PAPER - 20B : RISK MANAGEMENT IN BANKING AND INSURANCE

SUGGESTED ANSWERS

SECTION - A

1. (a)

(i) (D)

(ii) (C)

(iii) (C)

(iv) (C)

(v) (C)

(vi) (B)

(vii) (C)

(viii) (B)

(ix) (B)

(x) (B)

1. (b)

(xi) (B)

(xii) (B)

(xiii) (B)

(xiv) (B)

(xv) (A)

SECTION - B

2. (a)

The major obstacles faced by banks in managing risk in the present environment are as follows:

(i) **Changing regulations**

Banks operate in a regulatory framework that changes frequently due to political developments, public pressure, technological changes, and supervisory reforms. This creates difficulty in continuously tracking new rules, assessing their impact on the bank's business model, and implementing timely changes to ensure compliance. Failure to do so may expose the bank to compliance risk, penalties, and reputational damage.

(ii) **Digital customer expectations**

Modern customers expect banking services to be available seamlessly through mobile devices, with the same efficiency and functionality as online platforms or physical branches. Many banks still treat mobile banking as a supplementary channel rather than a complete service platform. This gap between customer expectations and service delivery creates pressure on banks to upgrade technology, improve customer experience, and manage service-related risk.

(iii) **Cyber threats**

As banking has become more technology-driven, cybersecurity has emerged as a major challenge in risk management. Banks face growing threats from malware, phishing, and denial-of-service attacks, while older legacy systems are often inadequate to handle such sophisticated risks. Security teams are also burdened by numerous false alerts, which consume time and reduce the efficiency of actual threat detection.

(iv) **Fraud risk and identity theft**

Banks also face serious difficulty from fraud and identity theft, especially because false positives in fraud detection directly affect customers. Genuine transactions may be blocked, customer inconvenience may increase, and confidence in the bank may decline. At the same time, actual fraud incidents can expose the bank to financial losses and reputational harm, making this a critical obstacle in effective risk management.

(v) **Inefficient internal processes**

Weaknesses in underwriting, servicing, monitoring, and other internal processes increase the cost of operations and make risk control less effective. Inefficiency can contribute not only to operational problems but also to credit risk, compliance risk, and even business and liquidity pressures. Therefore, banks need automation, stronger internal practices, and better use of technology such as cloud computing to improve efficiency and reduce cost.

(vi) **Increasing competition**

Traditional banks are under growing pressure from internet-based banks and large technology companies entering the financial services space. This competition makes it harder for banks, especially local and regional ones, to retain customers, maintain profitability, and preserve market share. As a result, competitive pressure becomes a major obstacle because it affects strategic stability and increases overall business risk.

A bank's risk management framework therefore becomes difficult to administer, when it must simultaneously respond to regulatory change, rising digital expectations, technology-based threats, fraud exposure, internal inefficiencies, and aggressive market competition.

2. (b)

The statement rightly identifies that while Green Bonds are a crucial ESG-compliant financing instrument, their widespread adoption in India faces practical hurdles. The growth, regulatory support, advantages, and challenges of the Indian Green Bond market can be analysed as follows:

Development and Milestones

The Green Bond market in India has seen significant growth to attract capital for renewable energy and sustainable projects:

- Initial Issuances: The market began in 2015 with Yes Bank issuing India's first Green Bond. In 2016, NTPC became the first Indian corporate to list a green masala bond on the London Stock Exchange.

- Scaling Up: In 2018, the State Bank of India raised USD 650 million through Green Bonds. By the first half of 2019, India executed transactions worth USD 10.3 billion, becoming the second-largest Green Bond market after China.

- Global Integration: In 2019, India joined the International Platform on Sustainable Finance (IPSF) to scale up the mobilization of private capital for environmentally sustainable projects.

Regulatory Framework and Support

India is among the first few countries to establish a statutory framework to regulate Green Bonds:

- SEBI Guidelines (2017): SEBI issued Disclosure Requirements defining green debt securities. Issuers must disclose the environmental objectives of the issuance, procedures to track the deployment of proceeds, and detailed information about the specific projects or assets utilizing the funds.

- RBI Reforms: Recognizing Green Bonds as a subset of the corporate bond market, the RBI increased the partial credit enhancement to 50% of the bond issue size (with a 20% limit for a particular bank) to provide additional comfort and security to investors.

Advantages of Green Bonds

- Capital Mobilization: They help in financing eco-friendly projects, new technologies, and attract foreign investments due to the global boom in the green energy sector.

- Intangible Value: Issuing Green Bonds enhances a corporate entity's reputation, showcasing a strong public commitment to sustainable development and ESG compliance.

Challenges and Practical Issues

Despite the growth, Green Bonds currently constitute only 0.7% of all bonds issued in India. The major practical constraints include:

- Lower Yields vs. Higher Costs: Green Bonds offer relatively lower interest rates compared to commercial bank loans, making them less attractive to profit-seeking investors. Furthermore, the cost of issuing them is higher due to the lack of a national climate finance tracking platform and insufficient policy coordination.

- Tenure Mismatch: Green Bonds typically have a shorter tenure (around 10 years) compared to general loans (minimum 13 years), whereas green projects generally have a longer gestation period to showcase returns.

- Lack of Credit Ratings: The absence of dedicated credit ratings for green projects negatively impacts their perceived creditworthiness in the market.

- Greenwashing: There are instances where proceeds are diverted to projects with negligible or negative environmental impacts. This defeats the purpose of Green Bonds and highlights the urgent need for a standard global definition of "green investments" to ensure market integrity

3. (a)

(i) Two-fold Impact of NPAs on Profitability

A Non-Performing Asset (NPA) causes a dual impact on a bank's profitability:

- Loss of Income: The bank ceases to earn interest on the NPA, thereby depriving the institution of its legitimate expected income from that asset.
- Provisioning Burden: The bank is mandatorily required to make financial provisions for the NPA out of its profits, depending on the asset's classification category and the value of available security. This further makes a severe dent in overall profitability.

(ii) **Provisioning Norms for NPAs (Loss, Substandard and Doubtful)**

- Loss Assets: These should be written off completely. If permitted to remain in the books for any reason, a 100% provision of the outstanding amount must be made.
- Substandard Assets: A general provision of 15% on total outstanding should be made (without making allowances for ECGC guarantee cover or securities). If the exposures are identified as 'unsecured', an additional 10% is required, bringing the total provision to 25% on the outstanding balance.
- Doubtful Assets: A 100% provision is required to the extent the advance is not covered by the realistic realizable value of the security (i.e., the unsecured portion). For the secured portion, provisions depend on the period the asset has remained doubtful:

- Up to 1 year: 25%
- 1 to 3 years: 40%
- More than 3 years: 100%

(iii) **Provisioning Rates for Standard Assets**

Banks are required to make a general provision for standard assets on a global loan portfolio basis at the following rates:

- Farm Credit to agricultural activities and Small and Micro Enterprises (SMEs): 0.25%
- Advances to Commercial Real Estate (CRE) Sector: 1.00%
- Advances to Commercial Real Estate – Residential Housing Sector (CRE – RH): 0.75%
- Housing loans extended at teaser rates: 2.00% (due to higher risk). This rate is reduced to 0.40% after 1 year from the date the rates are reset higher, provided the account remains 'Standard'.
- All other loans and advances not included above: 0.40%

3. (b)

(i) **Primary Risks in Foreign Lending**

When making loans to borrowers in foreign countries, two distinct risks must be considered:

- Credit Risk of the project: The ability of the borrower to repay based strictly on the economic viability of the project.
- Sovereign Risk: 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.

  Application to Scenario: In this case, Sovereign Risk has materialized. Even though the borrowing firm has the resources and economic viability to repay the loan, it cannot do so because of actions beyond its control (the host government blocking foreign exchange).

(ii) Loan Repudiation vs. Loan Rescheduling

- Loan Repudiation: This refers to a situation of outright default where the borrower refuses to make any further payments of interest and principal.
- Loan Rescheduling: This refers to a temporary postponement of payments during which new terms and conditions (usually structured to make it easier for the borrower to repay) are agreed upon between the borrower and lenders.

(iii) **Why Rescheduling Bank Loans is Easier than Bonds**

The syndicate will find it easier to reschedule this debt for the following reasons:

- Syndicate Size vs. Dispersed Holders: Loans are usually made by a small, cohesive group (syndicate) of banks, whereas bonds are held by geographically dispersed individuals and institutions. It is much more difficult to approve renegotiation agreements with scattered bondholders (even with trustees) than with a bank syndicate.
- Unified Action: The limited group of banks dominating international markets can form a cohesive group, enabling them to act in a unified manner against potential defaults by countries.
- Cross-Default Clauses: Many international bank loans contain cross-default clauses. Defaulting on one loan triggers default clauses on all such loans, preventing borrowers from selectively defaulting and making the cost of default extremely expensive.
- Government and Institutional Support: Governments are generally reluctant to allow banks to fail. Therefore, they actively involve themselves in the rescheduling process by providing direct subsidies to prevent repudiation or by providing incentives to international agencies (like the IMF and World Bank) to provide grants and aid.

4. (a)

Operational risk has been defined by the Basel Committee on Banking Supervision as the risk of loss resulting from inadequate or failed internal processes, people and systems, or from external events. This definition includes legal risk but excludes strategic risk and reputational risk. The definition is based on the underlying causes of operational risk and seeks to identify why a loss happened. At a broad level, the causes are grouped into four categories: people, processes, systems, and external factors.

The Basel Committee has identified the following major types of operational risk events that can result in substantial losses:

(i) Internal fraud
This includes intentional misreporting of positions, employee theft, and insider trading on an employee's own account.

(ii) External fraud
This includes robbery, forgery, cheque kiting, and losses arising from computer hacking.

(iii) Employment practices and workplace safety
This covers worker compensation claims, violation of employee health and safety rules, organized labour issues, discrimination claims, and general liability matters.

(iv) Clients, products, and business practices
This includes fiduciary breaches, misuse of confidential customer information, improper trading activities on the bank's account, money laundering, and sale of unauthorized products.

(v) Damage to physical assets
This includes losses caused by terrorism, vandalism, earthquakes, fires, and floods.

(vi) Business disruption and system failures
This covers hardware and software failures, telecommunication problems, and utility outages.

(vii) Execution, delivery, and process management
This includes data entry errors, collateral management failures, incomplete legal documentation, unauthorized access to client accounts, non-client counterparty misperformance, and vendor disputes.

4. (b)

(i) Given:

- High-Quality Liquid Assets (HQLA) = ₹500 crore
- Total cash outflows (30 days) = ₹650 crore
- Total cash inflows (30 days) = ₹200 crore

Net Cash Outflows
= Outflows – Inflows
= 650 – 200
= ₹450 crore

Liquidity Coverage Ratio (LCR)
= (HQLA ÷ Net Cash Outflows) × 100
= (500 ÷ 450) × 100
= 111.11% (approx.)

(ii) Minimum required LCR = 100%
Bank's calculated LCR = 111.11%
Since the bank's LCR is above 100%, it meets the regulatory requirement and maintains adequate short-term liquidity to withstand a 30-day stress scenario.

(iii) If LCR was below 100%, the bank should:
- Increase holdings of high-quality liquid assets such as government securities.
- Reduce short-term liabilities or volatile funding sources.
- Improve cash inflows by tightening credit recovery and shortening asset maturities.
- Arrange committed credit lines or contingency funding sources to strengthen liquidity buffers.

5. (a)

(i) This case reflects sovereign credit risk, where deterioration in the government's fiscal position led to a credit rating downgrade and decline in bond prices. The downgrade by agencies such as Moody's or Standard & Poor's increased the perceived default risk of government securities.

(ii) The decline in government bond prices resulted in mark-to-market losses, reducing the bank's investment value and weakening its capital adequacy ratio. Since banks typically hold large volumes of sovereign securities, such losses can significantly affect profitability and regulatory capital.

(iii) The bank should diversify its investment portfolio across different maturities and possibly foreign sovereign instruments (cross-border diversification), regularly monitor fiscal indicators, and maintain adequate capital buffers as prescribed by the Reserve Bank of India and global standards set by the Basel Committee on Banking Supervision.

5. (b)

(i) On-site Inspection by IRDAI

Objectives:
1. To verify compliance with provisions of the Insurance Act, Rules, and regulations framed thereunder.
2. To assess internal controls and checks at corporate and branch offices.
3. To monitor market-wide events that may affect insurers and ensure timely corrective action.

Scope / Features:
1. Conducted normally on an annual basis, covering corporate offices and branches.
2. Can be comprehensive (all areas) or targeted (specific key areas).
3. Supervisor can call for any information from insurance companies and intermediaries.
4. Focuses on internal control systems, operational procedures, and adherence to regulatory directions.

Off-site Inspection / Surveillance by IRDAI

Objectives:
1. To monitor the financial health of insurance companies.
2. To identify financial deterioration and potential supervisory concerns.
3. To trigger timely remedial action to prevent risks to policyholders and the industry.

Scope / Features:
1. Conducted through analysis of periodic statements, returns, reports, policies, and compliance certificates submitted by insurers.

2. Frequency of filings: annual, half-yearly, quarterly, or monthly, depending on the requirement.
3. Covers business performance, investment of funds, remuneration, management expenses, business statistics, and auditor certificates.
4. Ensures that accounts reflect the true and fair position of the company.
5. Relies on certifications in management reports, including Board certification of internal audit systems.
6. Ensures financial transparency, with companies required to publish results in newspapers and websites.

(ii) Role of Auditors and Management

1. Statutory and internal auditors audit all functional areas, ensuring compliance with statutory and regulatory requirements.
2. Management must implement an internal audit system appropriate to the size and nature of the business and certify its effective operation.
3. Auditors and management together ensure accuracy of accounts, adherence to regulatory directions, and financial soundness.

6. (a)

(i) Concept and Objective of POSP

- Point of Sales Persons (POSP) is a model introduced by IRDAI to facilitate the sale of simple and standardized insurance products.
- It aims to increase insurance penetration in both urban and rural areas by enabling easier access and simplified distribution.
- POSP acts as a low-cost distribution channel for insurers and intermediaries.

(ii) Eligibility Conditions and Regulatory Requirements

1. Identification Requirement:
    - Every POSP must have an Aadhaar Number or PAN.
2. Minimum Qualification:
    - Must be at least 10th pass.
3. Training and Certification:
    - Must undergo 15-hour in-house training.
    - Must pass the examination conducted by insurer/intermediary as per IRDAI syllabus.
4. Registration and Record Maintenance:
    - Insurer/intermediary must upload POSP details to Insurance Information Bureau (IIB) database.
    - Records must be maintained for 5 years.
5. Documentation Requirement:
    - Proposal forms and policy documents must include Aadhaar/PAN details of POSP.
6. Responsibility and Liability:
    - Insurance company or broker is responsible for acts of POSP.
    - Liable for penal provisions in case of misconduct of POSP.

(iii) Types of Products sold by POSP

1. General Insurance Products:

- Motor Insurance (Comprehensive & Third-Party for 2-wheelers, cars, commercial vehicles)
- Personal Accident Insurance
- Travel Insurance
- Home Insurance
- Indemnity-based Health Insurance (Max Sum Assured ₹5 lakhs; up to 3 products)

2. **Life Insurance Products:**

- Pure Term Insurance (with/without return of premium; non-medical). No limit to sum assured.
- Non-par, non-linked Endowment / Money Back policies (Max ₹10 lakhs, non-medical)
- Fixed benefit Health products
- Immediate Annuities

6. (b)

(i) Differences between Suraksha and Suvidha Schemes:

Basis of Difference	Suraksha (Whole Life Insurance)	Suvidha (Convertible Whole Life Insurance)
Scheme Payout	The assured amount + accrued bonus is paid only to the nominee, assignee, or legal heir after the insured expires or payable to the insured upon reaching 80	The assured amount + accrued bonus is paid to the proponent upon attaining a pre-decided maturity age. In case of unprecedented death, it is paid to the nominee/heir.
Policy Conversion	Can be converted to an Endowment Assurance policy after the completion of 1 year and before the insured turns 57 years of age.	Can be converted to an Endowment Assurance policy after 5 years (must not exceed 55 years of age). If not converted, it defaults to a Whole Life Insurance policy.
Loan Facility	Available only after 4 years of completion.	Unlocked only after completing 4 full policy years

(ii) Common Features shared by both Schemes:

- Age Eligibility: Both schemes require the applicant to have a minimum age of 19 years and a maximum age of 55 years.
- Sum Assured Limits: The minimum sum assured is ₹20,000, and the maximum sum assured is ₹50 Lakhs for both policies.
- Policy Surrender & Bonus Condition: Both policies can be surrendered after 3 years of completion. Neither is eligible for a bonus if assigned or loaned within 5 years of completion; otherwise, a proportionate bonus is accrued.
- Medical Examination: A medical examination is mandatory for the issuance of both policies.
- Premiums Payable: In both schemes, premiums are variable for the applicant and are calculated based on factors such as the age of entry and age of maturity.

7. (a)

(i) Primary Risks Faced by Insurance Companies

A. Premium Risk:

Premium-related risk encompasses the vulnerabilities in the entire process of product definition, pricing, underwriting, and selling, operating either individually or collectively.

Examples of premium/underwriting risks include:

- Flawed product definition or the product not being appropriate for the market.
- Incorrect pricing of the product or inappropriate discounts.
- Lenience in underwriting or adverse selection.
- Unfavorable terms and conditions or the product lacking competitiveness.
- Inability to reach projected sales volumes or changes in the market/regulatory economy.
- Inadequate reinsurance or inability to secure reinsurance cover.

B. **Claims Risk:**

Claims risks are those risks involved in the claims management process, such as claim notification, adjudication, settlement, reserving, litigation, and recovery.

Examples of claims risks include:

- Increased severity or frequency of claims high above expectations.
- Increase in fraudulent claims or reporting delays.
- Adverse judicial decisions impacting claims or latent claims.
- Accumulation of risk or catastrophes.
- Failure of reinsurers or expense risk.

C. **Investment Risk:**

Investment risk is the risk of an adverse movement in the value of a general insurer's assets or its off-balance sheet exposures. It includes:

- Liquidity risk
- Market risk
- Credit risk
- Cash flow risk
- Security of capital

(ii) Methods to Manage These Risks

Insurance companies manage the above-mentioned risks through the following mechanisms:

- Diversification: Spreading risk by country, currency, industry, classes, and asset types.
- Reinsurance: Transferring a portion of the risk portfolio to other parties.
- Matching and Hedging: Aligning the maturity and cash flows of assets and liabilities to hedge against market movements.
- Management Information Systems (MIS): Implementing a robust MIS for timely risk tracking and decision-making.
- Internal Controls: Establishing strong internal control mechanisms to prevent underwriting and operational failures.

7. (b)

The five essential steps to Information Technology Risk Management for insurance companies are as follows:

Design an Information Security Program

An information security program must be appropriate for the insurance professional's size and business complexity. As part of the Enterprise Risk Management (ERM) approach, a company may choose to mitigate risks internally or transfer them to a vendor. However, if services are outsourced, the company must ensure that the outsourcing partner also robustly protects sensitive information.

Choose Appropriate Security Controls

Similar to other prescriptive standards, a series of controls help guide risk analysts and actuaries.

1. Create authentication and access controls.
2. Identify critical data, personnel, devices, IT systems, and facilities.
3. Restrict physical access.
4. Incorporate at-rest and in-transit data encryption.
5. Adopt secure software development practices.
6. Modify information systems to maintain compliance with the security program.
7. Incorporate specific controls for access, such as Multi-Factor Authentication (MFA).

8. Test and monitor systems and procedures regularly.
9. Create audit trails to detect and respond to cybersecurity events, enabling the reconstruction of material financial transactions.
10. Implement measures to protect against destruction, loss, or damage from natural disasters (fire, water) or technological failures.
11. Create secure disposal and records retention procedures.

Cybersecurity in ERM
Taking an ERM-based approach to cybersecurity, the model law specifies that the overarching enterprise risk management process must formally incorporate information security.

Stay Informed
This procedure focuses on sharing information about emerging threats and vulnerabilities. As part of continuous monitoring, insurance companies must be aware of new threat vectors and establish clear communication procedures to inform both internal and external stakeholders.

Cybersecurity Training
The model law focuses on mandatory training protocols. This includes both initial onboarding training and continuous, updated training to reflect new risks to the data ecosystem and environment. This reiterates the "stay informed" procedure and highlights the absolute necessity of employee cyber awareness.

8. (a)

(i) NPAs include sub-standard, doubtful, and loss assets.
Total NPAs = ₹ 6,000 crore + ₹ 4,500 crore + ₹ 2,500 crore = ₹13,000 crore.
Thus, Shakti Commercial Bank has ₹13,000 crore as total NPAs.

(ii) The rise in credit risk can be attributed to:
- Aggressive corporate lending without adequate due diligence.
- Over-reliance on projected cash flows rather than historical financial performance.
- Poor post-disbursement monitoring of borrowers.
- Concentration risk in cyclical sectors like infrastructure and steel.

These factors led to increased loan defaults and asset quality deterioration.

(iii) The bank should adopt the following measures:
- Strengthen credit appraisal systems and industry risk analysis.
- Implement early warning systems to detect financial stress in borrowers.
- Diversify the loan portfolio to reduce sectoral concentration.
- Conduct regular credit audits and stress testing.
- Align lending practices with RBI guidelines on large exposures and asset classification.

These measures will help in reducing future credit losses and improving asset quality.

8. (b)

(i) Partial claim settlement can occur due to:
- Policy sub-limits on room rent and specific treatments.
- Exclusion of non-medical expenses such as gloves, registration charges, and administrative fees.
- Charges exceeding reasonable and customary limits defined by the insurer.
- Deductibles or co-payment clauses in the policy terms.

In this case, the room rent cap triggered proportionate deduction in all associated medical costs.

(ii) The insurer may be justified if the deductions were strictly in accordance with the policy terms and conditions. Health insurance policies often include:

- Room rent limits (e.g., 1% of sum insured per day).
- Exclusions listed in policy documents.

If Mr. Verma had been informed about these conditions at the time of purchase and they were clearly mentioned in the policy schedule, the insurer's action would be contractually valid. However, lack of transparency or mis selling could make the decision disputable.

(iii) Mr. Verma can pursue the following steps:

(1) File a written complaint with the insurer's grievance cell.
(2) Escalate to the insurer's grievance redressal officer, if unresolved within 30 days.
(3) Approach the Insurance Ombudsman for dispute resolution.
(4) As a last resort, file a complaint before consumer courts under the Consumer Protection Act, 2019.

These mechanisms ensure protection of policyholder rights and fair claim settlement.

(iv) Policyholders should:

- Carefully read policy documents and understand sub-limits and exclusions.
- Choose policies without room rent caps, if affordability permits.
- Maintain all medical bills and discharge summaries.
- Seek written clarification from insurers regarding coverage before hospitalization.

Such due diligence helps prevent unpleasant surprises during claim settlement.
