

PAPER - 20B: RISK MANAGEMENT IN BANKING AND INSURANCE

SUGGESTED ANSWERS

SECTION-A

1. (a)

- (i) (A)
- (ii) (D)
- (iii) (C)
- (iv) (B)
- (v) (B)
- (vi) (B)
- (vii) (D)
- (viii) (A)
- (ix) (B)
- (x) (C)

1. (b)

- (xi) (C)
- (xii) (B)
- (xiii) (A)
- (xiv) (B)
- (xv) (D)

SECTION-B

2. (a)

Risk Assessment and Measurement:

Assessment of risk may involve quantitative or qualitative methods. It also includes assessment of probability or likelihood of its occurrence over a given time horizon, and its impact in the event of its occurrence over a given time horizon, and its impact in the event of its occurrence.

In quantitative techniques, risk assessment is done based on Risk Assessment Models, Scorecards, etc. Banks assess sectoral risks in the industries, countries, geographies, etc., where they have taken significant exposure. In addition to assessment of identified risks on a standalone basis, interplay among the risks also needs to be examined holistically.

Similarly, an aggregated view of individual risks is also taken. For the purpose of illustration let us consider case of bank where, as per its credit policy, the minimum Credit Score for a loan approval needs to be, say, 700. Branch A sanctions one case after obtaining approval for deviation where credit score of the borrower is less than 700. If 100 other branches also do the same, then individually at branch level, they may have a small exposure with this deviation, but at the Bank level aggregation of all such deviations may be beyond its risk limits.

Examples of risk measurement techniques are Probability of Default, Loss Given Default, Expected Loss, Value at Risk (VaR), Modified Duration, PV01, Gap Analysis, etc.

Risk Control and Monitoring:

Risk control and monitoring deal with setting up of limits to each one of the risks and monitoring them to ensure that the actual exposure to each one of the risks defined is within the limits prescribed in the risk management policy. Any violation of limits needs to be thoroughly investigated to ascertain the reasons for violation and to avoid such violations in future. The modern risk management which strives to align risk management with overall Corporate Objectives and Strategies to achieve the objectives takes two more additional steps in the form capital allocation and risk adjusted performance measurement.

2. (b)

Depending on the complexity and range of activities of the individual banking business, banking business should have interest rate risk measurement systems that assess the effect of interest rate changes on both earnings and economic value.

At the very least, these measurement systems should:

- (a) Assess all material interest rate risk associated with a banking corporation's assets, liabilities, and off-balance sheet positions.
- (b) Provide measurements of the banking business's current exposure levels to interest rate risk.
- (c) Make it possible to find any deviant exposure.
- (d) Utilize generally accepted financial concepts and risk measurement techniques; and
- (e) Have well-documented assumptions and parameters.

Measurement systems should incorporate all interest rate exposures arising from the full scope of a banking corporation's activities, including trading and non-trading sources. This does not preclude different measurement systems and risk management approaches being used for different activities; however, management should have an integrated view of interest rate risk across products and business lines. The interest rate risk in banking book should be measured separately, in part to ensure compliance with Proper Conduct of Banking Business i.e., "Capital Adequacy Assessment".

A banking business's interest rate risk measurement system should address all material sources of interest rate risk including repricing, yield curve, basis, and optionality risk exposures.

Measurement systems should evaluate concentrations of the banking corporation's largest holdings with rigor and should also provide a rigorous treatment of those instruments which might significantly affect a banking corporation's aggregate position, even if they do not represent a major concentration, such as instruments with significant embedded or explicit option characteristics.

3. (a)

In order to enhance transparency in the entire process of sale of stressed assets, it is decided by RBI as under:

- Identification of stressed assets beyond a specified value, as may be determined by bank's policy, for sale shall be top-down i.e., the head office / corporate office of the bank shall be actively involved in identification of stressed assets, including assets which are classified as Special Mention Account, to be put on sale. Early identification will help in low vintage and better price realisation for banks.
- At least once in a year, preferably at the beginning of the year, banks shall, with the approval of their Board, identify and list internally the specific financial assets identified for sale to other institutions, including SCs / RCs.

- At a minimum, all assets classified as ‘doubtful asset’ above a threshold amount should be reviewed by the board/board committee on periodic basis and a view, with documented rationale, is to be taken on exit or otherwise.
- Prospective buyers need not be restricted to SCs / RCs. Banks may also offer the assets to other Banks / NBFCs/ FIs, etc. who have the necessary capital and expertise in resolving stressed assets. Participation of more buyers will result in better price discovery.
- In order to attract a wide variety of buyers, the invitation for bids should preferably be publicly solicited so as to enable participation of as many prospective buyers as possible. In such cases, it would be desirable to use e-auction platforms. An open auction process, apart from attracting a larger set of borrowers, is expected to result in better price discovery. Banks should lay down a Board approved policy in this regard.
- Banks must provide adequate time for due diligence by prospective buyers which may vary as per the size of the assets, with a floor of two weeks.
- Banks should have clear policies regarding valuation of assets proposed to be sold. It must be clearly specified as to in which cases internal valuation would be accepted and where external valuation would be needed. However, in case of exposures beyond Rs. 50 crore, banks shall obtain two external valuation reports.
- The cost of valuation exercise shall be borne by the bank, to ensure that the bank’s interests are protected.
- The discount rate used by banks in the valuation exercise shall be spelt out in the policy. This may be either cost of equity or average cost of funds or opportunity cost or some other relevant rate, subject to a floor of the contracted interest rate and penalty, if any.
Banks shall review the efficacy of their extant policies on sale of NPAs, with focus on valuation of stressed assets, and rework their policies by appropriately adopting the above principles.

3. (b)

If a company is at risk of going bankrupt, the following are often signs of trouble

- Dwindling cash and/or losses, especially if they represent a trend
- Abrupt dismissal of the company auditor
- Dividend cuts or the elimination of dividends
- Departure of senior management
- Insider selling, especially large or frequent transactions following negative news
- Selling off a product line to raise cash
- Cuts in perks like health benefits or pensions

Strategic actions that a company’s management can undertake to reduce its insolvency risk, when facing financial distress:

No company becomes insolvent overnight. If it looks like your business is headed in that direction, take steps to protect it.

- Focus on cash flow. Among other actions, this may involve invoicing promptly, recovering debts, renegotiating credit limits, renegotiating contracts with suppliers, selling assets (if necessary), and reducing the amount of cash tied up in stock.
- Reduce business expenses. Possibilities include cutting advertising and/or research and development, paying off debts earlier to lower interest on debt, reducing staff overtime, delaying the purchase of new or leased equipment.
- Keep your creditors in the loop. Discuss any problems you are having with payments and be ready to negotiate and compromise.
- Get good financial and legal advice. Consult the company's accountant and lawyer, who should already be familiar with your business.

4. (a)

The following are the principles to be followed by the banks for business line mapping:

- (i) All activities must be mapped into the eight-level business lines in a mutually exclusive and jointly exhaustive manner.
- (ii) Any banking or non-banking activity which cannot be readily mapped into the business line framework, but which represents an ancillary function to an activity included in the framework, must be allocated to the business line it supports. If more than one business line is supported through the ancillary activity, objective mapping criteria must be used.
- (iii) The mapping of activities into business lines for operational risk management must be consistent with the definitions of business lines used for management of other risk categories, i.e., credit and market risk. Any deviations from this principle must be motivated and documented.
- (iv) The mapping process used must be documented. Written business line definitions must be clear and detailed enough to allow third parties to replicate the business line mapping. Documentation must, among other things, clearly motivate any exceptions or overrides and be kept on record.
- (v) Processes must be in place to define the mapping of any new activities or products.
- (vi) Senior management is responsible for the mapping policy (which is subject to approval by the Board of Directors).
- (vii) The mapping process to business lines must be subject to independent review.

4. (b)

(i) **Provision on Standard accounts:**

$\text{₹ } 28,000 \times 0.4\% = \text{₹ } 112 \text{ Crores} + \text{Provision on direct agriculture and SME accounts} = \text{₹ } 10,000 \times 0.25\% = 25 \text{ Crores.}$

$\text{Total provision} = \text{₹ } 112 + \text{₹ } 25 = \text{₹ } 137 \text{ Crores.}$

(ii) **Secured Sub-standard accounts:**

$\text{₹ } 600 \times 15\% = \text{₹ } 90 \text{ Crores} + \text{Unsecured Sub-standard } \text{₹ } 200 \times 25\% = \text{₹ } 50 \text{ Crores.}$

$\text{Total Provision} = \text{₹ } 140 \text{ Crores}$

(iii) Doubtful accounts:

[Category-1 ₹ 800 x 25% = ₹ 200 Crores] + [Doubtful Category -2 = ₹ 200 × 40% = ₹ 80 Crores] +

[Doubtful Category -3 = ₹ 120 × 100] = ₹ 120 Crores

Total provision = ₹ 200 + ₹ 80 + ₹ 120 = ₹ 400 Crores

(iv) NPA Loan:

(Sub-standard = ₹ 140) + (Doubtful Category = ₹ 400) + (Loss accounts = ₹ 80 Crores)

Total provision on NPA loan = ₹ 140 + ₹ 400 + ₹ 80 = ₹ 620 Crores.

5. (a)

(i) Total Capital:

Tier –I Capital = 100+300+400 = 800 crore

Tier-II Capital = (300*45/100) + 300 + {1.25 % of RWAs (Rs. 14,000 crore) or (₹ 200 crore) whichever is lower.}

=135 + 300 + 175 = ₹ 610 crore

Total Capital = 800 + 610 = ₹ 1410 crore

(ii) Capital Adequacy Ratio (CAR):

CAR = ₹ 1410/₹ 14000*100 = 10.07%

(iii) Minimum Capital required to support Credit, Operational and Market Risks:

Minimum Capital required to support Credit and Operational Risks

= 10000*9/100 = ₹ 900 crore

Minimum Tier –I Capital Required to support Credit and Operational Risks

= 900*50 = ₹ 450 crore

Minimum Tier –II Capital Required to support Credit and Operational Risks

=900-450 = ₹ 450 crore

Amount of Tier –I Capital to support Market Risks = 800-450 = ₹ 350 crore

Amount of Tier –II Capital to support Market Risks = 610-450 = ₹ 160 crore

5. (b)

IRDAI, known to be the apex body of the insurance sector, ensures that it frames rules and regulations without any uncertainty or ambiguity towards any insurance company. To ensure the integrity and financial soundness in the industry, the primary work of the IRDAI revolves around the interest of the policyholder. The various roles of the IRDAI are as under:

- To issue the certificate of registration to new insurance companies.
- Establish rules and regulations to take care of the interests of the policyholders.
- To monitor claim settlements in a fair manner and ensure that no claim is denied by the insurance company under their free will.
- To regulate the code of conduct of the insurance company and of those associated with the insurance industry.

- Address issues and provide solutions in case of disputes which have risen via the IRDAI ombudsman.
- Regulate and control the rate of insurance to impede undesirable and superfluous price hikes in insurance premiums which might cause distress to the policyholder.
- The IRDAI is also accountable for setting a minimum percentage limit of insurance companies for both Life Insurance and General Insurance.
- IRDAI is also responsible for granting licenses to insurance agents. It issues licenses to individuals to clear the required exam. It was integrated with the IRDAI regulations and comprised the rules for applying and acquiring an insurance agent license.

6. (a)

(i) Remuneration to Corporate Agent paid by the Insurer for soliciting insurance business:

- Payment of remuneration to be governed by IRDAI by way of ceilings under Commission Regulations, subject to Commission as per “file & use” for each product approved by IRDAI.
- No signing fee or any other similar charges can be paid by insurer to corporate agent.
- No insurer shall directly pay incentives (cash or non-cash) to the Principal Officer, Specified Persons or any other employee of a Corporate Agent.

(ii) Records to be maintained by the Corporate Agent:

- Records of KYC as required under the Prevention of Money Laundering Rules;
- Copy of Proposal form, with Agent’s Confidential Report duly signed by the concerned Specified Person;
- Policy Register;
- Complaints Register;
- Specified Persons Register;
- Copies of correspondence exchanged with IRDAI;
- Financial Statements including annual Balance Sheet, Profit and Loss account etc.– details of payments made to and payments received from Group entities of corporate agents to be separately disclosed in the accounts. Non-exclusive corporate agents to separately capture the income from insurance intermediation in their books of account;
- Records to be maintained for a minimum period of 10 years.

6. (b)

Central Government Employees and Pensioners Health Insurance Scheme:

This scheme is especially for the employees of central government, both newly recruited and the retired one. The sum cover provided under this plan is Rs. 5 lakhs with a minimal premium.

Pre-existing conditions, pre-and post-hospitalization and maternity benefits are the coverage provided.

Besides all the traditional benefits, this plan has some of its exclusive benefits that are not available with a lot of plans in the market like zero initial waiting period for coverage initialization and the pre-existing conditions and even for the major critical illnesses like cataract, diabetes, hernia etc. while most plans carry a waiting period of up to 4 years for the pre-existing conditions and 30 days for the inception of coverage of the insured under the plan.

The term of coverage is for the lifetime until the survival of the insured.

Following are other benefits of the plan:

- Reimbursement for the cost of medical apparatus like artificial parts, hearing aids etc.
- Free Specialist and medical practitioner visits at government hospitals.
- OPD treatment and medicinal cost
- Medication and consultation at Siddha, Ayurveda, Unani systems of medicines and homeopathy.
- Reimbursement for emergency treatment both at government and private hospitals.
- Cashless treatment for the insured and the beneficiaries at diagnostic centers and certain authorized hospitals.
- Additional members can be covered under the plan if a fixed additional is paid per member.
- Policy period is for lifetime even for the beneficiaries.

7. (a)

SECTION 64V- Valuation of insurer's assets and liabilities:

For the purpose of ascertaining compliance with the provisions of section 64VA,

Assets

- (i) Assets shall be valued at values not exceeding their market or realizable value and the assets hereafter mentioned shall be excluded to the extent indicated, namely:
- a) agents' balances and outstanding premiums in India, to the extent they are not realized within a period of thirty days;
 - b) agents' balances and outstanding premium outside India, to the extent they are not realizable;
 - c) sundry debts, to the extent they are not realizable;
 - d) advances of an unrealizable character;
 - e) furniture, fixtures, dead stock and stationery;
 - f) deferred expenses;
 - g) profit and loss appropriation account balance and any fictitious assets other than prepaid expenses;
 - h) such other asset or assets as may be specified by the regulations made in this behalf.

Liabilities

- (ii) a proper value shall be placed on every item of liability and liabilities in respect of share capital, general reserve and other reserves of similar nature not created to meet specific liabilities and investment reserve, reserve for bad and doubtful debts, and depreciation fund shall be excluded and liabilities hereafter mentioned shall be included to the extent indicated, namely:
- a) provision for dividends declared or recommended, and outstanding dividends in full;
 - b) reserves for unexpired risks in respect of
 - (i) fire and miscellaneous business, 50 percent.
 - (ii) marine cargo business, 50 percent., and
 - (iii) marine full business, 100 per cent., of the premium, net of reinsurances, during the preceding twelve months;
 - c) estimated liability in respect of outstanding claims, in full;
 - d) amount due to insurance companies carrying on insurance business, in full;
 - e) amounts due to sundry creditors, in full;
 - f) provision for taxation, in full;
 - g) such other liability which may be made in this behalf to be included for the purpose of clause (ii).

7. (b)

(i) Definition of a Captive Insurer

According to the provided text, a Captive Insurer is an insurance company that is created and wholly owned and controlled by its sponsors or insureds. Its primary purpose is to provide a facility to aggregate, insure, and reinsure only the risks of its parent company or a group of related companies. It does not insure any company other than its parent and parent group companies.

(ii) A parent company might form a captive for several reasons:

1. Inadequate External Coverage: The parent company may be unable to find a suitable outside firm to insure it against particular business risks, or the insurance offered by external providers may not be affordable or offer the specific coverage needed.
2. Cost Reduction and Tax Savings: A captive can lower the parent company's overall insurance costs. Additionally, the premiums paid to the captive insurer can create tax savings for the parent company.
3. Risk Financing Strategy: A captive is utilized by insureds who choose to put their own capital at risk by creating their own insurance company, allowing them to work outside the commercial insurance marketplace and achieve their specific risk financing objectives.

(iii) Distinction between a Captive Insurer and a Mutual Insurance Company:

While a mutual insurance company is also technically owned by its policyholders, it is fundamentally different from a captive insurer. The key distinctions are as follows:

Basis of Distinction	Captive Insurer	Mutual Insurance Company
Control	The insureds, who are the owners, wholly own and control the company and actively participate in running it.	A policyholder does not exercise real control. Participation is typically limited to voting on a proxy as advised by the board that runs the company.
Capital Investment	The insureds create the company by putting their own capital at risk.	The policyholder does not invest any assets in the insurance company.
Nature of Ownership	Ownership is a core part of the structure, established through capital investment.	Ownership status is temporary; as soon as the insurance ceases, so does the policyholder's ownership status.

8. (a)

- (i) The A/c is NPA on 30.09.2024. So, it is in Sub-Standard category and the provision for Secured-15% and Unsecured-25%
- Secured Amount-₹ 40
Unsecured Amount-₹ 80

Provision Required = ₹ 40*15% + ₹ 80*25% = ₹ 6+₹ 20 = ₹ 26 Lakhs

- (ii) The A/c is NPA on 30.07.2022. So, it is in Doubtful (D2) category and the provision for Secured-40% and Unsecured-100%
- Secured Amount-₹ 60
Unsecured Amount-₹ 40

Provision Required = ₹ 60*40% + ₹ 40*100% = ₹ 24+₹ 40 = ₹ 64 Lakhs

- (iii) The A/c is NPA on 30.06.2023. So, it is in Doubtful (D1) category and the provision for Secured-25% and Unsecured-100%
Secured Amount-₹ 80
Unsecured Amount-₹ 80
- Provision Required = $80*25\% + 80*100\% = ₹ 20+₹ 80 = ₹ 100$ Lakhs
- (iv) The A/c is NPA on 31.08.2024. So, it is in Sub-Standard category and the provision for Secured-15% and Unsecured-25%
Secured Amount-₹ 100
Unsecured Amount-₹ 20
- Provision Required = $₹ 100*15\%+₹ 20*25\% = ₹ 15+₹ 5 = ₹ 20$ Lakhs
- (v) The A/c is NPA on 31.07.2022. So, it is in Doubtful (D2) category and the provision for Secured-40% and Unsecured-100%
Secured Amount-₹ 150
Unsecured Amount-₹ 0
- Provision Required = $₹ 150*40\%+₹ 0*100\% = ₹ 60+₹ 0 = ₹ 60$ Lakhs
- (vi) The A/c is NPA on 31.10.2023. So, it is in Doubtful (D1) category and the provision for Secured-25% and Unsecured-100%
Secured Amount-₹ 0
Unsecured Amount-₹ 160
- Provision Required = $₹ 0*25\%+₹ 160*100\% = ₹ 0+₹ 160 = ₹ 160$ Lakhs
- (vii) The A/c is NPA on 30.08.2022. So, it is in Doubtful (D2) category and the provision for Secured-40% and Unsecured-100%
Secured Amount-₹ 120
Unsecured Amount-₹ 80
- Provision Required = $₹ 120*40\%+₹ 80*100\% = ₹ 48+₹ 80 = ₹ 128$ Lakhs

8. (b)

(i) Ethical aspect of claims management:

Claims operation involves considerable sums of money. It is not uncommon to find that some of the individual claimants are tempted, either knowingly or unknowingly, to make company's funds due to the activities of such persons is not justifiable as far as other honest claimants are concerned who are satisfied with what is due to them in terms and conditions of the policy. Therefore, it is responsibility of the insurance companies, as trustees of the policyholders' money, to ensure as far as possible, that moral hazard is eliminated or at least minimized.

Since loss is personal, the individual is likely to react in a subjective manner and tends to exaggerate his claim. This can be tackled without much difficulty. But a more difficult problem is corporate clients trying to take advantage of insurance. Some of them are said to treat their insurance division as a profit centre. Therefore, it is necessary to successfully assess the moral hazard at the time of underwriting itself. When this is subsequently found, it is essential that insurance companies share this information with one another and deal with such clients in a suitable manner.

In the case of Health Insurance, most of the case settlement is done by TPA. A TPA is basically a middleman who facilitates the settlement of health insurance claim. A TPA is appointed by the insurer. TPAs help the insured, process of health insurance claim using various hospital bills and documents. However, they are not responsible for claims rejection or acceptance. So, as per the case, a survey on health insurance was carried out and nearly 38% respondents said that corruption is leading to high valuation of a company.

(ii) Close Proximity Claims:

Generally, a feeling arises that whenever a claim occurs immediately after the assumption of risk, that there is something wrong with the claim. It need not necessarily be a false claim, if it occurs immediately after a policy is issued, instead of occurring after a gap of 5/10 days and is deemed a pure chance event.

However, in the present scenario, there should be a standard procedure as described below to conduct an investigation and clear the doubt. Unfortunately, the insurer is in such a vulnerable position that if he settles such a claim, it may become a matter of vigilance. If he delays, he is open for criticism in the consumer forums and it may turn out to be a grievance as far as the insured is concerned.

When a claim arises within 5 days from the date of inception of the cover, the following procedure should be adopted as matter of routine. The operational office has to appoint an investigator immediately who has to comply with the following guidelines:

- He has to visit the accident spot immediately and collect the details of persons / vehicles involved.
- Contact police / transport authorities for obtaining the material evidence as to the nature, cause, exact date and time of the accident.
- To collect prefix and suffix cover notes issued, if any.
- To obtain the copy of the proposal submitted, and also to confirm as to whether the subject matter was inspected before the inception of the cover and if so by whom.
- To get confirmation as to whether any message has been given to operating offices by the development officers / agent immediately after the assumption of the cover.