



TIRM-RM — Risk Management

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CH-1 Why Banks Are Special

Topic 1 — Why Banks Are Special

Banks play **critical roles in the economy**. They **operate the payment system**, are the **major source of credit** for a large section of the economy, and are trusted by people to keep their **surplus funds**.

- **Non-fund facilities** — Banks have long provided **bank guarantees**, letters of guarantee and similar facilities that create **contingent obligations**.
- **Financial turmoil** — The global turmoil changed the banking structure, bank strategies and performance, and how banks are **regulated and supervised**.

Topic 2 — Functions Banks Perform

Financial institutions perform the essential function of **channelising funds** from people with **surplus funds** to people who **need funds**.

Unit	Who	Role in fund flow
Savings surplus units (lender-savers)	Households, business firms and governments that spend less than their income	Sources of funds
Savings deficit units (borrower-spenders)	Households, business firms, governments and foreign entities whose current need exceeds current income and sources of funds	Users of funds

A borrower who invests the funds in a business or in machines and equipment **adds value** by producing more goods and services. The economy grows, and a growing economy **creates jobs and adds to income**.

Topic 3 — Economy Without Efficient Financial Institutions

Without efficient financial institutions the **fund flow** between surplus and deficit units is likely to be **very low**, for three reasons.

Reason	Why it blocks direct lending
High monitoring cost	Households must check that the business keeps earning enough to repay and that the borrower's creditworthiness holds. This takes much time and cost. It is a disincentive to invest directly in corporate instruments.
Liquidity and maturity	Equity has no contractual maturity . Marketable debt and equity can be sold, but liquidity and price risk may restrict exit; non-marketable claims may have to be held longer.
Price risk	Even where a financial market exists to trade the instruments, savers remain exposed to price risk .

Topic 4 — Bank's Role in the Economy

Role	Key points
Financial inter mediation	Banks channel savings from depositors to borrowers. Depositors in effect lend to the bank and receive interest. The bank lends these funds and charges interest. The difference (spread) is the main source of revenue and profit .
Depositors at risk and safety net	Depositors rarely check the bank's credit quality and expect repayment on demand. Governments create safety nets such as deposit insurance . These vary by country and are generally not unlimited , so some deposits face default risk.
Asset transformation	Transforming bank liabilities (deposits) into bank assets (loans) with divergent characteristics — translating the product specifications wanted by savers into those wanted by borrowers.
Diversification benefits	Banks give savers highly liquid, low-risk products and hold relatively illiquid, high-risk assets. Diversification removes firm-specific risk . Thousands of depositors fund thousands of loans: each has a very small stake in each.
Maturity transformation	Savers have short horizons and want cash for shocks. Firms need long-term finance or working capital . Banks bear the maturity mismatch (long mortgages, short liabilities). Hedges: credit default swaps, securitisation .
Better liquidity products	SB and current accounts allow withdrawal at any time; SB balances earn interest. Callable term deposits may close early under bank terms and penalty. Non-callable deposits bar withdrawal except on specified events.

Example: A bank collects ₹1,000 from each of 10 lakh (1 million) depositors = ₹100 crore (1 billion) and makes 10,000 loans of ₹1 lakh each. Each depositor holds a **1/10,00,000 share** of the credit risk in each of the 10,000 loans.

Topic 5 — Deposit Insurance in India

- **Limited cover** — Deposit insurance is **limited protection**, not a guarantee that every bank product is risk free.
- **Insurer** — DICGC is a **wholly owned subsidiary of RBI**.
- **Limit** — It insures eligible deposits up to **₹5 lakh per depositor per insured bank**.
- **Scope** — The limit covers **principal and interest together**, held in the **same right and capacity**.
- **Aggregation** — Deposits at **all branches** of the same bank in the same capacity are aggregated.
- **Separate banks** — Deposits in different banks get **separate cover**; the limit is **per bank, not per account**.

Insured amount for one depositor in one bank and one capacity:

$$\text{Insured Amount} = \min(\text{Principal} + \text{Interest}, 5,00,000)$$

Example: Savings ₹2 lakh + fixed deposit ₹3 lakh + accrued interest ₹20,000 at branches of the same bank, same capacity = ₹5.20 lakh. Insured = **₹5 lakh**; ₹20,000 is outside the ceiling. Do not count ₹5 lakh per account.

Remember this

- DICGC: **₹5 lakh per depositor per bank**, principal + interest, same right and capacity.

Topic 6 — Uniqueness of Banks

Besides intermediation, banks carry out certain **unique services** that make them special.

Service	Key points
Transmission of monetary policy	The monetary transmission mechanism links monetary policy to aggregate demand . It affects asset prices and the economy. It steers credit to sectors in line with RBI policy, influencing demand, interest rates, money and credit.
Credit allocation	Banks are often the major, sometimes the only , lender to the priority sector . Loans need frequent renewal , so banks keep continually re-evaluating creditworthiness . Growth is linked to credit flow; monetary policy gives direction.
Creation of money	Banks expand money supply beyond what the central bank creates, making most of broad money via the money multiplier effect . A bank keeps the required reserve and lends the rest. The loan returns as a deposit elsewhere and is relent.
Payment services	Clearing and transfer of funds keep money moving. A breakdown would cause gridlock in the payment system and harm the economy.
Financial inclusion	Ensures ease of access, availability and usage of the formal financial system for all. It builds a savings culture in rural areas, broadens the resource base and reduces exploitation by usurious money lenders .
Digital and inclusive banking	Services reach remote areas without physical branches . Digital technology saves time, reduces operating cost , improves monitoring, risk management and control, and lets customers transact quickly and securely.

Topic 7 — Money Creation: Exam Application

- Textbook model** — The money multiplier is a **simplified textbook model**.
- Assumptions** — It assumes **full relending, no cash leakage and no excess reserves**.
- Not a rule** — It is not a mechanical lending rule.
- Loan entries** — A loan normally creates a **loan asset** and a matching **deposit liability**.
- Nature** — This is deposit money, not net wealth for the borrower.

Maximum deposits D from an initial reserve injection R at reserve ratio r :

$$D = \frac{R}{r}$$

$$\text{Additional Deposits} = D - R$$

Example: $R = ₹1,000$, $r = 10\%$: $D = 1,000 / 0.10 = ₹10,000$; additional deposits = **₹9,000**.

- Settlement** — A ₹1 lakh loan creates a ₹1 lakh loan asset and deposit. If the borrower pays someone at another bank, settlement transfers **reserves** and creates a **funding need** for the lending bank.
- Constraints** — Capital, liquidity, creditworthiness, profitable demand and monetary policy limit lending.
- Exam trap** — A 10% reserve ratio does not let one bank lend ten times any deposit. Distinguish **deposits from reserves** and **funding liquidity from capital adequacy**.

Topic 8 — Banks: Safety Net and Risk

- Maturity transformation** supplies long-term credit while savers keep liquid claims.
- Diversification** reduces borrower-specific risk, but **correlated defaults** and common withdrawals can defeat it.
- Solvent yet illiquid** — A bank can be solvent but illiquid; losses and **forced sales** can later erode solvency.
- Contagion** — Payment systems, monetary-policy transmission and credit allocation make bank distress **contagious**.
- Moral hazard** — Safety nets protect confidence but can weaken incentives to monitor risk. This explains the need for **capital, liquidity, supervision and sound governance**.

TIRM-RM | Module A | CH-1 | MCQs

Q1. A depositor holds ₹3 lakh SB, ₹2.5 lakh FD and ₹15,000 accrued interest at two branches of the same bank in the same capacity. The bank fails. How much is insured by DICGC? [Ref: Topic 5, p. 2]

- (a) ₹5,15,000 (b) ₹5,00,000 (c) ₹10,00,000 (d) ₹5,65,000

Q2. A customer has ₹4 lakh each in Bank X and Bank Y in her own name. What is her total DICGC cover? [Ref: Topic 5, p. 2]

- (a) ₹5 lakh, since the limit is per depositor
(b) ₹4 lakh, only the larger bank
(c) ₹8 lakh, since cover is per insured bank
(d) Nil, as accounts in two banks are excluded

Q3. Initial reserve injection ₹2,000 and reserve ratio 8% under the simple multiplier model. What are the additional deposits created? [Ref: Topic 7, p. 3]

- (a) ₹25,000 (b) ₹23,000 (c) ₹16,000 (d) ₹21,600

Q4. Which assumption is NOT part of the simple money-multiplier model? [Ref: Topic 7, p. 3]

- (a) Banks lend the full amount above required reserves
(b) No cash leakage out of the banking system
(c) No excess reserves are held
(d) Capital adequacy limits each bank's lending

Q5. Banks fund 20-year home loans with savings deposits that customers can withdraw any day. This function is [Ref: Topic 4, p. 2]

- (a) Maturity transformation (b) Payment services
(c) Credit allocation (d) Monetary transmission

Q6. Banks can offer liquid, low-risk deposits while holding illiquid, high-risk loans mainly because they [Ref: Topic 4, p. 2]

- (a) Hold all deposits as cash reserves
(b) Diversify away firm-specific risk across many loans
(c) Lend only to the government
(d) Pass all credit risk to depositors

Q7. Households hesitate to lend directly to companies even when a bond market exists. Which reason still applies after a market is available? [Ref: Topic 3, p. 2]

- (a) Equity has a fixed maturity
(b) Monitoring becomes free
(c) Savers remain exposed to price risk
(d) Deposit insurance covers the bonds

Q8. A bank has adequate capital but cannot meet heavy withdrawals without selling assets at a loss. The bank is [Ref: Topic 8, p. 3]

- (a) Insolvent but liquid
- (b) Solvent and liquid
- (c) Insolvent and illiquid by definition
- (d) Solvent yet illiquid

Q9. Deposit insurance can lead depositors to stop checking a bank's soundness. This weakness is called [Ref: Topic 8, p. 3]

- (a) Moral hazard
- (b) Adverse selection
- (c) Basis risk
- (d) Maturity mismatch

Q10. Banks frequently renew working capital limits and keep re-assessing borrowers. Which special role does this reflect? [Ref: Topic 6, p. 3]

- (a) Payment services
- (b) Creation of money
- (c) Credit allocation
- (d) Asset transformation

Q11. Which statement about a bank loan is correct? [Ref: Topic 7, p. 3]

- (a) It creates a loan asset and a matching deposit liability
- (b) It creates net wealth for the borrower
- (c) It reduces the bank's deposits by the loan amount
- (d) It needs no funding when the borrower pays another bank

Q12. A failure in clearing and fund-transfer systems would most directly cause [Ref: Topic 6, p. 3]

- (a) Higher priority-sector lending
- (b) Lower reserve ratio
- (c) Higher deposit insurance cover
- (d) Gridlock in the payment system

Answer key

Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	b	4	d	7	c	10	c
2	c	5	a	8	d	11	a
3	b	6	b	9	a	12	d

CH-2

Introduction to Risk Management

Topic 1 — Concept of Risk

Risk is the potential for loss due to uncertainties and unpredictable events — uncertainty with potential **adverse effects on the institution's income, capital or reputation**.

Investors generally require **higher expected returns** for greater risk. Actual returns may be lower or negative; taking more risk **does not guarantee a larger reward**.

Topic 2 — The Changing Forms of Risk

Risk attaches to every business activity but is more pronounced in banks because they are **highly leveraged institutions**.

Earlier approach	Present approach
Unorganised risk management efforts	Systematic and formal policy endeavours
Inspect / detect / react	Anticipate / prevent / monitor / mitigate

Earlier approach	Present approach
Focus on people alone	Focus on processes , not on people alone

Topic 3 — Characteristics of Risk

Characteristic	Key points
Profit motivation	The primary reason businesses, including banks, take risk is profit — seeking returns from potentially profitable but uncertain ventures.
Risk versus loss	Risk is the possibility of an undesirable outcome; loss is its actual realisation .
Ascertainability and quantifiability	Risks can be ascertained to varying degrees, but accurate quantification is difficult and needs complex analysis and estimation.
Risk-return relationship	Greater risk may require a higher expected return ; realised returns are uncertain and greater risk can produce larger losses .
Interrelated and overlapping	Banking risks are often interconnected and can amplify each other ; together they cover the whole risk landscape.

Topic 4 — Credit Risk

- **Meaning** — **Credit risk** arises when customers **default or fail to service debt**.
- **Loss** — The result is a total or partial loss.
- **Downgrade** — It is also reflected in **downgrading of the counterparty**.
- **Portfolio view** — Cumulated portfolio credit risk is hard to appraise because of the **diversification effect**.
- **Sub-components** — **Individual loans, market conditions and geographical / industry / group concentrations**.

Causes of credit risk	Strategies to minimise credit risk
Lack of proper communication between loan officers, risk teams and senior management	Know your borrower — financial health, credit history, repayment potential
Narrowly defined responsibilities — fragmented credit management	Diversify and spread across industries, regions and products
Over-emphasis on group decision-making — delays crucial decisions	Security — covenants, collateral and guarantees
Inadequate appraisal and narrow scope of appraisal (only financials, ignoring character, viability, market)	Monitoring of borrower performance, industry trends and early warning signals
Over-reliance on collateral and on decision-making tools (scoring models used blindly); data integrity issues	Learn and adapt — analyse successes and failures, use technology

Topic 5 — Liquidity Risk

- **Meaning** — **Liquidity risk** is the bank's inability to meet a financial commitment.
- **Cause** — The bank lacks enough **cash or equivalent assets** to pay depositors, creditors and counterparties.
- **Severity** — It is potentially fatal, so it is called the '**king of all risks**'.

Dimension	Arises from
Funding risk	Replacing net outflows from unanticipated withdrawal of CASA and non-renewal of deposits