Risks and Risk Management in Banks

Part-I

1. DEFINITION OF RISK 🏦⚠️

(i) Introduction

Risk is **inherent** in banking—every product, transaction and external link brings its own uncertainties. Effective **risk management** needs clear policies, strong procedures and a culture that understands risk. It all begins with a solid grasp of **"what risk really is."**

(ii) What is Risk? 🤔

- **Universal**: Present in everything (e.g., sickness, accidents).
- **Inevitable:** You cannot fully eliminate risk, only manage it.
- **Uncertain**: You know loss can happen, but not exactly **when** or **how much**.

Merriam-Webster: "Possibility of loss or injury."

- **Corporate view**: Any deviation from business objectives.
- **Financial view**: Uncertainty in returns; higher variability means higher risk.

(iii) Elements of Risk 🎯

🔢 Element	📖 Details
Measurable	• Can be quantified (probability, value).• Hard to manage if you can't measure it.
Different from Uncertainty	• *Risk*: Unknown outcome with known probability.• *Uncertainty*: No clear probabilities.
Likelihood × Impact	|Risk| = Probability of event × Consequence (₹ lost).• Probabilities range 0 (impossible) to 1 (certain).
Known–Unknown Matrix 🗺️	Categorises how well we know and can measure risks.

Example:

A corporate loan has a **0.05** (5%) chance of default, and potential loss ₹1 crore.

Risk = 0.05 × ₹1 crore = **₹5 lakh**. 💥

Known–Unknown Matrix

	Known	**Unknown**
Known	✅ Known Knowns: measured risks (e.g., interest-rate risk) 1	⚠️ Known Unknowns: identified but unmeasurable (e.g., model risk)

Unknown	❓ Unknown Knowns: concept known but not measured (e.g., rare legal loophole)	❌ Unknown Unknowns: unforeseen events (e.g., brand-new regulation)

10000 25%

(iv) Risk–Reward Trade-off 💹

Higher risk often brings higher reward—but also greater chance of loss.

- **Example:** Startup loans vs. Government securities.
- **Bank's choice:** How much risk? Which risks to take?

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2. VARIOUS TYPES OF RISKS FACED BY BANKS 🏦💼

(i) Overview

Banks face losses from events that hurt **profit**, **capital**, **solvency** or **reputation**—from economic downturns, policy shifts or market volatility. They must **identify**, **measure** and **manage** every risk.

(ii) Major Types of Risks

1. Credit Risk 💳 #1

Definition: Loss when a borrower or counterparty fails to meet obligations.

Impact: Can turn a good loan into an NPA, suspend interest income, and force provisioning.

Example: A ₹1 crore loan → NPA → bank stops interest + may recover only ₹80 lakh.

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2. Default Risk ❌ Time Risk

A form of credit risk when payment is missed:

Default Risk	Sub-Factors	Examples
Inadequate cash flow	• Internal reasons• External reasons	Poor budgeting vs. economic slowdown
Lack of willingness	• Intentional default• Mis-utilisation	Wilful defaulter diverting funds

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3. Migration Risk 📉 #3 Credit option

What: Borrower's credit rating downgrades before actual default.

Effect: Asset value falls as markets demand higher yields.

Example: Rating shifts from AAA → BBB → bond price drops.

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4. Recovery Risk 🔍 #4

What: Loss after default, due to low or delayed recovery.

Drivers:

• Collateral quality & value

• Legal/documentation strength

• Economic conditions

Examples:

• Delays in seizing collateral 🕒

• Guarantor refusal or slow action 🚫

• Flawed legal paperwork 📝

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5. Settlement Risk 🔄

When payments aren't exchanged at the same moment—common in FX due to time-zones.

- **Herstatt Risk:** 1974 collapse of Bankhaus Herstatt between receipt & payment on FX deals.
- **Mitigations:**

Sl. No.	Mitigation Method
1	Delivery versus Payment (DvP) system
2	Clearing via Central Counterparty (CCP)
3	Payment versus Payment (PvP) system

📝 **Summary Event**

1. **Risk basics**: Understand that **Risk = Probability × Impact**, and cannot be eliminated, only managed.
2. **Measure & distinguish**: Quantify risks, separate from pure uncertainty, and map known/unknowns.

3. **Risk–Reward**: Higher returns come with higher risk—choose wisely!
4. **Banking risks**:
   - **Credit & Default**: Monitor cash flows & borrower intent.
   - **Migration**: Watch ratings.
   - **Recovery**: Strengthen collateral & legal docs.
   - **Settlement**: Use DvP/PvP & CCPs to avoid FX payment gaps.

1. Definition of Risk 🏦⚠️

(i) Introduction

Risk is **inherent** in every banking activity. With many products, customers and external links, banks face both **known** and **unknown** dangers. Good **risk management** needs clear policies, strong processes and a culture that understands risk.

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(iii) Elements of Risk 🎯

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Measurable	Can be turned into numbers (probability, value). Without this, it's hard to manage.
Different from Uncertainty	• *Risk*: Unknown outcome but known probability.• *Uncertainty*: No clear probabilities.
Likelihood × Impact	|Risk| = Probability of event × Consequence (₹ loss).Probability from 0 to 1.

Example: If default chance = 5% (0.05) and loss = ₹1 crore, **Risk** = 0.05 × ₹1 crore = **₹5 lakh**. 📉

Known–Unknown Matrix 🗺️

	Known	**Unknown**
Known	✅ Known Knowns (measured)	⚠️ Known Unknowns (identified but unmeasured)
Unknown	❓ Unknown Knowns (understood but unmeasurable)	❌ Unknown Unknowns (totally unforeseen)

(iv) Risk–Reward Trade-off 💹

Higher risk can bring higher returns. E.g., **startup loans** vs. **Government securities**. Banks must decide **how much** and **which** risks to take.

2. Various Types of Risks Faced by Banks 🏦💼

Banks must **identify**, **measure** and **manage** risks to protect profit, capital, solvency and reputation.

2.1 Credit Risk 💳

Definition: Loss if borrower/counterparty fails to pay.

Example: A ₹1 cr loan → becomes NPA → suspension of interest + provisioning → maybe only ₹80 lakh recovered.

2.2 Default Risk ❌

When payment is missed:

Cause	Sub-Factor	Example
Inadequate cash flow	• Internal reasons	Poor management, bad budgeting
	• External reasons	Economic slowdown, rising input costs
Lack of willingness	• Wilful default	Borrower diverts funds
	• Mis-utilisation	Funds used for other purpose than agreed

2.3 Migration Risk 📉

Rating downgrade before default → asset value falls.

Example: AAA → BBB → bond price drops as investors demand higher yields.

2.4 Recovery Risk 🔍

Loss after default due to low/slow recovery.

Drivers: Collateral quality, legal docs, economic conditions.

Examples:

- Delay in seizing collateral 🕒
- Guarantor refusal 🚫
- Flawed documentation 📝

2.5 Settlement Risk 🔄

When payments aren't simultaneous (common in FX):

- **Herstatt Risk:** 1974 collapse of Bankhaus Herstatt between payment legs.
- **Mitigations:**

Sl. No.	Method
1	Delivery versus Payment (DvP)
2	Central Counterparty (CCP) clearing

Sl. No. Method

3 Payment versus Payment (PvP)

2.6 Country Risk 🌍

A B

Soverign Risk

Credit risk in cross-border deals:

- **What:** Sovereign may not meet obligations.
- **Drivers:** Macroeconomic & political changes, FX moves.
- **Effects:**
  - **Devaluation** hurts local-currency revenues on foreign-currency debt.
  - High for weak economy, fragile finance system, poor regulation.
- **Who's exposed:** Both governments **and** private borrowers in that country.
- **Indicators of default:**

Country limit

1. Missed principal/interest payments.
2. Debt restructuring or roll-over.
3. Failure to service external debt.

- **Examples:**
  - Russia refusing old Soviet debts.
  - FX-control restrictions when reserves fall.

- **Impact:** Lower sovereign rating → higher interest rates on international instruments.

2.7 Counterparty Credit Risk 🔗

Loss if counterparty defaults **before** all cash flows settle:

- **When seen:**
    1. **OTC derivatives** (interest-rate swaps, FX forwards, credit-default swaps).
    2. **Securities financing** (repos, reverse repos, securities lending).
- **Key differences vs. traditional credit risk:**

	Credit Risk	Counterparty Risk
Notional Amount Known	Yes	No—future value of contract uncertain
Risk Direction	Unilateral (lender → borrower)	Bilateral (each side risks the other)
Value Movement	Fixed	Contract value may go positive or negative before settlement

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2.8 Market Risk 📊 / Price Risk

Loss from **price movements** in trading portfolio during liquidation period:

- **Parameters:** Interest rates, stock indices, FX rates, commodities.
- **Control:** Keep changes within tolerance limits using strong market intelligence and limits.

RSA RSC

2.9 Interest Rate Risk 📈📉

Loss to capital and earnings from **adverse rate changes**:

- **Effects:**
  1. Changes in present value of assets, liabilities & off-balance sheet items → net worth shifts.
  2. Alters interest-sensitive income/expenses → impacts Net Interest Income (NII).
- **Books:**
  - [MTM] **Trading book:** Risk on fixed-income securities (bonds).
  - [HTM] **Banking book:** Risk on all assets/liabilities, capital, income & expenses.
- **Forms:** Gap risk, repricing risk, basis risk (see below).

D ← B_1

L ← B_2

2.10 Gap (Mismatch) Risk 🔀

Arises from **timing differences** in rate changes of assets vs. liabilities:

- **Term structure** changes:
  - Parallel shifts (whole curve) vs. non-parallel (specific segments).

- **When it hits:**
  - Liability rates rise before asset rates.
  - Asset rates fall before liability rates.
- **Impact:** Potential drop in interest earnings if repricing dates don't align.

RSA > RSL

RSA < RSL

+ve

-ve

2.11 Repricing Risk 🔄

A specific form of gap risk:

- **What:** Rate-sensitive assets & liabilities repriced at different times/rates.
- **Negative Gap:** More rate-sensitive liabilities than assets + rising rates → **NII falls**.
- **Positive Gap:** More rate-sensitive assets than liabilities + falling rates → **NII falls**.

2.12 Basis Risk 📐

When similar instruments' rates move by different amounts:

- **Cause:** Imperfect correlation in rate adjustments across instruments.
- **Example:**
  - Assets benchmarked to 364-day T-Bill.
  - Liabilities benchmarked to 1-year bank CD rate.

    - A rate change may impact each differently → net interest swings.

- **Hedging mismatches:** Imperfect hedge → losses if hedge instrument moves differently than investment.

🎯 **Summary Event**

Risk Type	Key Point
Credit & Default	Monitor cash flow and borrower intent.
Migration & Recovery	Watch rating shifts and strengthen recovery processes.
Settlement	Use DvP/PvP & CCPs to avoid FX payment gaps.
Country	Track sovereign health, FX controls & political changes.
Counterparty	Manage bilaterally uncertain contract values in OTC & repo markets.
Market	Set volatility limits on trading positions.
Interest Rate	Balance your trading vs. banking book exposures.
Gap & Repricing	Align repricing dates of assets and liabilities.
Basis	Hedge carefully—benchmarks can drift apart.

XI. Optionality Risk 🎛️📈

(a) Introduction

Optionality risk arises from **adverse movements in the price of instruments due to changes in interest rates**, either:

- **Automatically**, or
- Due to **changes in customer behavior**.

(b) Automatic Option Risk

Automatic options are part of stand-alone financial instruments like exchange-traded or OTC interest rate options.

- **Key Feature:** Option holders exercise options if financially beneficial (non-linear response).

Options → Call (Buy)
Options → Put (Sell)

📌 Option Payoff Structure

Scenario	Option Holder	Option Writer (e.g., Bank)
🔶 **Option not exercised**	✅ Limited downside (only premium loss)	❌ Unlimited downside risk
🔷 **Option exercised**	🚀 Unlimited upside potential	📌 Limited upside (only premium earned)

Example:

If a bank sells interest rate options to customers:

- **Downside risk (loss)** could exceed **premium income** gained.

(c) Behavioural Option Risk

embedded Option Risk

This risk arises when interest rate changes cause customers to alter behavior:

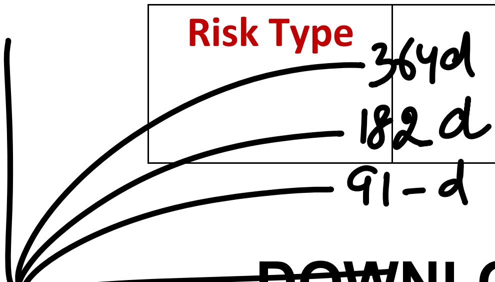
- Even well-matched maturities can expose banks if products carry **embedded options**.

🎯 Embedded Options in Banking Products

Product	Embedded Option	Trigger	Effect on Bank
📍 **Fixed Deposits (Liability)**	"Put" (early withdrawal)	Interest rates rise 🔼Depositor withdraws early to reinvest at higher rates.	Bank must replace funds at higher cost (loss in NII).
📍 **Term Loans (Asset)**	"Call" (prepayment)	Interest rates fall 🔽Borrower prepays to refinance at lower rates.	Bank must reinvest at lower yield (loss in NII).

XII. Other Key Risk Types 🚨📉

Risk Type	Description	Examples & Management



📈 **Yield Curve Risk**	Risk from changes in yield curve shape affecting bond portfolios.	🔷Long-term assets funded by short-term liabilities suffer if the yield curve flattens or inverts.
📊 **Equity Price Risk**	Volatility in stock prices causing value losses. 🔶**Systematic (market-wide)** – cannot be diversified. 🔶**Unsystematic (firm-specific)** – diversifiable.	🔷Portfolio diversification reduces unsystematic risk. 🔷Systematic risk controlled through hedging strategies.
💱 **Foreign Exchange Risk**	Adverse FX rate changes causing losses in open foreign currency positions.	🔷Manage by FX risk limits, forward contracts, regular market analysis, and FX forecasting.
🛢 **Commodity Price Risk**	Fluctuations in commodity prices impacting buyers (higher prices) & sellers (lower prices).	🔷Managed via futures contracts, hedging, and volatility monitoring.

⚙️ **Operational Risk**	Losses from inadequate processes, systems, people, or external events.	🔹Fraud (people risk), weak controls (process risk), system failures (technical risk). 🔹Controlled by strong internal processes, audits, and robust IT infrastructure.
📐 **Model Risk**	Using incorrect or misapplied financial models leading to poor decisions, financial losses, or reputational damage.	🔹Regular validation, testing, and updating models. 🔹Critical in credit analysis, valuation, capital adequacy computations.
💧 **Liquidity Risk**	Inability to meet cash/collateral obligations promptly.	🔹Dynamic liquidity management. Liquidity stress testing, prudent maturity gap management. 🔹Balance sufficient liquidity

		(avoiding both shortage & excess).

🎯 Summary Event: Key Concepts and Highlights

📌 Risk Type	📋 Key Concept	✅ Management Strategy
Optionality Risk	Arises from automatic or behavioral changes due to interest rate movements.	Monitor embedded options; hedge interest rate exposure.
Yield Curve Risk	Changes in yield curve shape affect bond portfolio values.	Manage maturity mismatches; monitor curve dynamics.
Equity Price Risk	Stock price volatility causes market and firm-specific losses.	Diversify portfolios; hedge systematic risk.
FX Risk	Adverse FX rate movements cause losses in open positions.	Use FX forwards & maintain controlled open positions.
Commodity Risk	Price volatility in commodities impacts buyers & sellers.	Futures market hedging; active volatility monitoring.

Operational Risk	Risk from internal processes, systems, people failures.	Robust systems; internal audits; control measures.
Model Risk	Misused or flawed models lead to financial losses.	Regular model validation and updates.
Liquidity Risk	Bank's inability to timely meet payment obligations or excessive idle funds.	Dynamic liquidity management; regular stress testing.

📌 Types of Risks and Their Key Aspects

Risk Type	Key Aspects	Example
⚖️ **Legal Risk**	Loss due to legal uncertainties or disputes.	Cross-border lending facing unknown foreign laws.
🔷 **Reputation Risk**	Damage from negative public opinion affecting business relationships & market standing.	Customer complaints going viral online, causing brand damage.

Tier 1 → CET1 → AT1 T-2 CCB CCCB LCR Leverage NSFR

🏦 **Solvency Risk**	Risk of inability to absorb losses; linked directly to capital adequacy & exposure.	Insufficient capital to cover sudden increase in NPAs.
📜 **Compliance Risk**	Arises from violations or ethical lapses; results in fines, penalties, and reputational harm.	Penalties imposed due to AML/KYC compliance violations.
💳 **Payment & Settlement Risk**	Failures in payment systems leading to systemic disruptions.	Technical glitch causing delayed payments across banking system.

📊 Categorisation and Emerging Risks

Type	Characteristics	Examples	Implications
💰 **Financial Risk**	Causes direct, quantifiable monetary loss.	Credit, Market, Liquidity risks	Bond value declining due to rising interest rates.

Imp.

📉 **Non-Financial Risk**	Indirect impacts, hard to quantify, assessed qualitatively.	Strategic, Reputation, Legal/Compliance, Technology risks	Loss of trust after a regulatory fine.
🚨 **Damage Severity**	Evaluated by impact scale: Low, Moderate, High.	Scandal causing severe reputational damage	Severe indirect effects despite not being financial.
📌 **Business Risk**	Events preventing achievement of business goals (internal/external).	Outdated marketing strategy; economic downturn	Mitigated through innovation and market tracking.

🔗 Control Risk and Interconnectedness of Risks

Risk Type	Characteristics	Example	Management Remarks
🔧 **Control Risk**	Inadequate internal controls	Poor credit appraisal →	Strengthen internal

	causing financial damage or regulatory breaches.	NPAs rise from 3% target to 8%.	training, monitoring & vigilance.
🌐 **Interconnectedness**	Risks interact, triggering each other; must be managed holistically.	Market risk (rate rise) → Credit risk (borrower default).	Map linkages between risks for effective management.

🚩 Detailed Analysis of Non-Financial Risks

✅ I. Strategic Risk

- **Definition:** Loss from poor strategic decisions or faulty implementation.
- **Causes:** Misalignment between goals, strategies, resources, and execution.
- **Impact:** Long-term franchise value decline.
- **Management:** Regularly review and adapt strategies considering internal strengths and external environment.

Example:

A bank investing heavily in branch expansion despite clear market shift towards digital banking.

🔥 II. Contagion Risk

- **Definition:** Risk from interconnected economies and financial systems spreading problems rapidly.
- **Characteristics:**
  - Triggered by negative developments affecting related markets/entities.
  - Prevalent in globally connected banks.
- **Management:**
  - Scenario analysis & stress testing.
  - Contingency plans and capital buffers.

Example:

2008 financial crisis spreading rapidly due to interlinked global financial markets.

🖥️ III. Model Dependency Risk

- **Definition:** Losses from excessive reliance on flawed models in decision-making.
- **Sources of Errors:**

- Poor data quality.
- Incorrect assumptions.
- Coding errors and flawed logic.

- **Mitigation:**
  - High-quality data standards.
  - Rigorous model validation.
  - Ongoing improvements and audits.

Example:

Inaccurate loan default prediction model causing significant credit losses.

📋 Detailed Risk Categorisation Tables

📍 Financial vs. Non-Financial Risks

FR

Type/Subtype	Characteristics	Examples	Management/Implications
💵 **Financial Risk**	Direct monetary loss, quantifiable clearly.	Bond value drop due to interest hike.	Requires monetary management & hedging.

difficult to evaluate

📍 **Non-Financial Risk**	Indirect impact, qualitative evaluation needed.	Reputation damage due to poor service.	Requires reputational risk management policies.

📍 Control Risk & Interconnectedness

Risk/Subtype	**Characteristics**	**Examples**	**Implications**
🛠️ **Control Risk**	Weak internal processes causing direct damage.	Poor credit appraisal causing high NPAs.	Improve internal audits and controls.
🔗 **Interconnectedness**	One risk triggering another (no risk is isolated).	Forex losses causing borrower defaults.	Holistic risk approach, monitoring interactions.

🗒️ Summary of Key Points

📌 **Risk Type**	🔑 **Key Points**	🛡️ **Risk Management Tips**

⚖️ **Legal & Compliance**	Risks from legal/regulatory violations, documentation issues.	Ensure strong documentation, regular audits.
🔷 **Reputation Risk**	Negative public opinion, magnified by online platforms.	Proactive customer relations & service excellence.
🏦 **Solvency Risk**	Unable to absorb losses due to insufficient capital.	Maintain adequate capital buffers, regular stress tests.
💳 **Payment & Settlement**	Critical system disruptions causing widespread impacts.	Robust IT infrastructure, redundancy plans.
📈 **Yield Curve Risk**	Changes affecting profitability from mismatched maturities.	Align assets & liabilities maturities.
📊 **Market & FX Risk**	Adverse price/rate changes leading to financial losses.	Hedging positions, regular trend analysis.

💧 **Liquidity Risk**	Difficulty meeting short-term financial obligations.	Dynamic liquidity management & scenario testing.

3️⃣ Global Financial Crisis (GFC) Overview

(i) What Happened and Why? 🌐🔥

The **Global Financial Crisis (GFC)** was a major worldwide economic crisis from **2007 to 2009**, originating from the **US housing market** collapse.

- **Key Trigger:**

  Massive defaults on mortgage loans, particularly from **subprime borrowers** (borrowers with weak credit profiles).

- **Impact:**

  🔷 Global bank losses

  🔷 Bailouts by governments

  🔷 Major economies faced recession & job losses

  🔷 Prolonged, slow economic recovery

(ii) Causes of the Crisis 📌

🧨 **Cause**	📖 **Detailed Explanation**	💡 **Examples**

⚠️ **Excessive Risk-Taking**	- Low interest rates & rising house prices encouraged risky loans.- Mortgages were packaged as Mortgage-Backed Securities (MBS).- Investors underestimated risks.	US subprime mortgages packaged and sold globally, rated incorrectly as safe investments.
📈 **High Leverage**	Banks borrowed heavily to buy MBS. Falling housing prices caused MBS values to crash, triggering losses.	Investment banks (e.g., Lehman Brothers) collapsed under high debt & losses.
🔍 **Regulatory Failures**	Weak oversight of mortgage lending, poor borrower assessment, widespread fraud & misreporting.	Approval of loans without proper income checks.
🌐 **Global Integration**	Risky US assets were globally owned, rapidly spreading the crisis internationally.	European banks (Germany's Deutsche Bank, France's BNP Paribas) held large quantities of US MBS.

4 Emerging Risks and Mitigation

I. Technology Risks

Key Points	Mitigation Strategies
System failures causing financial losses, legal issues & reputation damage.	Technical: Secure IT infrastructure, strong passwords, disaster recovery plans. Organizational: Regular training, audits, ethical guidelines.

Example:

A bank's online system crashes, resulting in payment delays and financial penalties.

II. Cyber Attacks

Key Points	Mitigation Strategies
Increasing strategic risk due to IT reliance. Growing due to geopolitical tensions.	Boost cybersecurity resources. Enhance industry-government collaboration. Develop strong response plans and threat detection systems.

Example:

Cyber-attack causing data leaks and customer trust erosion, similar to recent ransomware incidents.

🌱 III. ESG Risks (Environmental, Social, Governance)

ESG factors are crucial for businesses to manage for long-term success and reputation.

🌿 ESG Factors	📍 Key Aspects	🚧 Mitigation Examples
Environmental	Carbon emissions, biodiversity impact, waste management	Reduce carbon footprint, manage waste responsibly.
Social	Data privacy, human rights, employee equality	Strict data protection policies, fair labor practices.
Governance	Board integrity, transparent disclosures, accountability	Strong corporate governance, transparent reporting.

⚠️ Notable ESG Violations and Consequences

🚨 Violation	💸 Financial Impact
🛢️ BP oil spill	**$65 billion** in fines
🚰 Flint water crisis	**$600 million** settlement
🚗 VW emissions fraud	**$30 billion** in penalties
🔥 PG&E wildfires	**$30 billion** damages & lawsuits

Strategic Importance:

- Attract responsible investors & customers

- Improve public trust
- Avoid regulatory breaches & financial losses

🌡️ IV. Climate-Related Risks

Climate-related risks involve financial losses due to climate change impacts.

🌧️ Type of Climate Risk	📌 Definition & Examples	🛡️ Mitigation Measures
Physical Risk #1	Direct damages from climate events (floods, storms).	Assess geographical exposure, insurance coverage.
Transition Risk #2	Losses due to policy changes, technological shifts, and changing consumer behavior (moving to sustainable practices).	Diversify assets, monitor policy changes, and adopt sustainable practices.

Example:

Banks financing coal-fired power plants facing asset write-downs due to stricter environmental laws.

Summary Table of Emerging Risks

Risk Type	Key Points	Mitigation Strategies
Technology Risks	System failures causing financial & reputational harm.	Strong technical and organizational risk controls.
Cyber Attacks	Increasing threat due to digitization & geopolitics.	Enhanced cybersecurity, collaboration & rapid response plans.
ESG Risks	Environmental, social & governance failures causing severe financial and reputational damage.	Strong ESG policies, proactive management & transparency.
Climate Risks	Financial impacts due to physical climate events & transition to greener economy.	Diversification, exposure assessment & sustainable practices.

SEBI & RBI Guidelines on Climate Risk and Sustainable Finance

Climate Risk: Financial risks from climate change, classified into:

- 🌧️ **Physical Risks:** Extreme weather events, rising sea levels, natural disasters.
- ♻️ **Transition Risks:** Risks from policies, technology shifts, and market changes during the move to a low-carbon economy.

Sustainable Finance: Financial services integrating **Environmental, Social, and Governance (ESG)** factors into investment decisions, promoting sustainability and long-term value.

🏦 RBI Guidelines on Climate Risk & Sustainable Finance (April 2021)

Purpose: To raise awareness and guide banks towards climate-resilient practices.

📌 **Key Recommendations**	✅ **Actions**
Governance & Strategy	Develop clear climate-risk strategies and governance structures.
Stress Testing	Include climate risk in stress testing and scenario analysis.
Climate Risk Disclosure	Align disclosures with global frameworks (e.g., TCFD guidelines).
Green Lending	Encourage sustainable and green finance initiatives.

Capacity Building	Train staff in climate risk assessment methodologies.

RBI's Regulatory Push:

- Emphasizes integrating ESG in credit appraisal and risk management.
- Urges banks/NBFCs to create internal climate-risk frameworks.

📈 SEBI Guidelines on ESG & Sustainability Reporting

Business Responsibility and Sustainability Reporting (BRSR):

- **Mandatory** for top 1000 listed companies (by market cap) from FY 2022-23.
- Replaces the earlier Business Responsibility Report (BRR).
- Based on 9 principles of the National Guidelines on Responsible Business Conduct (NGRBC).

🌱 ESG Factors	📌 BRSR Key Elements
Environmental	Energy use, greenhouse gas emissions, water & waste management.
Social	Employee welfare, human rights, community engagement.
Governance	Board diversity, ethics, anti-corruption policies.

Green Bonds and ESG Funds:

- SEBI introduced **Green Debt Securities regulations** ensuring transparency in:
  - Use of funds.
  - Impact reporting.
  - Third-party verification.

📋 5. Risk Management Framework

📍 (a) Risk Management Concept

- Identifying, analyzing, mitigating risks to minimize losses.
- Understanding **risk appetite** to align strategies with acceptable risk levels.

🌐 (b) Risk Management Approach

ERM

- Integrated approach (**Enterprise Risk Management - ERM**), as risks are interconnected.
- Avoid silo-based strategies; focus on holistic risk analysis.

👬 (c) Risk Culture

Shared norms and behaviors towards risk influenced by:

C
O
R
M

🗝️ **Factor**	📖 **Description**
Competence	Skills, knowledge, training for staff.
Organization	Clear strategies, governance, ethics.
Relationships	Communication, leadership, structured discussions.

Motivation	Linking risk management to accountability and performance.

⚙️ (d) Risk Management Architecture

- Identify and assess material risks.
- Implement mitigation strategies.
- Maintain acceptable risk limits.
- Continuous monitoring through robust MIS.

quantify

🔧 (e) Elements of Risk Management Framework

- Covers business and enterprise-level risks.
- Aligns with institution's strategy and SWOT analysis.
- Includes strong board oversight, clear policies, tools, capital assessments, and mitigation mechanisms.

Part-2

🏢 6. Organizational Structure & Risk Management Committee

Three Levels of Risk Management

📌 Level	🧑‍💼 Responsibilities
Board of Directors	Sets strategy, defines risk appetite, monitors risk management.
Executive Management	Independent risk committee to formulate and oversee risk policies.