PAPER-20B: RISK MANAGEMENT IN BANKING AND INSURANCE

SUGGESTED ANSWERS

SECTION-A

1. (a)

(i) (C)

(ii) (D)

(iii) (D)

(iv) (D)

(v) (B)

(vi) (B)

(vii) (B)

(viii) (B)

(ix) (C)

(x) (B)

1. (b)

(xi) (B)

(xii) (C)

(xiii) (C)

(xiv) (B)

(xv) (A)

SECTION-B

2. (a)

Common types of risks faced by banks are as follows:

i. Operational Risk: Server failure disrupted net banking services. This halted customer transactions, causing operational chaos.

ii. Market Risk: A stock market crash devalued equity holdings. The bank's investment portfolio suffered significant losses.

iii. Liquidity Risk: Inability to sell bonds quickly for withdrawals. This strained the bank's cash flow during a crisis.

iv. Compliance Risk: RBI fined the bank for laxity in KYC compliance. Failure to meet regulatory norms led to penalties.

v. Reputational Risk: A bribe scandal damaged the bank's image. Public trust eroded due to the manager's misconduct.

vi. Credit Risk: A farmer defaulted on a ₹10 lakh loan. The bank faced losses from unrecovered funds.

vii. Business Risk: Fintechs lured customers with higher rates. Competition threatened the bank's market share and profits.

2. (b)

Given the risks involved in market investments of the Commercial Banks, which may lead to potential losses, Regulators prescribed maintaining capital for such incidents of the future. As an initial step towards prescribing a capital requirement for market risk, banks were initially advised by the RBI to:

i. Assign an additional risk weight of 2.5 per cent on the entire investment portfolio;
ii. Assign a Risk weight of 100 per cent on the open position limits on foreign exchange and gold; and
iii. Build up Investment Fluctuation Reserve up to a minimum of five per cent of the investments held in 'Held for Trading' and 'Available for Sale' categories in the investment portfolio.

Subsequently, keeping in view the ability of the banks to identify and measure market risk, the RBI decided to assign an explicit capital charge for market risk. Thus, banks are required to maintain a capital charge for market risk on securities included in the 'Held for Trading' and 'Available for Sale' categories, open gold position, open forex position, trading position in derivatives, and derivatives entered into for hedging trading book exposures. Consequently, the additional risk weight of 2.5 per cent towards market risk on the investment included under 'Held for Trading' and 'Available for Sale' categories was disbanded.

Capital charges for market risks are applicable to banks on a global basis.

- Banks are required to manage the market risks in their books on an ongoing basis and ensure that the capital requirements for market risks are being met on a continuous basis, i.e., at the close of each business day.

- Banks are also required to maintain strict risk management systems to monitor and control intra-day exposures to market risks. The capital charge for interest rate related instruments and equities would apply to current market value of these items in bank's trading book. The current market value will be determined as per extant RBI guidelines on valuation of investments.

- The minimum capital requirement is expressed in terms of two separate capital charges i.e., Specific Risk Charge for each security both for short and long positions and General market risk charge towards interest rate risk in the portfolio where long and short positions in different securities or instruments can be offset.

  In India, short position is not allowed except in case of derivatives and Central Government Securities. The banks have to provide the capital charge for interest rate risk in the trading book other than derivatives as per the guidelines for both specific risk and general risk after measuring the risk of holding or taking positions in debt securities and other interest rate related instruments in the trading book.

3. (a)

Step 1: Understanding Dual Approach

At the Transaction Level: XYZ Bank should strengthen collateralization practices, seek reliable third-party guarantees, and explore credit derivatives to offset individual transaction risks.

At Portfolio Level: The bank should consider securitization of assets, further diversification, and the use of advanced credit derivatives to achieve a balanced and resilient loan portfolio.

Step 2: Role of MIS (Management Information System) and CIS (Credit Information System)

Implementing a robust MIS and CIS will enable better monitoring and data analysis for informed decision-making. It will help in tracking credit exposures, monitoring repayment patterns, and detecting early signs of stress.

Step 3: Managing New Risks
Recognizing that credit risk mitigation techniques can increase legal, operational, liquidity, and market risks, XYZ Bank should develop effective processes to manage these risks.

A comprehensive assessment of the trade-offs between reduced credit risk and potential new risks is essential to ensure an optimal risk-return balance.

Step 4: Strategic Integration
Integrating the transaction-level and portfolio-level strategies into a cohesive framework is necessary. Regularly reviewing and adjusting the CRM (Credit Risk Management) strategies in line with the economic environment will enhance overall risk management.

XYZ Bank should adopt a dual approach to credit risk management—strengthening risk mitigation techniques at the transaction level while diversifying and balancing risks at the portfolio level. A robust MIS and CIS system should support these strategies, and proactive management of new risks arising from mitigation measures is essential for long-term stability.

3. (b)
Sovereign risk is defined as the uncertainty associated with the likelihood that the host government may not make foreign exchange available to the borrowing firm to fulfill its payment obligations. Thus, even though the borrowing firm has the resources to repay, it may not be able to do so because of actions beyond its control. Thus, creditors need to account for sovereign risk in their decision process when choosing to invest abroad.

The reasons why it is easier to reschedule debt in the form of bank loans than bonds, especially in the context of post-war lending in international financial markets, include:

(i) Loans usually are made by a small group (syndicate) of banks as opposed to bonds that are held by individuals and institutions that are geographically dispersed. Even though bondholders usually appoint trustees to look after their interests, it has proven to be much more difficult to approve renegotiation agreements with bondholders in contrast to bank syndicates.

(ii) The group of banks that dominate lending in international markets is limited and hence able to form a cohesive group. This enables them to act in a unified manner against potential defaults by countries.

(iii) Many international loans, especially those made in the post-war period, contain cross-default clauses, which make the cost of default very expensive to borrowers. Defaulting on a loan would trigger default clauses on all loans with such clauses, preventing borrowers from selectively defaulting on a few loans.

(iv) In the case of post-war loans, governments were reluctant to allow banks to fail. This meant that they would also be actively involved in the rescheduling process by either directly providing subsidies to prevent repudiations or providing incentives to international agencies like the IMF and World Bank to provide other forms of grants and aid.

4. (a)
Credit Risk in Off-balance Sheet Exposure: Banks evolve an adequate framework for managing their exposure in off-balance sheet products like forex forward contracts, swaps, options, etc., as a part of overall credit to individual customer relationships and subject to the same credit appraisal, limits, and monitoring procedures.

Banks should classify their off-balance sheet exposures into three broad categories:

- Full Risk (Credit Substitutes).
- Standby letters of credit, money guarantees, etc, medium risk (not direct credit substitutes, which do not support existing financial obligations).
- Bid bonds, letters of credit, indemnities and warranties and low risk.
- Reverse repos, currency swaps, options, futures, etc.

The trading credit exposure to counterparties can be measured on static (constant percentage of the notional principal over the life of the transaction) and on a dynamic basis. The total exposures to the counterparties on a dynamic basis should be the sum total of:

1) The current replacement cost (unrealised loss to the counterparty); and
2) The potential increase in replacement cost (estimated with the help of VaR or other methods to capture future volatilities in the value of the outstanding contracts/ obligations).

The current and potential credit exposures may be measured on a daily basis to evaluate the impact of potential changes in market conditions on the value of counterparty positions.

The potential exposures also may be quantified by subjecting the position to market movements involving normal and abnormal movements in interest rates, foreign exchange rates, equity prices, liquidity conditions, etc.

4. (b)

The Unity Bank will adopt the following different strategies in "Two Situations" to mitigate the Credit Risk of the Bank.

Situation 1:

In this case, the total return swap (TRS) would be appropriate (TRS represents an off-balance sheet replication of financial assets, such as a loan). The bank, after extending the loan, can arrange a TRS with a hedge fund investor. The bank in this way, will receive a spread for 5 years, can retain the customer, hedge the risk of the loan, and reduce the amount of regulatory capital.

Situation-2:

The bank can sanction a loan of ₹500 Crores and go for a Credit Default Swap (CDS) of ₹250 Crores and can sell this amount to a protection seller (Particularly those banks that are at a disadvantage, so for credit risk origination is concerned) under CDS. In this transaction, the loan will continue to be with the originating bank and will not be required to be transferred to the bank.

5. (a)

(i) Tier-1

= Capital + Free Reserves + Perpetual non-cumulative preference shares
= ₹ 200 Crores + ₹ 600 Crores + ₹ 800 Crores = ₹ 1,600 Crores

(ii) Tier II

= (Provisions and Contingencies Reserves Maximum 1.25% of Risk Weighted Assets) + (Revaluation Reserve at 55% Discount) + (Subordinated Debts)
= ₹ 350 Crores + ₹ 270 Crores (₹ 600 Crores x 45%, at 55% discount) + ₹ 600 Crores
= ₹ 1,220 Crores.

(iii) Amount of fund

= Amount of Tier-1 capital + Amount of Tier-2 capital
= ₹ 1,600 Crores + ₹ 1,220 Crores
= ₹ 2,820 Crores

(iv) Capital adequacy ratio of the bank

= (Amount of Tier-1 + Tier-2) / Total RWA
= ₹2,820 Crores / (₹20,000 Crores + ₹8,000 Crores) = 10.07%

5. (b)

A person is said to possess an insurable interest in a property if he has a legal relationship with the said property by which he would stand to lose financially if the property is lost or destroyed. The principle of insurable interest adds legal validity to an insurance contract, without which such contracts would be wagering or gambling in nature according to the Indian Contract Act 1872. The presence of insurable interest prevents fraudulent practices. In the absence of insurable interest, an unconcerned person can purchase policies on someone else's property and inflict loss on it deliberately to get the proceeds of the insurance settlement. Insurable interest provides the right to secure insurance and claim compensation to the insured based on the principle of indemnity. For example, people have insurable interests in their own homes and vehicles, but not in their neighbours' homes and vehicles, and almost certainly not those of strangers.

An insurance contract must meet four conditions in order to be legally valid:

- It must be for a legal purpose;
- The parties must have a legal capacity to contract;
- There must be evidence of a meeting of minds between the insurer and the insured; and
- There must be a payment or consideration.

6. (a)

An insurance agent is the representative of the insurance company, i.e., the insurer. According to section 42 of the Insurance Act, 1938, an insurance agent is a licensed person who receives or agrees to receive payment commission or remuneration in consideration for soliciting or procuring business and includes business related to the continuance, renewal, or revival of policies of insurance. In other words, an insurance agent in India is a person who agrees to work for the insurer in exchange for remuneration or commission. Such an agent promotes the products and services offered by the insurer.

The following are the key functions of an insurance agent in India:

- **Soliciting and procuring new business:**
  From the above definition of the insurance agent provided under the Act, it can be easily concluded that the primary function of an insurance agent is to solicit prospective clients and procure new business. The agent should make efforts to get new insurance proposals.

- **Conserve the existing business:**
  In addition to procuring new business, an insurance agent in India must also ensure that the existing customers continue with the policies of the company he represents and prevent them from lapsing on account of default in payment of premium.

- **Assistance in selection of the best suitable policy:**
  An insurance agent, though representing a particular company only, should guide the prospective client in selecting the best possible policy according to the requirements of the client.

- **Enquire into the client's details:**
  An insurance agent is supposed to enquire into all the necessary details of the client with a view to assess the extent of risk and to assist the client in taking a claim accordingly.

- **Assuring the date of birth and other related medical information:**
  An insurance agent should always assure himself of all the necessary medical information related to the client, including the date of birth of the insured, so that no technical complications arise in future with respect to the settlement of claims. It further helps in the future settlement of policies.

- **Ensure that the policyholder averts instances of default:**
  it is also the duty of the insurance agent in India to remind the policyholder about the due date of making payment on his premium and prevent the instances of default in payment of premiums. This helps to avoid the applicable penalties for late payments.

- **Preventing the policy from lapsing:**
  An insurance agent should inform and remind the policyholder of all the possible disadvantages that may accrue to the policyholder on account of the lapse of an insurance policy.

- **Remind the insured about the importance of the nominee:**
  An important duty on the part of an insurance agent is to inform the policyholder about the need to appoint a nominee in his policy. The appointment of a nominee helps in the future settlement of policies without any ambiguity.

- **Preparation of the required documentation:**
  An insurance agent is required to guide and assist the prospective client in the preparation of the necessary documentation for the required policy, such as birth certificate, medical certificate, major injuries etc.

Some of the important <u>duties</u> to be executed by an insurance agent in India include the following:

- An insurance agent must properly inform the prospective buyer of the insurance policy about all its terms and conditions in great detail so as to avoid misrepresentation, and both the policyholder and agent are on the same side.
- It is also the duty of the agent to suggest the best possible policy to the client on the basis of their needs and requirements.
- An insurance agent is supposed to introduce himself as an insurance agent and show the identity card when demanded by the client.
- The insurance agent is supposed to tell the client about the applicable rate of commission that agent will gain for selling the policy.
- The agent is supposed to explain the details of the insurance application form to the client.
- The agent is to make the client aware of the instances where the insurance agency can refuse the insurance application.
- The insurance bond is bound to comply with the rules and regulations for insurance agents laid down by the Insurance Regulatory and Development Authority of India.
- The client should be provided with the insurance bond within a period of 45 days.

To conclude that an insurance agent has in-depth knowledge of all the products of the company, and for selling the products. Their sphere of services is limited to providing products of only the company they represent, and as a result, they are able to serve a limited clientele. This makes their service even more personalized.

6. (b)

Rashtriya Swasthya Bima Yojana ('RSBY')

This is a Health insurance scheme launched by the Ministry of Labour and Employment, Government of India for Below the Poverty Line ('BPL') families. The beneficiary under this Scheme is any Family included as a BPL family in the District BPL List prepared by the State Governments. Such BPL family needs to enrol by identifying before the authorised official.

Benefits (insurance coverage):

Under this Scheme, hospitalisation expenses up to ₹30,000 for a family comprising up to 5 members are provided on a floater basis. Under a floater cover, any one or more of the members is eligible to claim the hospitalisation expenses. In addition, the cost of Transportation up to ₹100 per visit with a ceiling of ₹1,000 is also reimbursed. No age limits have been prescribed for the Members to get enrolled in this Scheme. Hospitalisation means admission to a hospital for 24 hours or more. RSBY applies to such hospitalisation, including maternity-related treatments.

However, it includes such day care treatments entailing less than 24 hours for certain treatments specified in the Scheme. All pre-existing illnesses on the date of admission to the Scheme are also covered.

Premium payable:

The Premium payable for RSBY is different for different districts. State Governments select insurance companies through a bidding process, and the technically qualified lowest bidder is selected.

Who pays the Premium?

Total premium is funded by the Central and State Governments, with Central Government bearing 75% of the Premium payable (90% in the case of J&K State) and the balance is borne by the respective State Government. Beneficiaries will have to pay only an Enrolment fee of ₹30.

RSBY is no longer operational as a standalone scheme. It was merged into Ayushman Bharat – PMJAY in 2018 to extend coverage to a larger section of the population with increased financial protection (₹5 lakh per family per year). The transition represents a major reform in India's public health insurance landscape.

7. (a)

Premium Risk:

Premium-related risk encompasses the risk in the process of product definition, pricing, underwriting, and selling, either operating individually or collectively. Given below are some of the underwriting risks facing the insurance companies, and the list is by no means exhaustive.

- Flawed Product definition.
- The product not be appropriate for the market.
- Pricing of the product might not be correct.
- Unfavourable Terms and conditions of the product.
- The product might not be competitive.
- Lenience in underwriting.
- Adverse selection.
- Inappropriate discounts.
- Change in market, economy, regulation, and judicial decisions and
- Inability to reach the project sales volume.
- Inadequate reinsurance.
- Inability to get reinsurance cover.

Claims Risk:
Claims risks are those risks involved in the claims process, such as claim notification, adjudication, settlement, reserving, litigation, and recovery, consisting of:

- Increased Severity.
- The frequency of claims is much higher than expected.
- Increase in fraudulent claims.
- Reporting delays.
- Judicial decision adversely impacting the claims.
- Latent claims.
- Catastrophes.
- Failure of reinsurers.
- Accumulation of risk.
- Expense risk.

7. (b)
Loss control is an important method for handling risk. It has two major objectives:
Loss prevention:
Loss prevention aims at reducing the probability of loss so that the frequency of losses is reduced, e.g. if you follow good health habits, watch your weight, and give up smoking, the chances of heart attacks are minimized. Loss prevention is important for business of enterprises, as loss frequency can be reduced by the enforcement of strong safety measures.

Loss reduction:
Loss reduction involves a reduction in the severity of loss. This can be achieved by installing a sprinkler system in a warehouse, which would help in the speedy extinguishment of fire, installing a perfect partition wall between two highly inflammable commodities, practising segregation, and constructing fire-resistant materials to minimize losses.

8. (a)
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 the solvency of the banks and their protection from untoward events that 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 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.

Calculation of Capital Adequacy Ratio of M/s IBS Bank:

Total Risk-Weighted Assets of the Bank:

Type of Risk-Weighted Asset	Amount (₹ in Crores)
Credit Risk Weighted Assets	15,73,578
Market Risk Weighted Assets	1,79,107
Operational Risk Weighted Assets	1,82,585
Total Risk Weighted Assets	19,35,270

Capital	Amount (₹ in Crores)
Tier – 1	2,01,488
Tier - 2	50,755
Total Capital	2,52,243

Capital Adequacy Ratio Formula

= (Total Tier-1 and Tier-2 Capital) / (Total Risk Weighted Assets)

= 2,52,243 / 19,35,270

The Capital Adequacy Ratio of M/s IBS Bank = 13.03%

8. (b)

(i) It is possible that the Policyholder can take multiple marine insurance policies for the same cargo or freight with different insurers. Under such circumstances, where two or more policies are effected by or on behalf of the same assured on the same adventure and interest or any part thereof, and the sums insured exceed the indemnity allowed by the Marine Insurance Act, 1963, the assured is said to be over-insured by double insurance.

Zenith Innovations Pvt. Ltd. is called the insured, as Zenith Innovations Pvt. Ltd. procures the policy or becomes the beneficiary through the insurance contract.

(ii) Claim is admissible, and where the assured is over-insured by double insurance:

a. The assured, unless the policy otherwise provides, may claim payment from the insurers in such order as he may think fit. However, he is not entitled to receive any sum over the indemnity allowed by this Act.

b. Where the policy under which the assured claims is a valued policy, the assured must give credit as against the valuation, for any sum received by him under any other policy, without regard to the actual value of the subject-matter insured.

c. Where the policy under which the assured claims is an unvalued policy, he must give credit, as against the full insurable value, for any sum received by him under any other policy.

d. Where the assured receives any sum over the indemnity allowed by the Marine Insurance Act, 1963, he is deemed to hold such sum in trust for the insurers, according to their right of contribution among themselves.

(iii) Before an industry is set up, it involves project planning, financing, procurement of land, land levelling and earthwork, excavation of land, placing orders and procurement of machinery from various places, storing this machinery and other equipment connected with the project in safe conditions, erecting the equipment's as per a planned schedule and finally testing and commissioning the erected plant and machinery for their rated capacity. So, the project can be insured. The engineering policies, recommended at the project stage, can be any one of the following three covers:

1. Erection All Risks (also known as Storage Cum Erection Insurance).
2. Contractors (Construction) All Risks Insurance.
3. Contractor's Plant and Machinery Insurance.