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The insurance–bank nexus: the climate protection gap as a source of risk for the financial system

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Policy insight

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Contents

Summary

The climate insurance protection gap should be a central concern for banks, supervisors and financial stability authorities. Understanding and addressing the risks associated with it requires not only action by insurance supervisors and governments, but also stronger coordination with the banking sector.

Microprudential responses are insufficient on their own to mitigate the risks arising from the insurance protection gap. As physical climate risks intensify, insurers face well-documented limitations in their risk modelling, pricing frameworks and contract structures. Although firm-level responses may reduce risks at the microprudential level, they can also generate unintended systemic consequences by shifting risk to other parts of the financial system.

These vulnerabilities can be transmitted to the banking sector through both direct and indirect channels. Banks may be directly affected through their own purchases of insurance products as a mitigant of climate-related risks, and indirectly through the exposures of sovereigns and their corporate and retail counterparties. While the impacts are most evident for credit risk, they extend across other risk categories in the Basel Framework, including market, liquidity and operational risk. Moreover, greater awareness of banks' exposure to the insurance protection gap may lead to more conservative assessments of borrower resilience and creditworthiness, potentially tightening credit conditions and reducing access to finance for vulnerable households and firms. Governments should, therefore, work closely with insurance and banking supervisors to ensure that improved risk awareness does not result in unintended systemic distortions that have adverse societal consequences.

The widening of the insurance protection gap could have significant macrofinancial consequences. It could contribute to tighter credit conditions, asset fire sales, and balance sheet stress for insurers, with spillover effects to other insurers, banks and non-bank financial intermediaries. Limited or asymmetric insurance coverage may then increase expectations of government intervention, effectively creating an implicit public subsidy. Such expectations can weaken market incentives for risk reduction, constrain fiscal space and crowd out public and private investment in climate resilience, thereby amplifying risks to financial stability.

Banks, supervisors and financial stability authorities should help address the insurance protection gap by:

- Acknowledging the limitations of insurance products in banks' climate risk management. It is important not to overestimate the availability and reliability of insurance, be it insurance used directly by banks as a risk-mitigation tool or indirectly by their corporate and retail clients.
- Strengthening cross-functional coordination within banks. This involves developing an understanding across banks' internal teams of which losses from climate hazards would have been borne in the absence of insurance and government support, particularly through due diligence and credit-granting processes.
- Reinforcing banks' insurance data and infrastructure. The authorities should ask and enable banks to identify, at a minimum, which assets and exposures are insured, to what extent, and against which risks.
- Incorporating the insurance–bank nexus into scenario analysis and stress testing. This will ensure that risk transfer mechanisms between insurers and banks do not amplify systemic and firm-level vulnerabilities.
- Further advancing risk reduction measures through sound banks' risk management and financial stability measures. Banks' investments in risk reduction are a cost-effective way to limit future losses, preserve collateral values and reduce the transmission of risks from the insurance sector to the banking sector.

1. Introduction: the widening insurance protection gap

From a banking perspective, the climate insurance protection gap is broader than its traditional insurance-focused definition. As physical climate risks intensify, banks can be materially affected through unavailable or inadequate insurance coverage, with potential impacts on financial stability. Such risks include slow-onset changes, acute hazards and related indirect damage. This policy insight examines the impacts of the insurance protection gap on the banking sector, focusing on property and casualty insurance at the global level.

Physical risks associated with climate change are becoming a growing area of interest for international standard-setters, financial stability authorities and insurance and banking supervisors.[1] Physical risks are growing rapidly, driven by rising global temperatures that intensify the frequency and severity of extreme weather events (IPCC, 2022), including flooding in Spain (October 2024) and Southeast Asia (2022), wildfires in California and Canada (2023), and record-breaking heatwaves across South America and the Caribbean (2023).

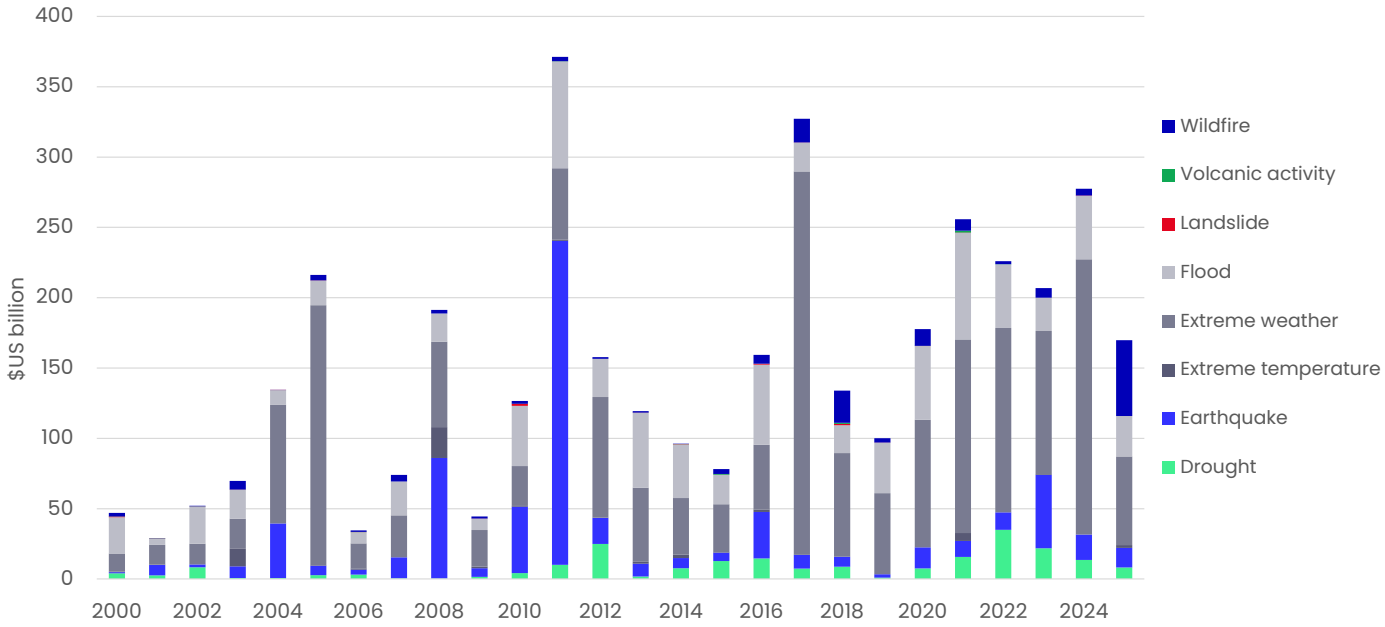
From the perspective of banks, the insurance protection gap (hereafter: insurance protection gap) is wider than the definition considered for insurance purposes. From an insurance perspective, the protection gap can be commonly defined as the uninsured portion of economic losses (IAIS, 2025). For a risk to be insurable, losses must be reasonably predictable in their frequency and severity, and exposures must be diversified across policyholders. When these conditions are not met, insurance coverage can become limited or unavailable, or high premiums can make insurance products unaffordable, widening the protection gap. Global economic losses in 2025 were estimated at US$8.18 billion from droughts, US$28.78 billion from floods, US$53.89 billion from wildfires and US$62.9 billion from extreme weather events (see Figure 1.1).

We define the insurance protection gap as the sum of all losses triggered by climate hazards which are uninsured or underinsured. The scope of this definition includes slow-onset climate events (e.g. sea-level rise), acute climate hazards (e.g. droughts and heatwaves) and other indirect damages (e.g. financial losses due to business disruption) that can materially affect banks as a consequence of unavailable or inadequate insurance, with potential impacts on financial stability (IPCC, 2022; IAIS, 2025; NGFS, 2026).

We focus on property and casualty (P&C), or non-life, insurance at the global level. This covers products such as home, commercial, travel, crop and natural-catastrophe insurance, as well as third-party liability. Climate risks affect all insurance business lines, P&C and life and health (L&H) insurance, both through insurers' underwriting activities and their role as institutional investors (Crugnola-Humbert, 2024). However, focusing on P&C insurance allows us to explore the most immediate and direct impacts from a banking and financial stability perspective, due to its close link to physical assets, collateral values and loss realisation.

[1] See: International Association of Insurance Supervisors [IAIS] (2018); Financial Stability Board [FSB] (2025); Network for Greening the Financial System [NGFS] (2026); Financial Stability Oversight Council [FSOC] (2023); Prudential Regulation Authority [PRA] (2025); Australian Prudential Regulation Authority [APRA] (2026); European Insurance and Occupational Pensions Authority [EIOPA] (2025); European Central Bank [ECB] (2026).

Figure 1.1. Natural disaster losses worldwide, 2000-25



Sources: EM-DAT; CRED/UCLouvain (2026). Note: Figures are not adjusted for inflation.

Contribution and structure of this policy insight

While previous research has explored the impact of climate shocks and disasters on the insurance sector, banks and governments, the interplay between these areas has not yet been explored in depth (FSB, 2025; Peters, 2025).

We draw on desk-based research on insurance, banking regulation, financial stability and sovereign risk frameworks to examine the impacts of the insurance protection gap for the banking sector. Section 2 assesses the structural limits of insurance in responding to climate-related physical risks alone. Section 3 examines how these limitations translate into risks to banks. Section 4 analyses the broader financial stability impacts of insurance protection gaps, including their function as an implicit public subsidy. Building on these findings, in Section 5 we set out short- and medium-term policy recommendations for banks, banking supervisors, and financial stability authorities.

2. Individual responses to the protection gap in the insurance sector

The insurance sector faces known limitations in how it models climate risks, structures pricing and designs contracts. As physical climate risks intensify, firm-level adjustments may help reduce exposures at the microprudential level, but they may also create unintended systemic effects by transferring risk to other parts of the financial system. Therefore, risk-reduction measures could be considered to adjust these incentives. At the same time, such challenges are not confined to primary insurers, as the reinsurance sector is also affected and may face constraints linked to the concentration of climate-related tail risks.

Known limitations to insurability of climate risks

The insurance sector faces known limitations in addressing climate risks in their modelling approaches, pricing frameworks and contract structures. Traditional insurance models rely on historical data to estimate future losses, enabling insurers to price premiums, allocate capital over a one-year horizon, and transfer risks to reinsurance markets. This approach works well for high-frequency, low-severity events, but climate risks are fundamentally different. Climate risks are characterised by deep uncertainty, non-linear impacts and long-term dynamics. As a result, conventional catastrophe models struggle to capture their full scale and evolution (IAIS, 2023).

This challenge is compounded by the short-term nature of P&C insurance contracts, many of which are renewed annually based on near-term risk assessments. Because of these annual renewals, insurers often prioritise experiences of short-term losses over long-term climate projections. This enables them to adjust premiums or limit coverage as climate risks evolve, instead of fully incorporating future climate-related exposures into current pricing (Surminski et al., 2022). Pillar 1 capital requirements are also focused on limiting the probability of failure over a one-year horizon. Meanwhile, macroprudential tools for insurers, where they exist, remain less developed than those available for the banking sector (Mack, 2025). While forward-looking tools such as scenario analysis and firm-level stress testing are emerging (PRA, 2025; Solvency II Directive), they have not been integrated into insurers' core modelling, pricing or contract design. The insurance sector will continue to develop its climate expertise, but the integration of climate hazards into insurance frameworks can only address certain dimensions of the insurance protection gap.

Risk transfer rather than risk reduction

Scenario analyses and stress tests often cover both the banking and insurance sectors (BoE, 2022; MAS, 2023) but do not yet capture their interactions. This constrains financial stability authorities and supervisors in their assessments of how the protection gap could propagate across the financial system. One notable exception is the Australian Prudential Regulation Authority (APRA), which integrates the insurance–bank nexus into its Banking Climate Vulnerability Assessment at an early stage (2022) and has since advanced this work through its Insurance Climate Vulnerability Assessment (2026).

Insurers' responses to rising physical climate risks could mitigate risk at the microprudential level, but they have unintended systemic consequences. To maintain solvency and meet regulatory requirements, insurers are starting to increase premiums; tighten underwriting standards and internal capital requirements; reduce coverage; and withdraw from high-risk areas of the economy (Crugnola-Humbert, 2025). Such responses primarily transfer risks to households, firms, banks or the public sector rather than reducing them (Section 3). As a result, protection gaps can widen, particularly in the regions most exposed to climate hazards, where insurance becomes increasingly unavailable or

unaffordable. The integration of risk reduction measures into insurance products, regulation and supervision could help adjust the incentives behind such trends by reducing exposure to climate hazards.

Insurance regulators and supervisors have started to look into the role of risk reduction measures. There are a few examples of regulatory and supervisory frameworks that incorporate or encourage risk reduction measures in insurance and reinsurance policies and products, such as the UK Flood Re (Build Back Better), the Strengthen Alabama Homes programme, and supervisory guidance from the European Insurance and Occupational Pensions Authority (EIOPA, 2019; 2021) and the Monetary Authority of Singapore (MAS, 2020).

Box 2.1. Important concepts in banking and insurance prudential regulation

Risk transfer: a shift of the financial consequences of risks from one party (e.g. insurers and reinsurers, banks or policyholders) to another (e.g. public balance sheets through public backstops).

Risk mitigation: the policies, controls and governance practices that financial institutions use to reduce the likelihood and impact of losses.

Risk mitigant: any legally recognised mechanism that reduces a bank's expected loss in the event of borrower default (collateral, guarantees and, under certain conditions, insurance). Risk-mitigation tools are primarily associated with credit risk, but in banking practice they can also affect or be used in other risk categories.

Risk reduction: the reduction of exposure to climate-related hazards through climate mitigation and adaptation measures, such as transition planning (Smoleńska and Poensgen, 2025). Climate mitigation helps reduce future economic losses by limiting greenhouse gas emissions and, therefore, the resulting rise in the frequency and severity of natural hazards caused by climate change. Climate adaptation strengthens resilience and decreases vulnerability to climate hazards through investment in infrastructure such as flood barriers, city planning and efforts to change building codes.

Emerging constraints in reinsurance markets

There is building pressure on reinsurance markets. Reinsurers - firms that provide insurance to primary insurers - play a critical role in absorbing tail risks and enabling insurers to underwrite large or catastrophic exposures (Curtis and Hall, 2026). For instance, in one sample of 16 large international insurers with predominantly non-life portfolios, reinsurance reduced the natural catastrophe value-at-risk by an average of 50% (IAIS, 2023).

As climate-related losses become more frequent and severe, reinsurers face increasing concentrations of tail risk. This can strain their underwriting capacity and lead them to adopt strategies similar to those of primary insurers, such as raising prices or withdrawing from high-risk segments of the market (Möhr et al., 2025). This dynamic may give rise to reinsurance protection gaps that have cross-border implications (Boaventura Xavier, 2025), further limiting the availability and affordability of coverage in primary insurance markets. The Insurance Council of Australia (2023) observed that extreme weather events globally contributed to a 20–30% increase in Australian reinsurance costs in 2023. The Central Bank of Ireland (2023) warned that reinsurance costs and capacity can be impacted by climate change effects in other countries, resulting in a reduced capacity to cover flood risk in Ireland.

3. Risk transmission channels to the banking sector

Information gaps, measurement challenges and the misalignment between existing insurance policies and climate-related risks may lead banks to underestimate the implications of the insurance protection gap for their balance sheets and business operations. An initial mapping of the direct and indirect channels through which the insurance protection gap affects banks can help identify key transmission mechanisms and reveal areas of vulnerability. At the same time, greater awareness of these risks should not result in reduced access to finance for households and firms that are particularly exposed to climate-related risks.

The insurance protection gap creates information friction and measurement challenges for banks. They often struggle to assess the extent and quality of insurance coverage: private and public insurance policies are frequently multidimensional and non-standardised, making it difficult to determine their scope, enforceability, and expected payout structure (OECD, 2023). In many jurisdictions, borrowers are not required to disclose detailed information on their insurance coverage, resulting in asymmetric information. Banks frequently lack clarity on what "being insured" entails in practice, meaning that they have limited information on areas such as coverage depth, exclusions, insured hazards and the valuation of insured assets (Banca d'Italia, 2026).

These challenges are compounded by a misalignment between existing insurance coverage and evolving climate risks. Insurance policies often focus on localised, historically observed events (such as fires), while offering more limited or uncertain protection against increasingly frequent, severe and correlated climate-related events, including floods, storms and wildfires. At the same time, the short-term nature of insurance contracts further constrains data availability. While banks may verify the existence of insurance when originating a loan, they generally do not receive systematic updates on changes in coverage, pricing or insurability over time (Baranović et al., 2026). As a result, banks may rely on proxy indicators and simplified assumptions. This raises the possibility that insurance-related assumptions embedded in risk assessments - particularly those for credit risks – will diverge from actual levels of protection.

The insurance protection gap can have an impact on banks through both direct and indirect channels. Banks can be directly affected when they buy insurance products to protect against climate-related risks, and indirectly affected by the exposures of their sovereigns and their corporate and retail counterparties. Unless the insurance protection gap is fully accounted for, banks may underestimate loss-given-default in stress scenarios, overestimate collateral recoverability, and understate tail risk correlations. This could result in a miscalibration of capital and liquidity requirements of the kind observed during the 2008 Global Financial Crisis (Federal Reserve, 2010).

Table 3.1. The insurance protection gap: impacts on banks

Basel category	Direct impacts	Indirect impacts
Credit risk	The effectiveness of insurance is declining due to rising premiums, tighter coverage and withdrawal from high-risk areas. As climate risks intensify and become more correlated with widespread losses in certain areas or	Reduced insurance coverage for borrowers increases default risk (e.g. in agriculture), contributes to declining collateral values (e.g. in real estate in high-risk areas) and can weaken sovereign

	sectors, insurance becomes less available and affordable, reducing its ability to shield banks from borrower default and collateral losses.	creditworthiness (see the following Section), leading to higher borrowing costs. In addition, rising insurance costs for business interruption and critical infrastructure, including across supply chains, may give rise to credit risks.
Market risk	Insurance instruments provide only partial protection against valuation uncertainty and are not designed to absorb systemic climate risks. Growing uncertainty around climate impacts and transition pathways further limits their availability and effectiveness.	Insurance repricing or withdrawal from climate-exposed sectors can trigger asset devaluations and increase market volatility. Investor expectations of acute climate-related physical risks can also trigger market downturns, affecting portfolios (NGFS, 2026).
Liquidity risks	Insurance can support asset liquidity by enhancing perceived credit quality, but this effect weakens under climate stress as insurers restrict coverage or face balance sheet constraints. As a result, insurance cannot reliably sustain asset tradability during widespread shocks.	Post-disaster insurer deleveraging or asset sales can reduce market depth, leading to fire sales and worsening liquidity conditions for banks.
Operational risks (compliance and liability)	Banks face increasing legal risks when climate-related losses expose weaknesses in governance, risk management or disclosures. Banks may be held liable for inadequate risk assessment, misjudging insurance coverage on collateral or financing projects that later fail due to climate shocks, including through claims directed against their executives.	Increased regulatory scrutiny, legal disputes and contractual uncertainty related to insurer undertakings and non-financial corporates (Carney, 2015; Climate Case Chart, 2023).

Direct impacts on banks: purchases of insurance products to protect against climate risks

Recognition of insurance's role as a risk-mitigation tool in microprudential frameworks appears to be limited. Under the Basel III credit risk framework, the treatment of insurance varies depending on the type considered (see Table 3.2). This is evident in, for example, the following areas:

- **Credit insurance.** Where credit insurance has the same economic substance as a guarantee, it may be recognised as an unfunded credit protection (UFCP) for the purposes of own funds requirements (EBA, 2024). UFCP refers to arrangements whereby a third party is contractually obliged to cover losses arising from a borrower's default, the failure of a credit facility or the occurrence of other specified credit events, thereby reducing a bank's credit risk exposure.[2]

- **Immovable property.** Insured real estate collateral can be recognised as a form of credit-risk mitigant in both the Standardised Approach (SA) and the Internal Ratings-Based (IRB) Approach. In the SA, in which regulators prescribe fixed risk weights for different types of exposures, preferential risk weights may be applied where eligibility criteria for collateral are met. Under the IRB Approach, in which banks estimate key risk parameters using internal models approved by supervisors, the risk-mitigating effect of real estate collateral is captured primarily through banks' estimates of Loss Given Default. As a result, the capital benefit

[2] Under Article 4(1), point 59, of the Capital Requirements Regulation 3 (CRR3) in the EU.

attributed to collateral depends on each institution's internal modelling assumptions and historical loss data.

This conservative treatment is motivated by prudential concerns, particularly the need to avoid excessive reliance on uncertain or non-guaranteed insurance recoveries. Such treatment limits the assessment of climate risks in both the SA and the IRB Approach. As the SA does not generally specify the scope of insurance requirements for risk-mitigation purposes, it does not ensure coverage of natural hazards and other climate risks. The use of the IRB Approach can lead to variation in banks' prudential treatment of insured assets, including in the extent to which climate-related risks are reflected in Loss Given Default estimates.[3] In addition, there is no available data on the share of banks' contracts and securities that are currently insured. The lack of this information may make it difficult for financial stability and supervisory authorities to assess the extent and effectiveness of risk transfers between the banking and insurance sectors.

Banks' reliance on insurance may increase as physical climate risks intensify (see Table 3.2). Insurance can influence not only banks' credit risk but also their exposure to market, liquidity and operational risks as defined by the Basel Committee on Banking Supervision (2022). When underlying assets or counterparties are insured, banks may be better protected against losses, thereby improving asset quality, stabilising cash flows and supporting liquidity positions. However, the structure of these products may be complex, limiting the transparency of coverage conditions, exclusions, bundled products and payout triggers. Global banks' disclosure reports are starting to note that insurance can be used to mitigate climate risks (JPMorganChase, 2024a, 2024b; Wells Fargo, 2024; Citi Group, 2024). This will have a direct impact on banks' dependence on insurance markets, particularly if the availability and affordability of coverage deteriorate (Curtis and Hall, 2026).

Table 3.2. Climate-related insurance products as risk mitigants for banks

Insurance product	Function for banks	Potential application related to climate risk
Credit insurance	Mitigates commercial counterparty risk in supply chains and supports corporate loans (e.g. trade credit and non-payment insurance).	Helps transfer climate-related credit risks, reducing banks' direct exposure to physical losses. Supports the liquidity of climate-exposed assets by enhancing their perceived safety and tradability in climate risk scenarios.
Political risk insurance	Reduces cross-border investment risk and supports market exposure in higher-risk jurisdictions (e.g. in project finance and foreign direct investments).	Helps banks manage climate-related uncertainty in cross-border lending and project finance, including exposure to climate-vulnerable jurisdictions and transition-sensitive assets.
Residual value insurance	Stabilises asset values in leasing and structured finance (e.g. real estate and equipment), affecting both credit and market risk.	Acts as a buffer against asset devaluation driven by climate hazards and stranded asset risks associated with a lack of insurance coverage.

[3] In the EU, under Article 208(5) CRR3, banks are required to adequately insure all immovable property used as collateral against damage and to put in place procedures to regularly monitor insurance adequacy. In accordance with Article 208(3) CRR3, "ESG-related considerations, including those related to limitations imposed by the relevant Union and Member States regulatory objectives and legal acts, as well as, where relevant for internationally active institutions, third-country legal and regulatory objectives, shall be considered to be an indication that the property value might have declined materially, relative to general market prices".

Regulatory risk and compliance insurance	Covers costs associated with regulatory investigations, penalties (where insurable) and compliance failures.	Helps banks address increasing regulatory scrutiny and enforcement actions related to environmental, social and governance factors.
Liability insurance	Reduces operational and legal risks linked to corporate governance failures and litigation exposure (e.g. directors' and officers' insurance, which covers the legal costs and liabilities faced by senior executives; and professional indemnity insurance, which provides protection against claims arising from mistakes in financial advice or administrative errors).	Reduces banks' operational exposure to climate-related governance failures, including mispricing of physical climate risks or financing of highly exposed assets.
Operational risk insurance	Mitigates losses from internal failures (e.g. system breakdowns, business interruption and damage to immovable property).	Protects banks from losses caused by natural disasters and extreme events.

Indirect impacts on banks: clients' exposures to the insurance protection gap

It is rare for banks to systematically differentiate between insured and uninsured clients with respect to emerging climate risks. Under Basel requirements, prudential regulation does not require banks to verify and monitor the insurance coverage of their clients. Insurance is required as a condition for lending only in certain contexts, depending on the applicable legal framework (e.g. under Article 208(5) of the EU Capital Requirements Regulation for real estate collateral). Moreover, as discussed, banks face uncertainty about how to incorporate insurance-related information into their credit risk models (Gallo et al., 2024).

However, growing physical risks give banks increasing incentives to incorporate such information into risk management. Even in countries with relatively high rates of insurance penetration for natural disasters, coverage is often insufficient to fully offset firms' financial losses associated with extreme events (European Environment Agency, 2025). At the corporate and retail level, limited or unaffordable insurance coverage can lead to larger uninsured or underinsured losses. In the UK, models from the Bank of England have been exploring such transmission channels in relation to flood risks (Banks and Erçevik, 2026). These models suggest that the UK's mortgage protection gaps for flood risks are unlikely to threaten banking solvency, with the caveat that they do not cover increases in risk after 2050, other key perils, assets or contagion channels (such as macroeconomic impacts). As insurance becomes less available, more expensive or subject to withdrawals in highly exposed sectors, insurance protection gaps may increase banks' credit and other prudential risk (see Table 1).

The ECB observes that banks in the EU have started integrating insurance information into climate-related due diligence and credit-granting processes. In its updated Good Practices for Climate and Nature Risk Management (2026), the ECB notes that some institutions perform a basic check during loan origination to confirm whether real estate collateral is covered by insurance. Banks also implement monitoring processes to track changes in insurance coverage and policy terms across their portfolios. These approaches differ by exposure type: insurance may be mandatory for certain hazards in residential real estate collateral, is generally required for commercial real estate, and is assessed case by case in corporate lending based on the vulnerability of specific assets and activities.

Governments should collaborate closely with insurance and banking supervisors to ensure that increased awareness does not lead to unintended societal distortions.[4] In particular, increased awareness of banks' vulnerability to the insurance protection gap may negatively affect assessments of borrower resilience and creditworthiness, potentially leading to tighter credit conditions and reduced access to finance for vulnerable households and firms.

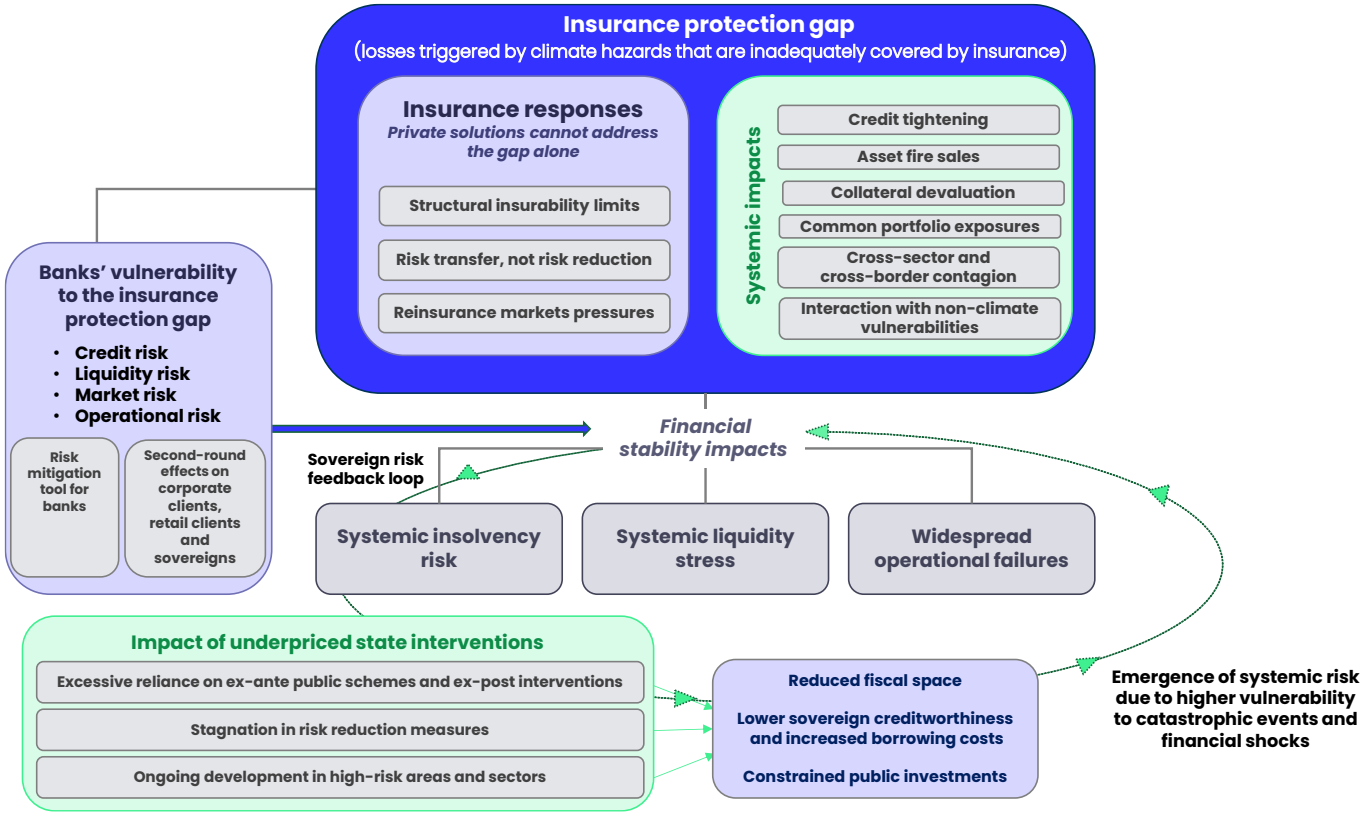
[4] The G7, under the French Presidency in 2026, will be focusing on building a stronger and more coherent framework to address the insurance protection gap.

4. The insurance protection gap, implicit public subsidies and financial stability

The widening insurance protection gap could have significant macrofinancial consequences. It could generate systemic risks through tighter credit conditions, asset fire sales, balance sheet stress and contagion across the financial system. Limited or uneven insurance coverage could also raise expectations of government intervention, effectively creating an implicit public subsidy. These expectations may constrain fiscal space and crowd out public and private investment in climate resilience, thereby further increasing risks to financial stability.

The widening of the insurance protection gap could create systemic risk by undermining the financial resilience of households, financial and non-financial firms, and governments (see Figure 4.1). When insurers and reinsurers face rising losses, withdraw coverage or significantly increase premiums, this can trigger credit tightening, asset fire sales and balance sheet stress, with spillovers to banks, other insurers, and non-bank financial intermediaries (FSB, 2025; Department for Energy Security and Net Zero, 2026).

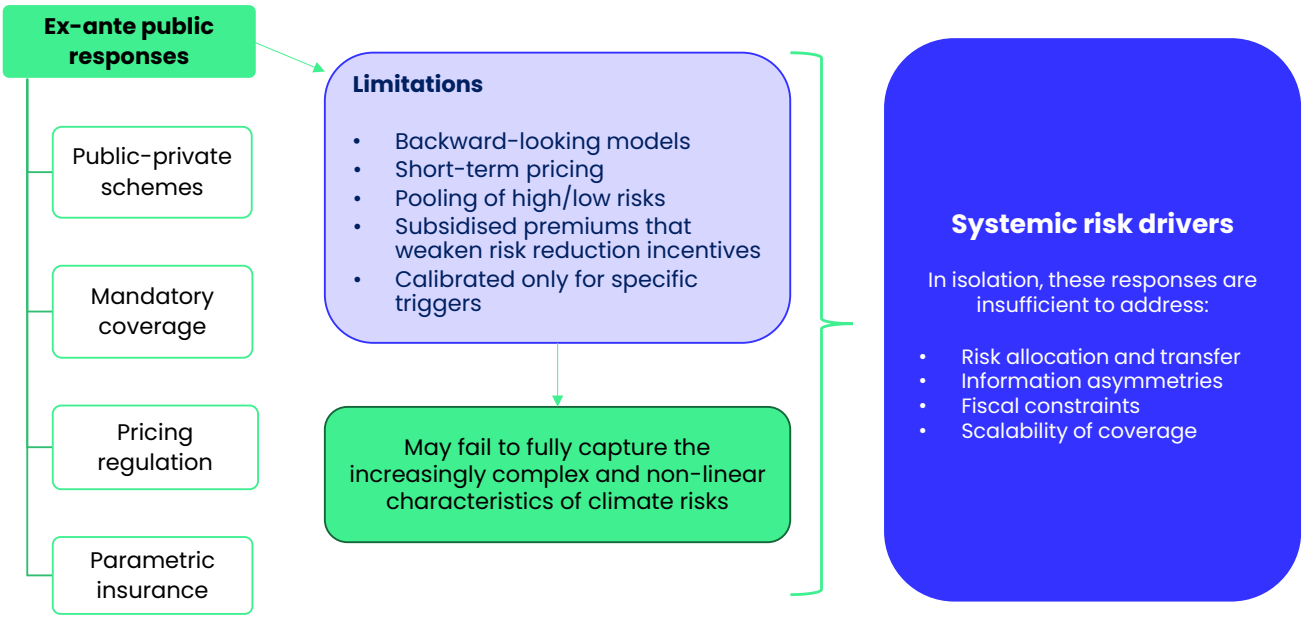
Figure 4.1. Systemic risk and macrofinancial transmission channels of the insurance protection gap



Sources: Authors; FSB (2025).

Limited or asymmetric insurance protection increases fiscal exposure to climate hazards (Lara Miranda et al., 2026). In this context, governments may be increasingly expected to provide different forms of public backstop, such as emergency relief, reconstruction spending or compensation schemes. For example, the US federal government has increased its disaster-related spending significantly in recent years (Congressional Budget Office, 2019). Governments are beginning to take steps to reduce the insurance protection gap, including through public–private insurance schemes, mandatory coverage, parametric insurance and pricing regulation. However, government measures are often insufficient on their own and may inadvertently obscure the true cost of climate hazards (see Figure 4.2). As discussed, this is particularly true in the case of slow-onset events and indirect damages, as opposed to losses arising from acute climate-related disasters.

Figure 4.2. Ex-ante public responses to reduce the insurance protection gap



Source: Authors. Notes: The figure provides an overview of key ex-ante government-backed measures proposed or adopted to address the insurance protection gap, outlining their limitations and situating them within broader systemic risk drivers that constrain their overall effectiveness. Forthcoming CETEx research will look into the regulatory and legal dimension of the insurance protection gap, including government-backed measures.

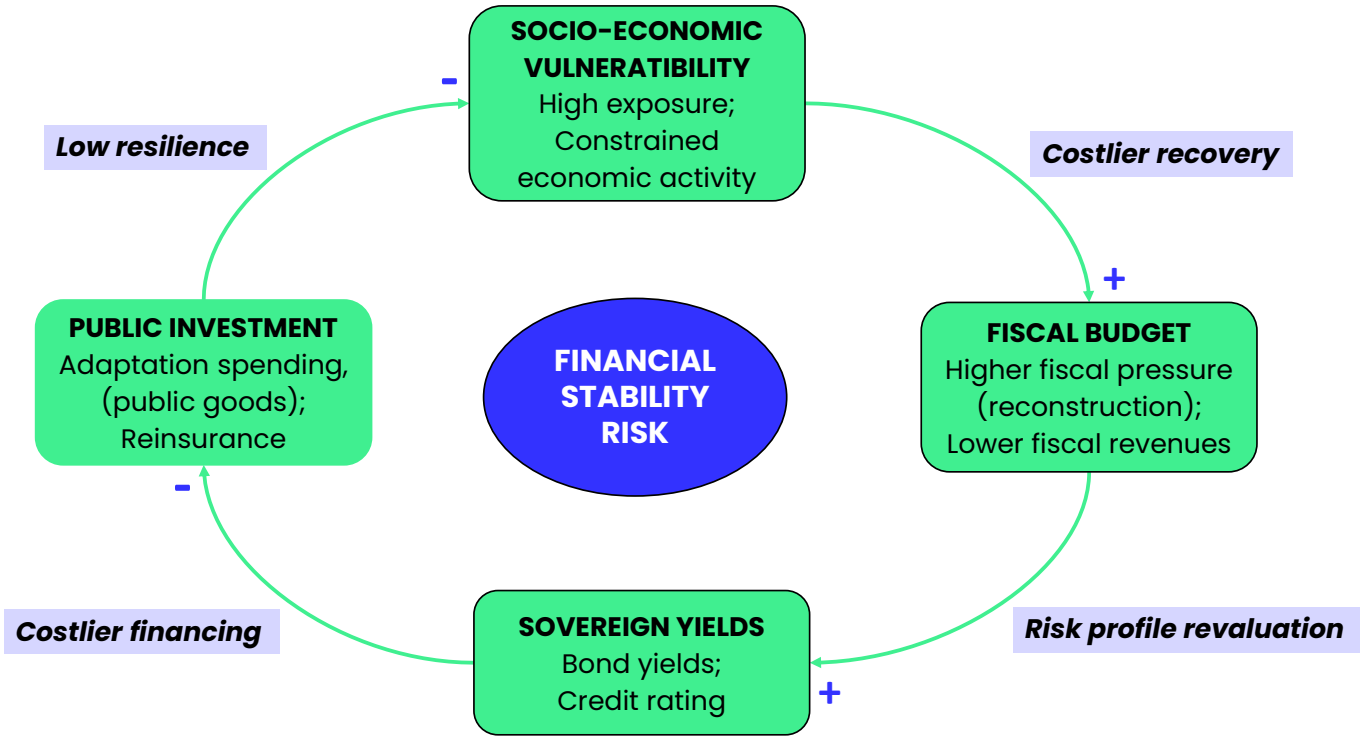
Second-round effects associated with sovereign exposures

Over time, expectations of public support can become structurally embedded, thereby operating as a form of implicit public subsidy. Households, firms and financial institutions increasingly anticipate that they will receive public support in response to climate-related losses, turning discretionary interventions into de facto entitlements (Greenslade et al., 2026). Because these commitments remain implicit rather than budgeted, their fiscal impacts are obscured. This weakens incentives for risk-reduction investments and enables settlement and infrastructure development in high-risk areas. The cumulative effect is a structural rise in exposure and vulnerability, contributing to increasingly severe losses (ECB and European Systemic Risk Board, 2023).

This dynamic can generate a negative feedback loop. As insurance coverage erodes, households and firms experience longer and more costly post-disaster disruptions, slowing recovery and deepening socio-economic vulnerability. Governments are then drawn into repeated large-scale fiscal interventions, which strain public finances and narrow fiscal space, increasing their contingent liabilities (Monasterolo et al., 2025). This process can weaken sovereign creditworthiness, raise borrowing costs and limit lending and public investment. Government intervention may crowd out banks' recovery lending or even create incentives for banks to provide too much credit in high-risk regions (Ouazad and Kahn, 2022). The result is a self-reinforcing cycle in which rising losses, fiscal

pressure and incomplete recovery undermine overall resilience and crowd out risk reduction measures (see Figure 4.3).

Figure 4.3. Insurance protection gap and sovereign risk



Source: Monasterolo et al. (2025).

5. Conclusion and policy recommendations

Banking supervisors and financial stability authorities are starting to look into the insurance–bank nexus. Short- and medium-term actions can be implemented to increase awareness of the insurance protection gap and initiate its incorporation into analytical frameworks and banks' risk-management processes. While improving the availability and affordability of insurance remains an important priority, public policy should also recognise the banking sector's role in reducing the insurance protection gap. This includes developing financing instruments that enable banks to support investments in risk reduction and resilience rather than encouraging the withdrawal of, or restriction of access to, banking services for vulnerable sectors and regions.

Initiatives to address the challenges discussed above should involve some of the following actions:

Short term: acknowledge the limitations of insurance products in climate risk management

Insurance-related policies can help address certain aspects of the insurance protection gap, but they cannot ensure that banks are protected against losses arising from all types of climate hazards. As insurance frameworks evolve, it is essential that banks recognise the limitations of insurance as a risk-mitigation tool, both in relation to their own use of insurance and that of their corporate and retail clients.

Supervisors should raise awareness of the scale, drivers and impacts of the insurance protection gap, ensuring that banks do not overestimate the availability or reliability of insurance coverage in changing climate conditions. Developing analytical frameworks to map banks' direct and indirect exposures to the insurance protection gap – such as the exploratory one in this policy insight - can help raise awareness, support ongoing monitoring and enhance banks' risk management. This is essential to prevent the treatment of insurance as a risk-mitigation tool from resulting in a systemic underestimation of exposures – which could, in turn, lead to miscalibrated capital and liquidity requirements during periods of heightened climate stress.

Short term: strengthen cross-functional bank coordination on insurance protection gap risks

Banks should be able to understand which losses from climate hazards they would have borne without insurance and government support. There is evidence that teams performing different functions within banks do not collaborate on sustainability-related risks as often as they should (Goumet et al., 2026). This lack of coordination can prevent banks from gaining a comprehensive understanding of emerging risk drivers, including those linked to the insurance protection gap.

Supervisors should ensure that there is close coordination between teams performing relevant functions within banks, particularly those responsible for risk management, credit assessment, and physical climate risk modelling and stress testing. Strengthening collaboration across these areas through due diligence and credit granting processes is essential to foster greater awareness, improve risk assessments and support the effective management of vulnerabilities arising from gaps in insurance coverage.

Medium term: reinforce banks' insurance-related data collection and infrastructure

Data gaps and fragmentation represent a key structural barrier to integrating insurance considerations into banks' risk management and financial stability assessments. Improved data availability would enable supervisors to provide more granular guidance on how insurance should be treated within prudential frameworks, including its interaction with risk modelling and capital requirements.

Supervisors should, therefore, require banks to systematically collect, compare and store insurance-related data, drawing on public data sources, client disclosures and third-party providers. At a minimum, banks should be able to identify which assets and exposures are insured, to what extent, and against which risks. They should also develop centralised data systems in which to record such information across banks' functions.

Medium term: integrate the insurance–bank nexus into scenario analysis and stress testing frameworks

Financial stability authorities and supervisors should incorporate the insurance–bank nexus into scenario analysis frameworks and stress testing. This approach, which could include scenarios such as those developed by the Network for Greening the Financial System (NGFS), would help ensure that risk transfer mechanisms between insurers and banks did not inadvertently amplify systemic vulnerabilities or produce correlated responses across markets – both of which could heighten microprudential and financial stability risks, and lead to broader societal distortions.

Short and medium term: Further advance risk reduction through sound banks' risk management and financial stability measures

Addressing the insurance protection gap is not the sole responsibility of insurers or governments. Banks can play an active role in this by supporting risk reduction measures. Investing in risk reduction measures is a cost-effective way to limit future losses, protect collateral values and reduce the transmission of risks from the insurance sector to the banking system. Lower expected losses can, in turn, contribute to more available and affordable insurance, strengthening financial resilience across sectors.

Supervisors and governments also have a role to play in this regard. Supervisors should help ensure that financing activities related to risk reduction and resilience are sound, credible and effective from a risk management perspective. Governments can support these efforts by creating appropriate incentives and risk-sharing mechanisms, including public–private partnerships that encourage banks to participate in resilience financing and improve coordinated risk management across the banking and insurance sectors.

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