RISK MANAGEMENT IN BANKING AND INSURANCE

Time Allowed: 3 Hours | **Full Marks: 100**

The figures in the margin on the right side indicate full marks.

SECTION – A (Compulsory)

1. Choose the correct option: **[15×2 = 30]**

(a) i. Operational Risk is the risk of -------.

a. When borrowers or counterparties fail to meet contractual obligations.
b. The unpredictability of equity markets, commodity prices, interest rates, and credit spreads.
c. Loss due to errors, interruptions, or damages caused by people, systems, or processes.
d. All of the above

ii. _____ risk arises because the financial system is one intricate and connected network.

a. Credit
b. Operational
c. Market Risk
d. Systemic

iii. Zero Coupon Bond Makes

a. No Coupon Payment
b. Interest Payment Every Month
c. Is Not Traded
d. Has No Maturity Date

iv. Select the expanded form of SA as commonly used in life insurance

a. Sum Assured
b. Surrender of Assurance
c. Supplementary Assurance
d. Stamp Act

v. Changes in interest rates also affect the underlying value of the bank's _____.

a. Assets.
b. Liabilities.
c. Assets, Liabilities.
d. None of the above.

vi. When the amount for which a subject matter is insured is more than its actual value, it is called_____

a. Cover note
b. Reinsurance
c. Co-insurance
d. Double Insurance

vii. Risk retention means-----
- a. Saving money to pay for the losses
- b. Accepting and agreeing to finance the loss oneself
- c. Not taking up any activity which is risky
- d. Insuring the risk

viii. _____ is the most famous tool of risk management
- a. Certainty risk
- b. Insurance
- c. Loss prevention
- d. Uncertainty risk

ix. Which of these is not an element of life insurance?
- a. Grace period
- b. Nomination and assignment
- c. Policyholder
- d. Paid-up value

x. An insurance agent represents the _____.
- a. Insured
- b. Insurer
- c. Government
- d. Adjustment bureau

(b) Based on the following case study, you are required to answer the questions no. (i) to (v) [5x2 = 10]

International Bank has provided the following information relating to its advance portfolio as of Mar 31, 2024: Total advances of ` 40,000 Crores. Gross NPA 9% and Net NPA 2%. Based on this information, answer the following questions:

i. Considering that all the standard loan accounts represent general advances, what is the amount of provision for standard loan accounts:
- a. ₹ 160 Crores.
- b. ₹ 151.90 Crores.
- c. ₹ 145.60 Crores.
- d. ₹ 141.50 Crores.

ii. What is the provision on NPA accounts?
- a. ₹ 3600 Crores
- b. ₹ 3200 Crores.
- c. ₹ 2800 Crores.
- d. Incomplete information. Cannot be calculated

iii. What is the total amount of provisions on total advances, including the standard accounts?

a. ₹ 3612.30 Crores.
b. ₹ 2945.60 Crores.
c. ₹ 2840.20 Crores.
d. Incomplete information. Cannot be calculated

iv. What is the amount of gross NPA?

a. ₹ 4000 Crores.
b. ₹ 3600 Crores.
c. ₹ 3200 Crores.
d. ₹ 2800 Crores.

v. What is the amount of net NPA?

a. ₹ 800 Crores.
b. ₹ 1000 Crores.
c. ₹ 1200 Crores.
d. Incomplete information

Answer:

1. (a)

i	ii	iii	iv	v	vi	vii	viii	ix	x
c	d	a	a	c	d	b	b	c	b

(b)

i	ii	iii	iv	v
c	c	b	b	a

Section – B

(Answer any five questions out of seven questions given. Each question carries 14 Marks)

[5 x 14 = 70]

2. (a) Explain the various benefits provided by risk management? [7]

(b) Examine the concept of Masala Bond and discuss its Benefits. [7]

Answer:

2. (a) The various benefits provided by risk management are:

(a) Forecasts Probable Issues: One of the benefits of risk management is that it changes the culture of a business organization. Companies that tend to focus more on risk management tend to be more proactive as compared to other companies which can be reactive. Risk management forces the companies to take a hard look at each of their business processes and decide what can go wrong. This detailed what-if analysis helps companies become more proactive and forecast probable issues.

Companies that extensively use risk management have fewer business disruptions as such issues are foreseen and taken care of at an early stage. The proactive approach is very helpful since it helps companies to identify failed projects at an early stage. The continuous feedback helps companies to decide whether investing additional money in a failed project will help it turn around or whether it is just throwing good money after bad.

(b) Avoiding Catastrophic Events: Risk management prepares the companies for all kinds of shocks. Risk managers try to foresee the small shocks which affect the day-to-day business of any firm. However, they also try to focus on catastrophic events. Such events have a very low probability of occurring. However, if they do occur, then companies need to be prepared to deal with them without going bankrupt. Such events have gained prominence in recent years. These events are called "black swan" events.

(c) Enables Growth: Prima facie, risk management sounds like a defensive business activity. It has a negative connotation and the assumption is that the activity is performed to avoid losses. However, during risk management, companies are forced to study their processes and risk factors in detail. The management is aware of all the possible things that can go wrong.

When new products have to be launched or when new markets have to be entered, companies have a ready framework that can be deployed to avoid these risks. Hence, in a way, risk management ends up enabling companies to take calculated risks and expedite their growth. Extensive risk management processes mean that the company has a lot of data. This data can be mined to gain meaningful insight which ultimately leads to better decisions.

(d) Helps to Stay Competitive: Risk management helps companies to minimize their losses at critical times. These are the times when poorly managed companies struggle to stay afloat. On the other hand, companies that have risk management processes in place tend to minimize their loss. Hence, the competitiveness of such companies stays constant. It may improve also.

It is a known fact that when adverse events such as recessions occur, companies with better risk management practices continue to stay afloat and have a lot of cash. This is the reason that during a crisis some companies seem to have the extra cash required in order make acquisitions. Risk management processes also force different departments as well as different stakeholders to actively communicate with each other. This communication is helpful since it increases the competitiveness of the company.

(e) **Business Process Improvement:** The day-to-day processes of risk management force companies to collect more and more information about their processes and operations. As a result, companies can identify the parts of the process which are inefficient or where there is scope for improvement.
Risk management departments are supposed to continuously monitor the working or various departments about external entities and look for things that can go wrong. The end result is that during the process many opportunities are identified and processes are improved. Risk management processes often work hand in hand with business process reengineering and quality improvements in the process.

(f) **Enables Better Budgeting:** Companies that have risk management processes in place have better control of their finances as opposed to other companies. This is because they often have a close look at their financial numbers and try to trim any waste. The end result is that these companies have a better knowledge of their processes. As a result, these companies also have a better knowledge of their budgets. They can create more efficient budgets wherein funds can be allocated to achieve the goals of the company in the most optimized manner possible. In such companies, budgets do not have to rely on guesswork.

(b) Masala Bonds were introduced in India in 2014 by International Finance Corporation (IFC). The IFC issued the first masala bonds in India to fund infrastructure projects. Indian entities or companies issue masala bonds outside India to raise money. The issue of these bonds is in Indian currency rather than local currency. Thus, if the rupee rate falls, the investor will bear the loss.
Masala Bonds are rupee-denominated bonds issued outside India by Indian entities. They are debt instruments which help to raise money in local currency from foreign investors. Both the government and private entities can issue these bonds. Investors outside India who would like to invest in assets in India can subscribe to these bonds. Any resident of that country can subscribe to these bonds which are members of the Financial Action Task Force. The investors who subscribe should be whose securities market regulator is a member of the International Organisation of Securities Commission. Multilateral and Regional Financial Institutions which India is a member country can also subscribe to these bonds.
According to RBI, the maturity period is three years for the bonds raised to the rupee equivalent of 50 million dollars in a financial year. The maturity period is five years for the bonds raised above the rupee equivalent of 50 million dollars in a financial year. The conversion of these bonds happens at market rate on the date of settlement of transactions undertaken for issue and servicing of interest of the bonds.
The proceeds raised from these bonds can be used:

- In refinancing of rupee loan and non-convertible debentures.
- For the development of integrated townships and affordable housing projects.
- Working capital to corporate.

RBI mandates the proceeds raised from these bonds cannot be used:

- In real estate activities, not including the development of integrated townships and affordable housing projects.
- Activities prohibited according to Foreign Direct Investment guidelines.

- Investing in capital markets and usage of the proceeds for equity investment domestically.
- Purchase of land.
- On-lending to other entities for any of the above purposes.

Benefits of Masala Bonds:

Masala bonds have various benefits. Both the investors and borrowers get benefits from subscribing and issuing of these bonds. The benefits for the investors are:

- It offers higher interest rates and thus benefits the investor.
- It helps in building up foreign investors' confidence in the Indian economy.
- It helps strengthen the foreign investments in the country as it facilitates foreign investors' confidence in Indian currency.
- The capital gains arising from rupee denomination are exempted from tax.
- If the rupee appreciates at the time of maturity, it benefits the investor.

The benefits for the borrowers are:

- It benefits the borrower as there is no currency risk. It saves the borrower from currency fluctuations.
- Borrowers need not worry about rupee depreciation as the issuance of these bonds is in Indian currency rather than foreign currency.
- The borrower can mobilise a huge amount of funds.
- It helps the Indian entity issuing these bonds to diversify their portfolio.
- It aids borrowers to cut down their cost as they are issued outside India below 7% interest rate.
- As these bonds issuing are in the offshore market, it helps borrowers to tap a large number of investors.

3. (a) Discuss the types of Credit Risk and Examine the Factors Affecting Credit Risk Modelling. [7]

(b) Discuss the difference between Debt Rescheduling and Debt Repudiation. [7]

Answers:

(a) Financial institutions used credit risk analysis models to determine the probability of default of a potential borrower. The models provide information on the level of a borrower's credit risk at any particular time. If the lender fails to detect the credit risk in advance, it exposes them to the risk of default and loss of funds. Lenders rely on the validation provided by credit risk analysis models to make key lending decisions on whether or not to extend credit to the borrower and the credit to be charged.

With the continuous evolution of technology, banks are continually researching and developing effective ways of modelling credit risk. A growing number of financial institutions are investing in new technologies and human resources to make it possible to create credit risk models using machine learning languages, such as Python and other analytics-friendly languages. It ensures that the models created produce data that are both accurate and scientific.

Credit risk arises when a corporate or individual borrower fails to meet their debt obligations. It is the probability that the lender will not receive the principal and interest payments of a debt required to service the debt extended to a borrower.

On the side of the lender, credit risk will disrupt its cash flows and also increase collection costs, since the lender may be forced to hire a debt collection agency to enforce the collection.

The loss may be partial or complete, where the lender incurs a loss of part of the loan or the entire loan extended to the borrower. The interest rate charged on a loan serves as the lender's reward for accepting to bear credit risk. In an efficient market system, banks charge a high interest rate for high-risk loans as a way of compensating for the high risk of default. For example, a corporate borrower with a steady income and a good credit history can get credit at a lower interest rate than what high-risk borrowers would be charged. Conversely, when transacting with a corporate borrower with a poor credit history, the lender can decide to charge a high interest rate for the loan or reject the loan application altogether. Lenders can use different methods to assess the level of credit risk of a potential borrower in order to mitigate losses and avoid delayed payments**.**

Types of Credit Risk:

The following are the main types of credit risks:

1. Credit default risk:

   Credit default risk occurs when the borrower is unable to pay the loan obligation in full or when the borrower is already 90 days past the due date of the loan repayment. The credit default risk may affect all credit-sensitive financial transactions such as loans, bonds, securities, and derivatives.

   The level of default risk can change due to a broader economic change. It can also be due because of a change in a borrower's economic situation, such as increased competition or recession, which can affect the company's ability to set aside principal and interest payments on the loan.

2. Concentration risk:

   Concentration risk is the level of risk that arises from exposure to a single counterparty or sector, and it offers the potential to produce large amounts of losses that may threaten the lender's core operations. The risk results from the observation that more concentrated portfolios lack diversification, and therefore, the returns on the underlying assets are more correlated.

   For example, a corporate borrower who relies on one major buyer for its main products has a high level of concentration risk and has the potential to incur a large amount of losses if the main buyer stops buying their products.

3. Country risk:

   Country risk is the risk that occurs when a country freezes foreign currency payments obligations, resulting in a default on its obligations. The risk is associated with the country's political instability and macroeconomic performance, which may adversely affect the value of its assets or operating profits. The changes in the business environment will affect all companies operating within a particular country.

Factors Affecting Credit Risk Modelling:

In order to minimize the level of credit risk, lenders should forecast credit risk with greater accuracy. Listed below are some of the factors that lenders should consider when assessing the level of credit risk.

1. Probability of Default (POD):

   The probability of default, sometimes abbreviated as POD, is the likelihood that a borrower will default on their loan obligations. For individual borrowers, POD is based on a combination of two factors, i.e., credit score and debt-to-income ratio.

   The POD for corporate borrowers is obtained from credit rating agencies. If the lender determines that a potential borrower demonstrates a lower probability of default, the loan will come with a low interest rate and low or no down payment on the loan. The risk is partly managed by pledging collateral against the loan.

2. Loss Given Default (LGD):

   Loss given default (LGD) refers to the amount of loss that a lender will suffer in case a borrower defaults on the loan. For example, assume that two borrowers, A and B, with the same debt-to-income ratio and an identical credit score. Borrower A takes a loan of Rs1,00,000 while B takes a loan of Rs. 2,00,000.

   The two borrowers present with different credit profiles, and the lender stands to suffer a greater loss when Borrower B defaults since the latter owes a larger amount. Although there is no standard practice of calculating LGD, lenders consider an entire portfolio of loans to determine the total exposure to loss.

3. Exposure at Default (EAD):

   Exposure at Default (EAD) evaluates the amount of loss exposure that a lender is exposed to at any particular time, and it is an indicator of the risk appetite of the lender. EAD is an important concept that references both individual and corporate borrowers. It is calculated by multiplying each loan obligation by a specific percentage that is adjusted based on the particulars of the loan.

(b) **Debt Repudiation** refers to a situation of outright default where the borrower refuses to make any further payments of interest and principal. In contrast, debt rescheduling refers to temporary postponement of payments during which time new terms and conditions are agreed upon between the borrower and lenders. In most cases, these new terms are structured to make it easier for the borrower to repay.

Debt Rescheduling is typically pursued as a solution to financial distress or temporary difficulties in meeting debt obligations. It aims to provide the borrower with a revised repayment plan that is more manageable, allowing them to repay their debt over an extended period. Debt repudiation can occur for various reasons, such as the borrower considering the debt to be illegitimate, unfair, or unsustainable. It is a more extreme measure taken when the borrower believes that the debt was incurred under duress, fraud, or other circumstances that invalidate the debt's legitimacy. Debt repudiation often leads to legal disputes and can damage the borrower's reputation in the financial markets, making it harder for them to access credit in the future. In summary, debt rescheduling involves renegotiating the terms of a debt agreement to make it more manageable for the borrower, while debt repudiation is the outright refusal to acknowledge or repay a debt obligation, often due to a belief that the debt is unjust or illegitimate.

4. (a) Analyze the concept of Operational Risk and examine the types of Operational Risk as identified by Basel Committee. [7]

(b) Global Trust Bank reported total advances amounting to ₹50,000 crores as of March 31, 2024. The bank's Gross Non-Performing Assets (NPA) were recorded at 8%, while the Net NPA stood at 3%. This scenario suggests that a considerable portion of the bank's portfolio is under stress, potentially affecting profitability and liquidity. To address these challenges, the bank's management must implement strong recovery measures and enhance credit appraisal standards to reduce risks and improve asset quality. Based on this information:

(i) Given that all the standard loan accounts are general advances, Calculate the amount of provision required for standard loan accounts?
(ii) Calculate the amount of provision required for NPA accounts?
(iii) Calculate the total amount of provisions for all advances, including the standard accounts?
(iv) Calculate the total amount of gross and net NPA?
(v) Calculate the provision coverage ratio for NPA?
(vi) Calculate the minimum amount of provision required to meet a Provision Coverage Ratio (PCR) of 70%? [7]

Answer:

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 is based on the underlying causes of operational risk. It seeks to identify why a loss happened and at the broadest level includes the breakdown by four causes: people, processes, systems and external factors.

The Basel Committee has identified the following types of operational risk events as having the potential to result in substantial losses:

- ✓ Internal fraud: For example, intentional misreporting of positions, employee theft, and insider trading on an employee's own account.
- ✓ External fraud: For example, robbery, forgery, cheque kiting, and damage from computer hacking.
- ✓ Employment practices and workplace safety: For example, workers compensation claims, violation of employee health and safety rules, organized labour activities, discrimination claims, and general liability.
- ✓ Clients, products and business practices: For example, fiduciary breaches, misuse of confidential customer information, improper trading activities on the bank's account, money laundering, and sale of unauthorized products.
- ✓ Damage to physical assets: For example, terrorism, vandalism, earthquakes, fires and floods.
- ✓ Business disruption and system failures: For example, hardware and software failures, telecommunication problems, and utility outages.
- ✓ Execution, delivery and process management: For example: data entry errors, collateral management failures, incomplete legal documentation, and unauthorized access given to client accounts, non-client counterparty mis-performance, and vendor disputes etc.

(b) (i) Standard account Total = ₹50,000 Crores - 8% NPA = ₹4,000 Crores
= ₹50,000 Crores - ₹4,000 Crores = ₹46,000 Crores.
Provision at 0.4% = ₹46,000 Crores x 0.4% = ₹184.00 Crores.

(ii) Provision on NPA = Gross NPA 8% - Net NPA 3% = 5% i.e. ₹50,000 Crores x 5% = ₹2,500 Crores.

(iii) Provision on NPA = Gross NPA 8% - Net NPA 3% = 5% i.e., ₹50,000 Crores x 5% = ₹2,500Crores.
Provision on standard account ₹184.00 Crores.
Hence Total Provision = ₹2,684 Crores

(iv) Gross NPA = ₹50,000 Crores x 8% = ₹4,000 Crores.
Net NPA = ₹50,000 Crores x 3% = ₹1,500 Crores.

(v) Provision coverage ratio for NPA = Total provision on NPA / Gross NPA
= ₹2,500 Crores / ₹4,000 Crores = 62.5%

(vi) Minimum provision required = Gross NPA x 70% = ₹4,000 Crores x 70% = ₹2,800 Crores

5. (a) XYZ Bank has paid up capital of ₹300 Crores, free reserves of ₹900 Crores, provisions and contingencies reserves ₹500 Crores, Revaluation Reserve of ₹700 Crores, Perpetual non-cumulative preference shares of ₹900 Crores, and Subordinated Debt of ₹700 Crores. The Risk Weighted Assets for Credit and Operational Risk are ₹25,000 Crores and for-Market Risk ₹10,000 Crores.
Based on the above information, calculate the following:

1. **The amount of Tier-1 capital.**
2. **The amount of Tier-2 capital.**
3. **The amount of Fund**
4. **The capital adequacy ratio of the bank**
5. **The amount of minimum capital to support Credit and Operational Risk.**
6. **The amount of minimum Tier 1 and Tier 2 to support the credit and operational risk?**
7. **The amount of Tier-1 capital fund, to support Market Risk?**
8. **The amount of Tier-2 capital fund, to support Market Risk?** **[7]**

(b) Explain why are Indian insurance companies important for the country's economic development? **[7]**

Answer:

5. (a) 1. Tier-1 = Capital + Free Reserves + Perpetual non-Cumulative preference shares
= ₹300 Crores +₹900 Crores + ₹900 Crores = ₹2,100 Crores.

2. Tier II = (Provisions and Contingencies Reserves Maximum 1.25% of Risk Weighted Assets) + (Revaluation Reserve at 55% Discount) + (Subordinated Debts)
= ₹437.5 Crores + ₹315 Crores (₹700 Crores × 45%, at 55% discount) + ₹700Crores
= ₹1,452.05 Crores

3. Total Capital Fund = Tier - 1 capital + Tier - 2 capital = ₹2100 Crores + ₹1452.5 Crores = ₹3552.5 Crores
4. ₹3552.5 Crores / ₹35000 Crores = 10.15%
5. ₹25,000 Crores × 9% = ₹2,250 Crores
6. Tier 1 = ₹25,000 Crores x 4.5% = ₹1,125 Crores
   Tier-2 = ₹25,000 Crores x4.5% = ₹1,125 Crores.
7. Total Tier-1 Minus Min Tier 1 for Credit and Operational risk = ₹2,100 Crores – ₹1125 Crores = ₹975 Crores.
8. Total Tier-2 Minus Min Tier 2 for Credit and Operational risk = ₹1452.50 Crores – ₹1125 Crores = ₹327.50 Crores

(b) GDP is one of the most important macroeconomic metrics. The volume of GDP is used to determine each country's level of development. People can choose from a variety of insurance plans offered by insurance firms. These premiums are used by insurance companies in the financial and investment operations of the economy. As a result, this process boosts the economy's GDP.

Indian insurance companies play the following roles in the economic development of our country.

1. Saving and Insurance:

Saving involves refraining from present consumption. The investment can take place only when there are savings.

The relationship between. saving, investment, and growth of GDP can be explained as:

G = S / K. Where G – Rate of GDP growth, S – Saving Ratio, and K – Capital output ratio.

Insurance companies lead to economic development by mobilizing savings and investing them into productive activities. Indian insurance companies can mobilize long-term savings to support economic growth and also facilitate economic development by providing insurance cover to a large segment of our people as well as to business enterprises throughout India.

2. Capital Formation and Insurance:

Capital formation may be defined as an increase in the capital stock of the country consisting of plants, equipment, machinery, tools, building, means of transport, communication, etc. The process of capital formation envisages three essential steps.

These are:

(a) Real saving: Mobilization of saving through financial and non-financial intermediaries to be placed at the disposal of investors.

(b) The act of investment: The contribution of insurance companies in the process of capital formation appears at all these stages. Insurance services act as a tool to mobilize savings, function as a financial intermediary, and at times also indulge indirect investment. Also govt. has made regulations under which every insurer carrying on the business of life insurance shall invest 25% of funds in Govt. securities and not less than 15% in infrastructure and social sector.

The importance of the Indian insurance industry is gauged by the fact that the annual amount of investible funds of LIC and GIC and its subsidiaries amounted to over Rs 20,000 crores and Rs 10,000 crores is invested in nation-building activities, housing, and other infrastructural areas.

(c) Increased Employment: Before the liberalization of the insurance sector in India, the employment opportunities were limited with the LIC of India as the sole employer. While some of the professionals left the country looking for opportunities elsewhere, those who remained, worked within the confines and constraints of public sector monopoly. This has further constrained the opportunities for exposure to the development of the rest of the world. Liberalization and the opening up of the sector to private players have now created a vast employment opportunity.

3. Obligation to Rural and Social Sector:

In India, insurance companies are required to fulfil their obligation to rural and social sectors. For this, Life insurers are required to have 5%, 7%, 10%, 12%, and 15% of total policies in the first five years respectively in the rural sector. Likewise, General Insurers are required to have 2% 3%, and 5% thereafter of total gross premium income written in the first five financial years respectively in the rural sector.

4. Insurance as a financial intermediary:

Financial intermediaries perform the function of channelizing saving into domestic investment. They facilitate efficient allocation of capital resources, which in turn improves productivity and economic efficiency which results in a reduced capital-output ratio. Insurance companies perform an extremely useful function in the economy as financial intermediaries. These are as follows:

(a) Reduction in transaction cost: Insurers help in reducing transaction costs in the economy by collecting funds from policyholders and investing the same in different projects scattered over different regions. It is a specialized and time-consuming job.

(b) Creating liability: The policyholders, in case of loss, are not required to wait for a long period for the amount of claim. It improves their liquidity.

(c) Facilitates Economies of scale in Investment: Insurers are in the position of financing large projects, railways power projects, etc. These large projects create economies of scale, facilitate technological innovation and specialization and thus promote economic efficiency and productivity.

5. Promotes Trade and Commerce:

The increase in GDP is positively correlated to the growth of trade and commerce in the economy. Whether it is the production of goods and services, domestic or international trade, or venture capital projects, insurance dominates everywhere. Even banks demand insurance cover of assets while granting loans for the purchase of assets. Thus, insurance covers promote specialization and flexibility in the economic system that plays a contributory role in the healthy and smooth growth of trade and commerce.

6. Facilitates efficient capital allocation:

Insurance provides cover to a large number of firms, enterprises, and businesses and also deploys its funds in several investment projects. The vast pool of knowledge and expertise so gained enable

them to distinguish between productive and high return projects. Therefore, they promote efficient and productive allocation of capital resources, which in turn lead to increased productivity and efficiency in the system.

7. **Encouraging Financial Stability and Reducing Anxiety:**
Insurer promotes financial stability in the economy by ensuring the risks and losses of individuals, firm, and organizations. Because of uninsured large losses, the firm may not be able to compensate for it leading to its insolvency which may cause loss of employment, revenue to suppliers & Govt., loss of products to the customer, etc. Moreover, it relieves the tensions and anxiety of individuals by securing the loss of their lives and assets.

8. **Reducing Burden on Govt. Exchequer:**
Insurance companies, particularly life insurers provide a variety of insurance products covering the needs of children, women, the aged, etc. under the social security networks and thereby reduce the burden on Govt. the exchequer by providing these services. This Govt. saves expenditure on these items and the amount can be utilized for more productive projects. To conclude, we can say that insurance companies play an important role in the economic development of the country.

6. (a) Examine the Duties and Responsibilities of a Surveyor and Loss Assessor. [7]

(b) Examine the Solvency Margins of Life Insurers. Discuss why is it needed and How is the solvency ratio worked out? [7]

Answer:

6. (a) 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:

1) 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.

2) A surveyor or loss assessor whether appointed by an insurer or insured, shall submit his report to the insurer as expeditiously as possible, but not later than 30 days of his appointment, with a copy of the report to the insured giving his comments on the insured's consent or otherwise on the assessment of loss. Where, in special circumstances of the case, either due to its special and complicated nature, the surveyor shall under intimation to the insured, seek an extension, in any case not exceeding six months from the insurer for submission of his report.

3) In cases where the Survey report is pending due to non-completion of documents, the surveyor may issue the final survey report independently based on the available documents on record, giving a minimum of three reminders in writing to the insured.

4) If an insurer, on the receipt of a survey report, finds that it is incomplete in any respect, he shall require the surveyor under intimation to the insured, to furnish an additional report on such incomplete issues. Such a request may be made by the insurer within 15 days of the receipt of the original survey report. Provided that the facility of calling for an additional report by the insurer shall not resort to more than once in the case of a claim.

5) The surveyor on receipt of this communication shall furnish an additional report within three weeks of the date of receipt of communication from the insurer.

(b) It indicates how solvent a company is, or how prepared it is to meet unforeseen exigencies. It is the extra capital that an insurance company is required to hold. As per the IRDA (Assets, Liabilities, and Solvency Margin of Insurers) Rules 2000, both life and general insurance companies need to maintain solvency

margins. While all non-life insurers are required to follow the regulations, life insurance companies are expected to maintain a 150% solvency margin.

Solvency margin needed: All insurance companies have to pay claims to policy holders. These could be current or future claims of policy holders. Insurers are expected to put aside a certain sum to cover these liabilities. These are also referred to as technical provisions. Insurance, however, is risky business and unforeseen events might occur sometimes, resulting in higher claims not anticipated earlier. For instance, calamities like the Mumbai floods, J&K earthquake, fire, accidents of a large magnitude, etc may impose an unbearable burden on the insurer. In such circumstances, technical provisions though initially prudent, may prove insufficient for taking care of liabilities. If the liability is large, there is a possibility of the insurance company becoming insolvent. This would create an awkward situation for the insurance sector, regulator and also the government. The solvency margin is thus aimed at averting such a crisis. The purpose of the extra capital all insurers are required to keep as per the regulatory norms is to protect policy holders against unforeseen events.

Solvency ratio worked out: All insurers in India have to determine the solvency margin as per the guidelines laid down under IRDA Rules. The process involves valuation of the assets and determination of the liabilities. The value is assigned to assets as per the provisions laid down in IRDA Rules. For instance, advances of unrealisable character, deferred expenses, preliminary expenses in the formation of the company, etc. are to be assigned zero value. Assets also include the insurance company's investment in approved securities, non-man-dated investments, etc.
The determination of liabilities is more complicated. IRDA Rules have prescribed a detailed method for the determination of liability by both life insurance as well as general insurance companies. In the former case, a company also has to take into account the options available to the insured while determining the liability. After working out the assets and liabilities, the insurer works out the available solvency margin, which is basically the difference between the value of assets and that of insurance liabilities. Thereafter, the company works out a solvency ratio, which is the ratio of the available solvency margin to the amount of required solvency margin.

7. (a) Examine the Five steps to Information Technology Risk Management for Insurance Companies [7]

(b) Examine the Benefits of Risk management. Discuss the Risk Management Strategy [7]

Answer:

7. (a) Five steps to Information Technology Risk Management for Insurance Companies:
Step 1: Design an Information Security Program: An information security program should be appropriate for the insurance professional's size and complexity. As part of the ERM approach, a company may choose to mitigate the risks itself or transfer the risk to a vendor. If the company outsources services, however, it needs to assure that the outsourcing partner also protects sensitive information.

Step 2: Choose Appropriate Security Controls: Similar to other prescriptive standards, a series of controls that can help guide actuaries. The 11 controls used by risk analysts are:

- Create authentication and access controls.
- Identify critical data, personnel, devices, information technology (IT) systems, and facilities.
- Restrict physical access.
- Incorporate at-rest and in-transit encryption.
- Adopt secure software development practices.
- Modify the information systems to maintain compliance with the security program.
- Incorporate controls, such as multi-factor authentication, for access.
- Test and monitor systems and procedures regularly.
- Create audit trails to detect and respond to cybersecurity events that enable reconstruction of material financial transactions.
- Implement measures to protect against destruction, loss, or damage from natural disasters, fire, and water damage, or technological failures.
- Create secure disposal and records retention procedures.

Step 3: Cybersecurity in ERM: An ERM-based approach to cybersecurity, the model law specifies that the enterprise risk management process should incorporate information security.

Step 4: Stay Informed: This risk management procedure focuses on sharing information about emerging threats and vulnerabilities. As part of continuous monitoring, insurance companies should be aware of new threat vectors. As part of informing internal and external stakeholders, they need to establish clear communication procedures.

Step 5: Cybersecurity Training: The model law focuses on both initial training and continued, updated training to reflect new risks to the data ecosystem and environment. Repeating the "stay informed" procedure highlights the importance of employee cyber awareness.

(b) Benefits to Managing Risk:

Risk management provides a clear and structured approach to identifying risks. Having a clear understanding of all risks allows an organization to measure and prioritize them and take the appropriate actions to reduce losses. Risk management has other benefits for an organization, including:

- Saving Resources: Time, assets, income, property and people are all valuable resources that can be saved if fewer claims occur.
- Protecting the reputation and public image of the organization.
- Preventing or reducing legal liability and increasing the stability of operations.
- Protecting people from harm.
- Protecting the environment.
- Enhancing the ability to prepare for various circumstances.
- Reducing liabilities.
- Assisting in clearly defining insurance needs.

Risk Management Strategy:

- People are now more likely to sue. Taking the steps to reduce injuries could help in defending against a claim.
- Courts are often sympathetic to injured claimants and give them the benefit of the doubt.
- Organizations and individuals are held to very high standards of care.
- People are more aware of the level of service to expect, and the recourse they can take if they have been wronged.
- Organizations are being held liable for the actions of their employees/volunteers.
- Organizations are perceived as having a lot of assets and/or high insurance policy limits.

8. (a) The Management of Bridge Bank is worried about the movement of interest rates across the globe and its impact on the financial health of the industry to which it belongs. In order to know the sensitivity of interest rates and its impact, the Management has approached you with the following details relating to its Balance sheet as March 31, 2024:

Capital	**₹4,000 Crores**
Reserves	**₹24,000 Crores**
Saving Bank Accounts	**₹12,000 Crores**
Term Deposits	**₹1,20,000 Crores**
Borrowing from RBI	**₹12,000 Crores**
Cash Balances	**₹27,000 Crores**
Balances with other Banks	**₹60,000 Crores**
Investment in Securities	**₹60,000 Crores**
Bills Payable	**₹8,000 Crores**
Cash Credit	**₹80,000 Crores**
Term Loan	**₹80,000 Crores and**
Fixed Assets	**₹12,400 Crores**
Total Assets and Total Liabilities	**₹4,00,000 Crores.**

The term loans have a fixed rate of interest.

As a Management Accountant, you are tasked with creating a detailed report for management, addressing the following points based on the provided information:

(i) Evaluate the value of interest-rate-sensitive assets.

(ii) Assess the amount of interest rate sensitive liabilities.

(iii) Identify the magnitude and nature of the gap between rate-sensitive assets and liabilities in this scenario. [7]

(b) Mr. R purchased a bus by taking a loan from M/s. ABC Limited. The bus was being used as private service vehicle and not as a public transport vehicle. It was insured under a comprehensive insurance policy issued by M/s. XYZ Insurance Limited. The bus met with an accident, for which insurance was claimed.

The insurance company appointed its surveyor, who assessed the loss at Rs. 1,26,500. However, the insurance company deducted Rs 33,125 from the assessed amount on the ground that the driver did not have an endorsement on his licence to drive a transport vehicle. Even this amount was not paid to Mr. R, but was paid directly to the Finance Company.

Advise:

(i) Was the insurance company right in deducting the amount of Rs 33,125 from the claim amount? Justify your answer. What is the course of action available to Mr. R?

(ii) Is it right on the part of the insurance company to pay the claim amount directly to the Finance Company and not to the insured? Justify your answer. [7]

Answer:

8. (a) Report on Interest Rate Sensitivity Analysis

Date:

Prepared by: Management Accountant

Executive Summary:

This report provides an analysis of interest rate sensitivity for The Bridge Bank. The assessment includes determining the value of interest rate-sensitive assets, calculating the amount of interest rate- sensitive liabilities, and identifying the gap between these two categories.

(i) Interest Rate-Sensitive Assets:

Assets other than Cash and other assets like Fixed Assets are rate sensitive.

		(₹ Crores)
Total Assets		4,00,000
Less: Cash balance	27,600	
Fixed Assets	12,400	40,000
Net		3,60,000

(ii) Interest Rate-Sensitive Liabilities:

Liabilities other than Capital, Reserves and Current Accounts are rate sensitive.

		(₹ Crores)
Total Liabilities		4,00,000
Less: Capital	4,000	
Reserves	24,000	
Current Accounts	1,20,000	1,48,000
Net		2,52,000

(iii) Magnitude and nature of the gap between rate-sensitive assets and liabilities.

	(₹ Crores)
Interest Rate-Sensitive Assets	3,60,000
Less: Interest Rate-Sensitive Liabilities	2,52,000
Net	1,08,000

Interest-Sensitive Assets are more than Interest-Sensitive Liabilities by ₹1,08,000 Crores. Hence, there is a positive gap. In conclusion, this report has provided a comprehensive analysis of the interest rate sensitivity of the Bridge bank, addressing the key points outlined by management. Overall, this analysis underscores the importance of proactive interest rate risk management to safeguard the financial health and stability of the Bridge bank.

(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 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.