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# Catastrophic (Cat) Bonds

**Mains:** *GS III - Disaster and Disaster Management.*

## Why in the news?

*Recently, India is considering the use of catastrophic bonds for disaster resilience and management.*

## What are catastrophic bonds?

- **Definition** - Catastrophe bonds are *hybrid financial instruments* that *combine features of insurance and debt*.
- **Origin** - It originated in the U.S. in late 1990s after hurricanes.
- **Objective** - To ***strengthen disaster risk financing*** and enhance climate resilience amid the increasing frequency of natural disasters.
- **Importance** – They turn a country's hazard exposure into a *tradable security,* opening access to a wider pool of capital beyond traditional insurers and reinsurers.
- They allow at-risk entities, usually sovereign states, to transfer pre-defined disaster risks to investors, thereby *enabling quicker payouts* and *reduces counterparty risk*.
- They help in ***diversification of natural hazard risks***.

*Nobel laureate Harry Markowitz's emphasis on diversification aligns with the strategic rationale for including* ***cat bonds in investment portfolios.***

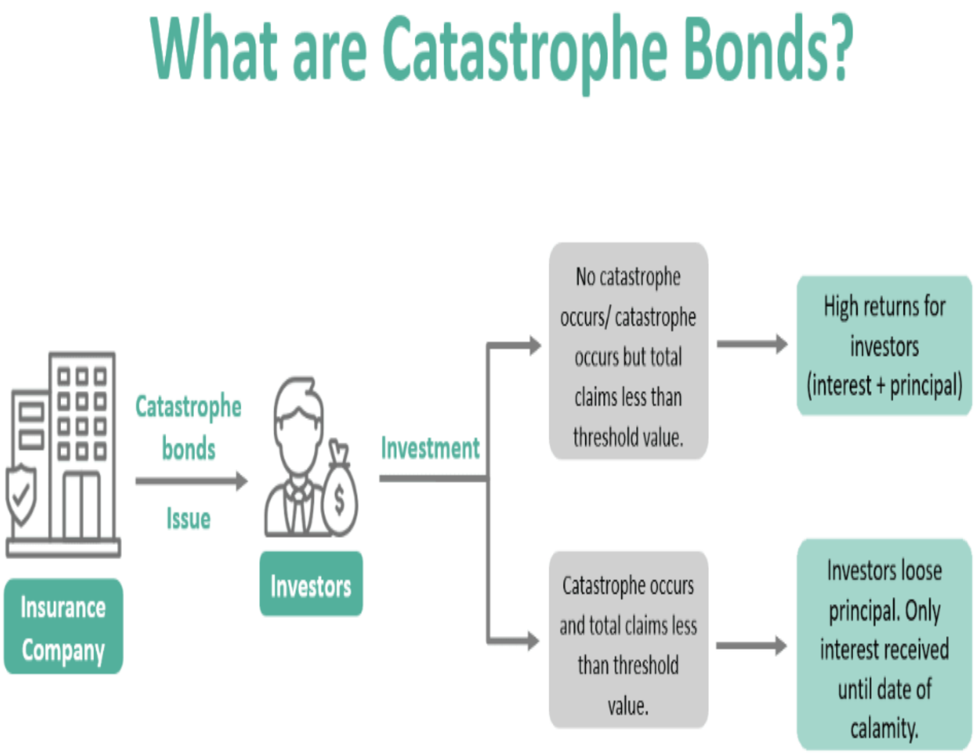
- They are statistically *independent of traditional financial risks*, making them valuable for risk-averse portfolios.

## How do Cat bonds work?

- **Creation** – They are *created by sovereign nations*, which *sponsor the bond and pay the premium*, with the principal being the sum insured.
- **Issuance** – The sponsor requires an *intermediary to issue* the bond, thereby reducing counterparty risk.
    - **Intermediaries** - It can include the *World Bank, the Asian Development Bank, or a reinsurance company.*

***U.S., catastrophe bonds*** *have seen over $180 billion in issuances globally, with approximately $50 billion currently outstanding, since their inception in the late 1990s* *following major hurricanes.*

- **Purchaser** – It is generally purchased by global investors, including pension funds, hedge funds, and family offices, who are attracted by high returns and the diversification benefits of non-market associated risks.
- **Coupon rates** – If a disaster does occur, the investor runs the risk of losing a part of the principal, a key reason for *higher coupon rates of such bonds*, compared to regular debt instruments.
- The risk level and frequency of disaster occurrence directly influence coupon rates.
    - ***For example****, earthquake-related bonds often offer lower premiums (1-2%) compared to those covering cyclones or hurricanes.*




## Why does India need Cat bonds?

- **Less insurance penetration** - The traditional insurance coverage remains sparse, especially for individuals and small businesses.
- **Lack of disaster insurance** - Less availability of insurance on individual property and livelihoods leaves much of the *population exposed to irretrievable damage and loss*.
- **Burden on public finance** – It places a significant burden on public finances *for recovery, rehabilitation and reconstruction*.
- **Increased climate crisis** - As climate change intensifies the frequency and severity of natural disasters, India is increasingly vulnerable to financial shocks arising from catastrophic disasters.
- India faces an increasingly precarious climate future with rising occurrences of floods, cyclones, forest fires, and earthquakes.

## How could sponsoring cat bonds help India?

- **Reserving the finances for disaster recovery** - Leverage its strong sovereign credit profile to negotiate favourable terms.
- **Transfer of risk** - It ta*kes away risk from the government to global investors*.
- **Ensure quicker post-disaster recovery** – Finances for pre-defined risk helps in easier availability of risk finances.
- **Lowers bond premiums** – India's proactive disaster management steps, including an annual allocation of *Rs.15,000 crore ($1.8 billion)* for mitigation and capacity building, could further.

## What is India's potential in South Asian Cat bonds?

- **India's financial stability** - India could be lead-sponsor for a South Asian cat bond, given that most such regional risks remain unhedged.

- **Regional collaboration** - India is well-positioned to lead the creation of a regional catastrophe bond framework for South Asia.
- **Risk spreading** - It spreads risk across multiple countries and reduce overall premium costs.
- **Financial preparedness** – India could foster financial preparedness across the region of south Asia.
- **Cover high-impact hazards**
  - **Earthquakes** across India, Nepal, and Bhutan
  - **Cyclones and tsunamis** are affecting India, Bangladesh, the Maldives, Myanmar, and Sri Lanka.
- By pooling diverse risks across geographies, a South Asian cat bond would be more attractive to investors and more robust in coverage.

## What are the challenges?

- **Insufficient design** - Poorly designed bonds may miss payouts due to rigid trigger conditions.
  - ***For example**, a bond triggered only by earthquakes above 6.6 magnitude may not activate for a 6.5 event, even if damage is severe.*
- **Wasted premium payments** - Governments may question the cost-benefit ratio if no disasters occur during the bond period, leading to a perception of lost premium payments.
- **Limited coverage** - Most cat bonds generally covered primary risks like major hurricanes and earthquakes.
- It can be more expensive to build bonds for secondary risks like floods, wildfires, etc. which are becoming more frequent due to climate change.
- **Lack of technical knowledge** – These bonds are difficult to value and understand for generalist investors, requiring specialized knowledge and reliance on catastrophe modelling firms.

### What lies ahead?

- Accountable insurance framework can be made through, transparent cost comparisons with past disaster recovery expenditures.
- Engagement with reliable intermediaries and risk modellers could be an efficient way to administer the disaster insurance network.

### Reference

The Hindu| Cat Bonds for a Natural Disaster Mitigation