted with many risks, some are loss of property due to natural calamities, changes in price of the commodity, price hike in raw materials, wages and political instability etc.

b. Types of risk:

**– Underwriting risk: Property-casualty insurance**
The property-casualty risk category encompasses the underwriting risks in the property, motor, third-party liability, personal accident, marine, aviation and space, and credit classes of insurance, together with special classes also allocated to property-casualty. Underwriting risk is defined as the risk of insured losses being higher than our expectations. The premium and reserve risks are significant components of the underwriting risk.

**– Underwriting risk: Life and health**
The underwriting risk is defined as the risk of insured benefits payable in life or health insurance business being higher than expected. Of particular relevance are the biometric risks and the customer behaviour risks, for example lapses and lump-sum options. We differentiate between risks that have a short-term or long-term effect on our portfolio.

**– Market risk**
We define market risk as the risk of economic losses resulting from price changes in the capital markets. This includes equity risk, general and specific interest-rate risk, property risk and currency risk.

**– Credit risk**
We define credit risk as the financial loss that Munich Re could incur as a result of a change in the financial situation of a counterparty, such as an issuer of securities or other debtor with liabilities to our Group.
In addition to credit risks arising out of investments and payment transactions with clients, we actively assume credit risk through the writing of insurance and reinsurance business, for example in credit and financial reinsurance.

**– Operational risk**
We define operational risk as the risk of losses resulting from inadequate or failed internal processes, incidents caused by the actions of personnel or system malfunctions, or external events.

**– Liquidity risk**
Our objective in managing liquidity risk is to ensure that we are in a position to meet our payment obligations at all times.

**– Strategic risk**
We define strategic risk as the risk of making wrong business decisions, implementing decisions poorly, or being unable to adapt to changes in the operating environment.

**– Reputational risk**
Reputational risk is the risk of a loss resulting from damage to the Group's public image (for example with clients, shareholders or other parties).

c. Sources of Risk

I. **Decision/ indecision**: Taking or not taking a decision at the right time is generally the first cause of risk. Suppose a banker takes deposits and decides not to put money in statutory liquidity requirements, the bank would be called upon to pay penalties. Indecision in selling a government security when the market upswing is also a risk as it causes loss of revenue. The risk of revenue loss is on account of indecision.

II. **Business Cycles/ Seasonality:** There are certain exposures that are affected by seasonality or business cycles. Lending to sugar industry in India disregarding the fact that the production of sugar is restricted six to seven months in a year, may give rise to risky situation.

III. **Economic / Fiscal changes:** The government `s economic and taxation policies are sources of risk. The levying of import duty on certain capital goods can escalate the funding cost and bank finance

requirement. While the borrower`s repaying capacity remains the same, such a situation enhances the exposure of adding to the risk. The changes in Government Policies can impact the cash inflow for the borrowing customer thereby his repayment capacity.

IV. **Market Preferences:** Over the years, the consumer demands and preferences particularly from the youth segment, are changing substantially. The preference of motorcycle over a scooter is an example. Lending to scooter dealers or manufactures will have to be cautious due to this market trend.

V. **Political Compulsions:** A Government may compel to lend in areas where the rewards may not be proportional.

VI. **Regulations:** The impact of change in regulations is similar to the changes in government policies. In developed countries like the USA, there are certain boycott laws prescribing restrictions. The anti-boycott laws specifically refer to boycotts involving our foreign government against another foreign government and participation of people in the US in those boycotts. Indian operating in the USA do have to assess the regulatory risks. With the passing of USA Patriot Act, the process of anti money laundering have been strengthened. Compliance of a variety of regulations is also a source of risk.

VII. **Competition:** In order to remain competitive, banks assume risks of enhancing the returns. In the quest to achieve the better result there could be a tendency to assume risks highly unrelated to the return. The selection of the right counter party, lack of proper risk assessment, failure to appreciate the borrower rating, etc., all contribute to risk acceleration. Competition remains a major source of risks for banks as for all other sectors.

VIII. **Technology:** Technology is both, a solution and a course of risk. Deals worth millions are made in treasury at mind boggling speed, thanks to advanced technology supports. The process of maker-checker is scrupulously followed while entering into such deals. Still machines can go wrong. The reflection of inaccurate values like dates, amounts, interest rates, etc., can cause a huge risk. It is a part of operational risk wherein technology itself becomes the source of risk.

IX. **Non availability of Information:** Technology is an enabler for decision support for rational and data based decision making. More often than that, in the absence of information support , banks do take decisions. The banks fix exposure limits per party or per industry. Exposures exceed these prudential limits in the absence of real time information, thereby multiplying the risk exposures.

3.

a. Risk put three major burden on the society:
   i. *The creation of adequate contingency*
   ii. *Deprivation of society of needed goods and services*
   iii. *The creation of perpetual state of fear and mental worry.*

b. Financial exposure is the amount that can be lost in an investment. For example, the financial exposure of purchasing a car would be the initial investment amount, minus the insured portion. Knowing and understanding financial exposure, which is just another name for risk, is a crucial part of the investment process.

**BREAKING DOWN 'Financial Exposure'**

As a general rule, investors are always seeking to limit their financial exposure, which will help maximize profits. For instance, if 100 shares of a stock purchased at $10 a share appreciated to $20, selling 50 shares would eliminate the financial exposure. The only risk going forward would be to the profit made as the principal amount was already sold. Conversely, if the stock decreased from the original purchase price of $10 to $5 per share, the investor would have lost half the original principal amount.

Financial exposure does not only apply to investing in the stock market. Financial exposure will occur anytime where the participant stands to lose any of the principal value invested. Purchasing a home is an excellent example of financial exposure. If the value of real estate declines and the homeowner sold at a lower amount than the original purchase, a loss on investment would occur.

**Reducing Financial Exposure**

The simplest way to reduce one's financial exposure is to put money into principal protected investments with little to no risk. Certificate of Deposits or savings accounts are two ways to drastically reduce financial exposure. Both investments are guaranteed by the FDIC, up to the qualified coverage amounts. However, with no risk comes very little return on investment. Also, with having no financial exposure also leaves a conservative investor subject to other risks, such as inflation risk.

Another way to reduce financial exposure is to diversify among many different investments and asset classes. To build a less volatile portfolio, an investor should have a combination of stocks, bonds, real estate and other various asset classes. Within the equities, there should be further diversification among market capitalizations and exposure to both domestic and international markets. When a portfolio is successfully diversified among many asset classes, it should reduce overall volatility. If the market as a whole goes down, non-correlating asset classes will reduce the downside.

c. Components of cost of risk

**Cost of risk** is the cost of managing risk and incurring losses due to risk. It is a metric that can be calculated for a financial period or forecast for a future period. The following are common elements of cost of risk.

### Administration Costs

The costs of managing risk such as the budget of a risk management team.

#### Mitigation Costs

The costs of reducing risk. For example, a firm that buys specialized hardware and software to reduce information security risks.

#### Risk Control Costs

The cost of operational processes designed to reduce risk such as credit checks that are run on customers.

### Transfer Costs

The cost of transferring risk using techniques such as insurance or financial instruments.

### Losses

Losses that occur because of a risk. For example, losses that occur when a customer fails to pay for delivered services is considered a loss due to credit risk.

| Overview: Cost Of Risk | | |
|---|---|---|
| Type | Risk Analysis<br><br>Risk Metric | |

| | | |
|---|---|---|
| Definition | The cost of risk management, risk control, risk mitigation, risk transfer and losses due to risk. | |
| Notes | Cost of risk can be forecasted using estimates such as a risk value. | |
| Related Concepts | Risk Management<br><br>Risk Control<br><br>Risk Mitigation<br><br>Risk Transfer<br><br>Risk Analysis<br><br>Risk | |

4.

a. Business risk exposure

**Business Risk Exposure** (BRE) is a method of calculating (scoring) the nature and level of **exposure** that an organization is likely to confront through a potential failure of a specified asset or group of assets

b. **Risk Identification tools and techniques**

- Documentation Reviews. ...
- Information Gathering Techniques. ...
- Brainstorming. ...
- Delphi Technique. ...
- Interviewing. ...
- Root Cause Analysis. ...
- Swot Analysis (STRENGTH, Weakness, Opportunities And Threats) ...
- Checklist Analysis.