

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 <u>hybrid financial instruments</u> that <u>combine features</u> of insurance and <u>debt</u>.
- **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.

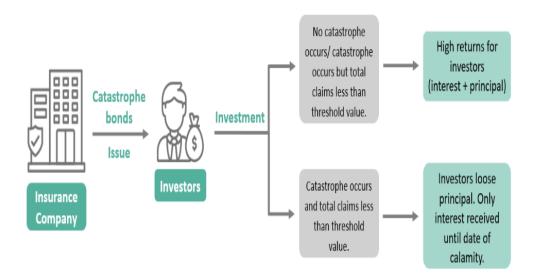
How do Cat bonds work?

- **Creation** They are <u>created by sovereign nations</u>, which <u>sponsor the bond and pay the premium</u>, 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 <u>globally</u>, with approximately \$50 billion currently outstanding, since their inception in the late 1990s

- **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 <u>higher coupon rates of such bonds</u>, 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.

What are Catastrophe Bonds?



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 takes 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

