PAPER – 20B : RISK MANAGEMENT IN BANKING AND INSURANCE SUGGESTED ANSWERS SECTION – A

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- (i) (A)
- (ii) (D)
- (iii) (D)
- (iv) (C)
- (v) (C)
- (vi) (D)
- (vii) (B)
- (viii) (B)
- (ix) (C)
- (x) (C)
- (xi) (A)
- (xii) (B)
- (xiii) (A)
- (xiv) (B)
- (xv) (B)

SECTION - B

2. (a)

Risk refers to 'a condition where there is a possibility of undesirable occurrence of a particular result which is known or best quantifiable and therefore insurable'. A risk can be defined as an unplanned event with financial consequences resulting in loss or reduced earnings. An activity which may give profits or result in loss may be called a risky proposition due to uncertainty or unpredictability of the activity of trade in future.

In other words, it can be defined as the uncertainty of the outcome. As risk is directly proportionate to return, the more risk a bank takes, it can expect to make more money.

Type of Risks: The major risks in the banking business as commonly referred can be broadly classified into:

- Liquidity Risk
- Interest Rate Risk
- Market Risk
- Credit or Default Risk
- Operational Risk
- **1. Liquidity Risk**: The liquidity risk of banks arises from funding of long-term assets by short-term liabilities, thereby making the liabilities subject to rollover or refinancing risk.

The liquidity risk in banks manifest in different dimensions:

- (a) Funding Risk: Funding Liquidity Risk is defined as the inability to obtain funds to meet cash flow obligations. For banks, funding liquidity risk is crucial. This arises from the need to replace net outflows due to unanticipated withdrawal/non-renewal of deposits (wholesale and retail).
- (b) Time Risk: Time risk arises from the need to compensate for non-receipt of expected inflows of funds i.e., performing assets turning into non-performing assets.
- (c) Call Risk: Call risk arises due to the crystallisation of contingent liabilities. It may also arise when a bank may not be able to undertake profitable business opportunities when it arises.

2. Interest Rate Risk:

Interest Rate Risk arises when the Net Interest Margin or the Market Value of Equity (MVE) of an institution is affected due to changes in the interest rates.

IRR can be viewed in two ways – its impact is on the earnings of the bank or its impact on the economic value of the bank's assets, liabilities and Off-Balance Sheet (OBS) positions. Interest rate Risk can take different forms.

3. Market Risk:

The risk of adverse deviations of the mark-to-market value of the trading portfolio, due to market movements, during the period required to liquidate the transactions is termed as Market Risk. This risk results from adverse movements in the level or volatility of the market prices of interest rate instruments, equities, commodities, and currencies. It is also referred to as Price Risk.

The term Market risk applies to

- (i) that part of IRR which affects the price of interest rate instruments
- (ii) Pricing risk for all other assets/portfolio that is held in the trading book of the bank and
- (iii) Foreign Currency Risk.
- (a) Forex Risk: Forex risk is the risk that a bank may suffer losses as a result of adverse exchange rate movements during a period in which it has an open position either spot or forward, or a combination of the two, in an individual foreign currency.
- (b) Market Liquidity Risk: Market liquidity risk arises when a bank is unable to conclude a large transaction in a particular instrument near the current market price.

4. Default or Credit Risk:

Credit risk is more simply defined as the potential of a bank borrower or counterparty to fail to meet its obligations in accordance with the agreed terms. For most banks, loans are the largest and most obvious source of credit risk. It is the most significant risk, more so in the Indian scenario where the NPA level of the banking system is significantly high.

The two variants of credit risk are:

- (a) Counterparty Risk: This is a variant of Credit risk and is related to non-performance of the trading partners due to counterparty's refusal and or inability to perform. The counterparty risk is generally viewed as a transient financial risk associated with trading rather than standard credit risk.
- (b) Country Risk: This is also a type of credit risk where non-performance of a borrower or counterparty arises due to constraints or restrictions imposed by a country. Here, the reason of non-performance is external factors on which the borrower or the counterparty has no control

5. Operational Risk:

Basel Committee for Banking Supervision has defined operational risk as 'the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. Managing operational risk has become important for banks due to the following reasons:

- Higher level of automation in rendering banking and financial services
- Increase in global financial inter-linkages
- The scope of operational risk is very wide because of the above-mentioned reasons.

Two of the most common operational risks are discussed below:

(a) Transaction Risk: Transaction risk is the risk arising from fraud, both internal and external, failed business processes and the inability to maintain business continuity and manage information.

(b) Compliance Risk: Compliance risk is the risk of legal or regulatory sanction, financial loss or reputation loss that a bank may suffer as a result of its failure to comply with any or all of the applicable laws, regulations, codes of conduct and standards of good practice. It is also called integrity risk since a bank's reputation is closely linked to its adherence to principles of integrity and fair dealing.

Therefore, the challenge of Indian banks is to establish a coherent framework for measuring and managing risk consistent with corporate goals and responsive to the developments in the market. As the market is dynamic, banks should maintain vigil on the convergence of regulatory frameworks in the country, changes in the international accounting standards and finally and most importantly changes in the clients' business practices.

Therefore, the need of the hour is to follow certain risk management norms suggested by the RBI and BIS.

2. (b)

Gap or Mismatch Risk:

A gap of mismatch risk arises from holding assets and liabilities and off-balance sheet items with different principal amounts, maturity dates or repricing dates, thereby creating exposure to unexpected changes in the level of market interest rates.

An example of this risk would be where an asset maturing in two years at a fixed rate of interest has been funded by a liability maturing in six months or a liability maturing over a period but getting repriced periodically. The interest margin would undergo a change after six months /repricing period, causing variation in net interest income.

Basis Risk:

The risk that the interest rate of different assets, liabilities and off-balance sheet items may change in different magnitude is termed as basis risk.

An example of basis risk would be to say in a rising interest rate scenario asset interest rate may rise in different magnitude than the interest rate on corresponding liability creating variation in net interest income.

The degree of basis risk is fairly high in respect of banks that create composite assets out of composite liabilities. The Loan book in India is funded out of a composite liability portfolio and is exposed to a considerable degree of basis risk. The basis risk is quite visible in volatile interest rate scenarios. When the variation in market interest rate causes the NII to expand, the banks have experienced favourable basis shifts and if the interest rate movement causes the NII to contract, the basis has moved against the banks.

3. (a)

The increasing importance of credit risk modelling can be attributed to the following three factors:

- 1. Banks became more concerned for treatment of credit risk.
- 2. New markets are emerging in credit derivatives and the marketability of existing loans is increasing through securitisation / loan sales market.
- **3.** Regulators are concerned to improve the current system of bank capital requirements especially as it is related to credit risk.

Credit Risk Models have assumed importance due to the fact that they provide the decision maker with insight or knowledge that would not otherwise be readily available or that could be obtained at a high cost. In a marketplace where margins are fast disappearing and the pressure to lower pricing is unrelenting, models give their users a competitive edge.

Credit risk models are intended to assist banks in quantifying, aggregating and managing risk across geographical and product lines. The outputs of these models also play significant roles in banks' risk management and performance measurement processes, customer profitability analysis, risk-based pricing, active portfolio management and capital structure decisions. Credit risk modelling may lead to better internal risk management and may have the potential to be used in the supervisory oversight of banking organisations.

Credit risk may take the following forms:

- i. In the case of Direct Lending: Non-payment of principal / and or interest amount.
- ii. In the case of Guarantees or Letters of Credit: Not meeting financial commitments by constituents on crystallization of these contingent liabilities.
- iii. In the case of Treasury Operations: Default or cessation in payment or series of payments that have fallen due from the counter parties under respective contracts.
- iv. In the case of Securities Trading Businesses: Non settlement of funds/ securities.
- v. In the case of Cross-Border Exposure: Embargo or restrictions of free transfer of foreign currency funds imposed by foreign governments (Sovereigns).

3. (b)

Advantages of Sovereign Risk Rating:

It enables easy comparison between different countries and allows an investor to understand and appreciate the risk and reward associated with investing in a particular country and industry. In short, it enables cross-country and across different time frame comparisons.

Ratings based on such risk act as an essential benchmark for a country to showcase its competitiveness over other countries to promote itself as an investment destination in front of Foreign Investors.

Disadvantages:

It follows a herd mentality, which means that ratings based on Country Risk are usually impacted by converging practice. If one developing country is downgraded, others were also downgraded due to the interconnected, globalized world.

Country Risk indirectly impacts the ability of the corporate in that country and impacts their ability to raise cheap foreign borrowing, which directly affects their profitability. A high Sovereign Risk is perceived by foreign Investors as Risky and requires a higher premium, which will increase the cost of borrowing for companies within that country.

This usually is not exhibited in the Sovereign ratings until it's too late (the country might have defaulted). This is due to the inherent vested interest of the government of various countries to ensure their ratings are higher and the Rating Agency's incentive to accommodate the states (which are its clients).

It is primarily based on Historical data points and analysing the same to infer future events and, as such, lacks a lot of objectivity.

4. (a)

For operational risk management, the activities of a bank may be mapped into eight business lines identified in the New Capital Adequacy Framework. The various products launched by the banks are also to be mapped to the relevant business line. Banks must develop specific policies for mapping a product or an activity to a business line and have the same documentation to indicate the criteria. The following are the eight recommended business lines.

Details and methodologies for mapping these business lines are:

- (i) Corporate finance.
- (ii) Trading and sales.
- (iii) Retail banking.
- (iv) Commercial banking.

- (v) Payment and settlement.
- (vi) Agency services.
- (vii) Asset management.
- (viii) Retail brokerage.

4. (b)

- (i) Net Exposure qualifying for Capital Adequacy is ₹64.11 lacs
- (ii) Expected loss = EUR 0.98 million

5. (a)

(i) Tier-I = ₹1,600 Crores. (ii) Tier-II = ₹1,220 Crores.

(iii) Capital Adequacy Ratio of the Bank = 10.07%

(iv) The amount of minimum capital to support credit and operational Risk = ₹1,800 Crores.

5. (b)

Insurance is a valuable risk-financing tool. Few organizations have the reserves or funds necessary to take on the risk themselves and pay the total costs following a loss. Purchasing insurance, however, is not risk management. A thorough and thoughtful risk management plan is the commitment to prevent harm. Risk management also addresses many risks that are not insurable including brand integrity, potential loss of tax exempt status for volunteer groups, public goodwill and continuing donor support.

Risk Management Comprises of mainly five steps which are as under:

- Risk Analysis,
- Risk Identification,
- Risk Assessment,
- Risk Planning,
- Risk Controlling.

There are five major methods of handling and controlling risk, which are as under:

- Risk avoidance;
- Risk retention;
- Risk transfer;
- Loss control; and
- Insurance. Risk avoidance is one method of handling risk.

Reinsurance is a contract under which insurance companies can pass on the risk they assume under the policies issued by them, to yet another insurance company (called reinsurer). Therefore, the insurance company which issues the policy becomes the Policyholder under the reinsurance contract entered into with a reinsurer. A broker can be an intermediary who can arrange reinsurance contracts with reinsurance companies. Except for GIC, the National Reinsurer, all the other reinsurance companies doing business in India are located abroad.

6. (a)

Duties and Responsibilities of a Surveyor and Loss Assessor:

It shall be the duty of every Licensed Surveyor and Loss Assessor to investigate, manage, quantify, validate and deal with losses (whether insured or not) arising from any contingency, and report thereon to the insurer or insured, as the case may be., All Licensed Surveyors and Loss Assessors shall carry out the said work with competence, objectivity and professional integrity and strictly adhere to the code of conduct as stipulated in these Regulations:

The following, shall, inter alia, be the duties and responsibilities of a Surveyor and Loss Assessor:

Declaring whether he has any interest in the subject matter in question or whether it pertains to any of his relatives, business partners, or through material shareholding;

Explanation:

- For the purpose of this clause 'relatives' shall mean any of the relatives as defined in Subsection (77) of Section 2 of the Companies Act, 2013;
- Bringing to the notice of the Authority, any change in the information or particulars furnished at the time of issuance of the license, within a period not exceeding fifteen days from the date of occurrence of such change that has a bearing on the license granted by the Authority
- Maintaining confidentiality and neutrality without jeopardizing the liability of the insurer and claim of the insured;
- Conducting inspection and re-inspection of the property in question suffering a loss;
- Examining, inquiring, investigating, verifying, and checking upon the causes and the circumstances of the loss in question including the extent of loss, nature of the ownership and insurable interest;
- Conducting spot and final surveys, as and when necessary, and comment upon the franchise, excess/under insurance, and any other related matter;
- Estimating, measuring, and determining the quantum and description of the subject under loss;
- Advising the insurer and the insured about loss minimization, loss control, security, and safety measures, wherever appropriate, to avoid further losses;
- Commenting on the admissibility of the loss as also the observance of warranty conditions under the policy contract;
- Surveying and assessing the loss on behalf of an insurer or insured;
- Assessing liability under the contract of insurance;
- Pointing out discrepancies, if any, in the policy wordings;
- Satisfying queries of the insured/insurer and of persons connected thereto in respect of the claim/loss;
- Recommending applicability of depreciation, percentage, and quantum of depreciation;
- Giving reasons for repudiation of claim, in case the claim is not covered by policy terms and conditions;
- Taking expert opinion, wherever required;
- Commenting on salvage and its disposal wherever necessary.

6. (b)

TPA (Third Party Administrator) is a licensed intermediary between health insurance policyholders and insurance companies. It can be a company, an organisation or an agency with a license from the Insurance Regulatory and Development Authority of India. Insurance companies could outsource claim settlements to TPAs to make the process hassle-free and reduce the overall burden of processing claims.

The need of TPA in Health Insurance are:

- ✓ Improved efficiency/quality (delivery of services).
- ✓ Enhanced standardisation (procedures and due diligence).
- ✓ Increase your understanding of healthcare services.
- ✓ Implement new management system.
- ✓ Increased availability of health insurance.
- ✓ Reduce expenses/costs.
- ✓ Create protocols to streamline investigations and eliminate unnecessary delays.
- ✓ Reduce insurance premiums by paving the way.

TPAs are also provide certain value-added services. The functions of a TPA in health insurance are:

- ✓ Processing claims and settlements.
- ✓ Approving cashless claims.
- ✓ Disbursing claims.
- ✓ Providing network facilities.
- ✓ Database maintenance.
- ✓ Collecting premiums.
- ✓ Cashless processing for approved hospitals.
- ✓ Enrolment.
- ✓ Reimbursing hospitals bills with cash.

Some TPAs provide value-added services such as:

- ✓ Ambulance services.
- ✓ 24×7 toll-free helplines.
- ✓ Medicine supplies.
- ✓ Specialised consultation.
- ✓ Health facilities.
- ✓ Checking available beds.

7. (a)

Risk is part of every human endeavour. From the moment we get up in the morning, drive or take public transportation to get to school or to work until we get back into our beds (and perhaps even afterwards), we are exposed to risks of different degrees. Risk is the potential of loss (an undesirable outcome, however not necessarily so) resulting from a given action, activity and/or inaction. The notion implies that a choice having an influence on the outcome sometimes exists (or existed). Potential losses themselves may also be called "risks". Any human endeavour carries some risk, but some are much riskier than others.

A peril is an event or circumstance that causes or may potentially cause a loss and give rise to risk. Examples of perils include fire, flooding, hailstorms, tornado, hurricane, auto accident or home accident such as falling.

A hazard is an action, condition, circumstance or situation that makes a peril more likely to occur or a loss more likely to be suffered as the result of a peril. Examples of hazards include dangerous behaviours, such as skydiving or base jumping, that increase the likelihood of injury.

A risk is simply the possibility of a loss, but a peril is a cause of loss. A hazard is a condition that increases the possibility of loss. For instance, fire is a peril because it causes losses, while a fireplace is a hazard because it increases the probability of loss from fire.

Flood is the peril and the proximity of the house to the river is the hazard. The peril is the prime cause; it is what will give rise to the loss. Often it is beyond the control of anyone who may be involved. In this way, we can say that storm, fire, theft, motor accident and explosion are all perils. Thus, if a house burns because of a fire, the peril, or cause of loss, is the fire. If a car is totally destroyed in an accident with another motorist, accident (collision) is the peril, or cause of loss. Some common perils that result in the loss or destruction of properly include fire, cyclone, storm, landslide, etc.

7. (b)

Alternative Risk Transfer (ART) includes alternative types of risk carriers such as:

- Self-Insurance:
- Risk Retention Groups;
- Pools; and
- Captive Insurance Company, rent-a-captive insurance company and protected cell insurance companies;
- Finite or Financial Insurance;
- Multi Year, Multi line, aggregate or blended or integrated programme.
- Self-Insurance, Risk Retention Groups and Pools are largely US based concepts for ART.

The three critical points to risk pooling are:

- Centralized inventory saves safety stock and average inventory in the system.
- When demands from markets are negatively correlated, the higher the coefficient of variation, the greater the benefit obtained from centralized systems; that is, the greater the benefit from risk pooling.
- The benefits from risk pooling depend directly on relative market behaviour. If two markets are competing when demand from both markets are more or less than the average demand, the demands from the market are said to be positively correlated. Thus, the benefits derived from risk pooling decreases as the correlation between demands from both markets becomes more positive.

8. (a)

- (i) Capital Adequacy Ratio = 13.51%
- (ii) Importance of Capital Adequacy Ratio / Capital to Risk Assets Ratio: Banks in the modern world face an inherent risk of insolvency. Since the banks are so highly leveraged, there could be a run on the bank any moment if their reserves are considered to be inadequate by the market.

Hence, banks must maintain adequate capital in their vaults, if they want to survive. However, what constitutes "adequate" is subjective. This is generally measured in the form of a "capital adequacy ratio" and central banking institutions all over the world prescribe the level of capital that needs to be maintained.

Ensuring Solvency of Banks:

The capital adequacy ratio is important from the point of view of solvency of the banks and their protection from untoward events which arise as a result of liquidity risk as well as the credit risk that banks are exposed to in the normal course of their business.

The solvency of banks is not a matter that can be left alone to the banking industry. This is because banks have the savings of the entire economy in their accounts. Hence, if the banking system were to go bankrupt, the entire economy would collapse within no time. Also, if the savings of the common people are lost, the government will have to step in and pay the deposit insurance.

Hence, since the government has a direct stake in the issue, regulatory bodies are involved in the creation and enforcement of capital ratios. In addition to that capital ratios are also influenced by international banking institutions.

8. (b)

- i. No, the insurance company was not right in deducting the amount of ₹ 33,125/- from the claim amount on the ground that the driver did not have an endorsement on his licence to drive a transport vehicle. Once a person had a licence to drive a heavy goods carriage vehicle, it would mean that he was entitled to drive a transport vehicle. Due to this entitlement with the driving licence, the driver was allowed to drive the bus, which met with the accident. The insurance company in such a case was liable to pay the full amount of claim and was not justified in deducting the amount of ₹ 33,125/-.
 - The aggrieved insured person should file a complaint at the appropriate forum, so that the insurance company pays the balance amount along with interest at 12 percent and cost of ₹ 5,000/-.
- ii. No, the insurance company is not right in paying the claim amount directly to the finance company without informing the claimant. Even if the insurance company intended to make the claim payment to the finance company it should have informed the claimant insured and asked for his consent to do so. The insurance company and the financier cannot act in isolation without even informing the insured who has made the claim for the loss.

In such a case, the insurance company should have either paid the claim amount to the insured or should have properly communicated with the claimant and asked for his written consent/no objection certificate to pay the claim amount to the finance company.