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India's next systemic financial risk

India's initiatives to improve its ESG situation have allowed the market to move towards a sense of sustainability and stability, but more work needs to be done. **Edme Insurance Broker**'s **Ms Neha Yadav** elaborates.

For much of the past decade, India's climate conversation has been framed through ESG disclosures, sustainability metrics and voluntary commitments. These initiatives have served an important purpose in improving transparency, corporate awareness and stakeholder reporting. But a more consequential shift is now underway, one that moves climate change decisively out of the sustainability silo and into the domain of financial stability.

Globally, central banks, regulators and insurers are converging on a common assessment: climate risk is no longer a peripheral, reputational or compliance-driven issue. Extreme weather events and climate transition dynamics are increasingly capable of impairing asset values, disrupting cash flows, weakening credit quality and imposing unpredictable fiscal costs. In short, climate risk is becoming a recurring balance-sheet variable, not a distant tail risk.

Reframing underway

India's regulators are aligning with this view. Earlier this year, the Reserve Bank of India (RBI) explicitly acknowledged that climate change can materially affect the financial system through asset damage, business disruption and rising credit stress bringing climate risk firmly within the scope of financial supervision.

The RBI has since released climate-related financial risk disclosures *(RBI draft disclosure framework on climate-related financial risks, 2024),* aligned with international standards such as the Task Force on Climate-related Financial Disclosures, signalling that climate risks can pose financial-stability concerns if left unaddressed.

How climate shocks enter the financial system

The analytical pathway from climate events to financial stress is now well understood. The Network for Greening the Financial System, a coalition of central banks and supervisors, has articulated how climate risk enters the financial system through two channels.

The first is physical risk floods, cyclones, heatwaves and droughts that damage assets, disrupt supply chains and erode borrower cash flows. The second is transition risk, arising from policy changes, technological shifts and market repricing as economies adapt to climate realities.

The Bank for International Settlements has noted that while climate risk ultimately transmits through familiar financial channels credit, market, operational and liquidity it requires new kinds of data, scenarios and time horizons that traditional risk models were never designed to handle.

For banks, this means geographically concentrated credit stress. For insurers, clustered claims and capital strain. For governments, sudden fiscal outlays that fall outside planned budgets.

India's exposure is already material

This is not a theoretical concern as international climate-risk assessments show that India ranks sixth globally on the Germanwatch Global Climate Risk Index 2025, having suffered more than 400 extreme weather events since 1993, with economic losses of roughly $180bn and over 80,000 deaths. These losses are no longer confined to rural agriculture. Urban flooding, heat stress and infrastructure damage increasingly affect industrial clusters, logistics networks and municipal finances.

Looking ahead, the challenge intensifies. The World Bank estimates that Indian cities alone will require

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over $2.4tn by 2050 to build climate-resilient infrastructure and services. Climate risk, in other words, is not episodic. It is structural, and its financial implications will compound over time.

The missing shock absorber: India's protection gap

Despite the scale of exposure, a large share of climate-related losses in India remains uninsured. Globally, insurers cover less than half of catastrophe-related economic losses; in emerging markets, the protection gap is typically wider. Sector assessments suggest that a substantial majority of economic losses over 70% are from natural catastrophes in Asia remain uninsured, with India among the markets where insurance penetration is particularly low.

This gap has clear macro-financial consequences. When losses are uninsured, they are absorbed by households, lenders and the state. Over time, repeated shocks translate into higher non-performing assets in exposed regions, deferred private investment and unplanned public expenditure. Climate volatility thus migrates from the physical economy into the financial system.

From disclosure to risk management

ESG disclosure frameworks have helped surface climate exposure. But global supervisory guidance is increasingly explicit that disclosure is only a starting point. Financial resilience depends on what happens next, how climate risks are measured, priced, capitalised and transferred.

As India deepens its approach, the opportunity lies in embedding climate risk into:

- Credit underwriting and portfolio management
- Insurance pricing and reinsurance strategy
- Capital planning and stress testing
- Public investment and disaster financing

This evolution reflects maturity rather than criticism. As climate risk becomes more quantifiable and financially material, it must inevitably move from reporting frameworks into balance-sheet management.

Why parametric insurance is entering the policy conversation

Against this backdrop, parametric insurance is moving decisively into policy focus. Unlike traditional indemnity cover, parametric structures deliver pre-agreed payouts when independently verifiable thresholds such as rainfall, temperature or wind speed are breached.

Global risk bodies, including the World Economic Forum, have highlighted such instruments as increasingly central to climate-resilience planning. In India, recent reporting points to state-level pilots and early national-level discussions on climate-linked insurance using parametric triggers evidence that interest is shifting from conceptual debate to practical deployment.

Practitioners can add value by:

- **Calibrating India-specific parametric triggers** that capture monsoon volatility, heat stress, floods and cyclones using granular climate and geospatial data.
- **Structuring pre-disaster risk-financing mechanisms** where rapid parametric payouts provide immediate liquidity, without prolonged claims processes.
- **Narrowing the protection gap** by extending parametric coverage to underinsured segments, reducing the risk of climate shocks escalating into systemic financial stress.

Together, these capabilities translate climate uncertainty into decision-grade financial risk – aligned with fiduciary responsibility and financial stability.

Execution will matter more than design

Regulatory recognition of climate risk, improving data availability and growing policy interest in parametric solutions all point to a system that is evolving.

But execution will be decisive. Insurance is not a turnkey solution. Poorly designed triggers can create basis risk; weak data governance can undermine credibility; misaligned incentives can limit uptake.

This is where specialist capability becomes critical ensuring that climate variables are translated into financially meaningful triggers aligned with the risk profiles of lenders, insurers and public authorities. The next phase is less about conceptual frameworks and more about building operational capability.

From ESG to economic resilience

India's ambition to become a $5tn economy depends on resilient infrastructure, stable capital flows and predictable fiscal outcomes. Hence, parametric insurance is not a silver bullet. But used judiciously, alongside traditional insurance and public risk-financing tools, it can help convert climate uncertainty into manageable financial risk and, in doing so, strengthen India's long-term economic resilience.

Climate risk has moved beyond ESG and into the core of financial stability, with direct consequences for credit, capital and public finances. India's opportunity lies in closing the protection gap and embedding climate risk into financial decision-making using tools such as parametric insurance to turn climate volatility into manageable, system-level risk.

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