Gallagher Re

A Changed Climate

How public authorities can transfer risk to private insurance

With natural disaster losses rising and a difficult economic backdrop, those charged with protecting populations need clear plans for how to pay for recovery and mitigation.

Climate risk is a difficult thing to account for at the best of times, but a combination of a hard insurance market, a post-pandemic economic shock, the recent inflationary environment, and persistently higher interest rates in many parts of the world is making it even trickier.

In such uncertain times, public-sector authorities need a clear resilience strategy and a robust approach to financial risk management, as well as long-term partnerships with providers of climate and disaster risk finance and insurance.

The risks posed by climate change range from hits to key industries, such as agriculture and tourism, through to damage to critical infrastructure and knock-on effects for the public finances (for example, through lowered tax receipts and/or bills for mitigation and reconstruction). An indicative illustration is provided in Figure 1 below.

Figure 1: Illustration of climate risks faced by governments and public authorities

REAL ECONOMY

Agriculture
- Production losses
- Revenue losses
- Unemployment and loss of productivity

Tourism
- Damage to infrastructure
- Revenue losses
- Unemployment

Other services & industry
- Damage to physical assets and capital stock
- Impact on food and commodity prices
- Energy and raw materials production/costs
- Unemployment and revenue losses due to disruption

MACRO-FINANCIAL SECTOR

Private finance
- Firms' profitability credit risk, and financing costs
- Banking sector financial stability

Public finance
- Fiscal revenue
- Sovereign debt

Indirect economic impact
- GDP
- Investment
- Unemployment
- Household consumption
- Ex/Import balance
- Remittances

ACTUAL IMPACT

Spill-over & compounding effects

CRITICAL PUBLIC INFRASTRUCTURE AND SERVICES
- Roads and public transport
- Electricity distribution facilities
- Telecommunications
- Water treatment facilities, irrigation channels, and dams
- Schools and hospitals

INTANGIBLE IMPACT
- Livelihoods (e.g., health, education, financial inclusion)
- Firms (e.g., data, IP, Brand)
- Government's implicit responsibility

Source: Gallagher Re

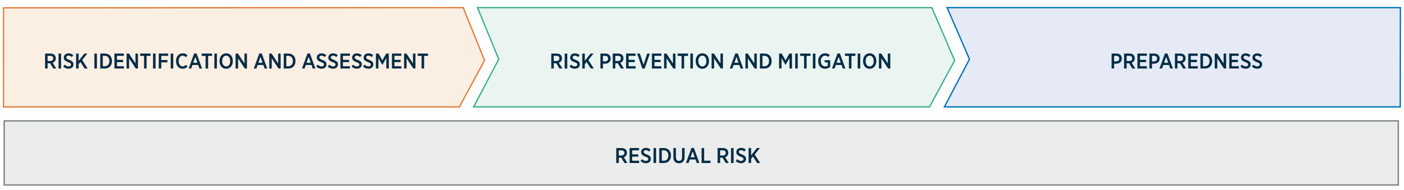
Typically, the first step in tackling such exposures is a risk assessment exercise. This helps to map critical sources of financial vulnerability and to identify the most pressing needs. It will often involve climate-adjusted natural and non-natural catastrophe modeling and scenario-based stress tests.

The next step may involve mapping out existing financing instruments. Government retention and budget lines offer a highly efficient financing mechanism for the most frequent and attritional losses (e.g., recurring events that do not generate high impact). This may facilitate emergency relief and response efforts, which help protect lives and livelihoods, i.e., avoiding job losses or drops in production. Another solution might be contingent credit — loans, typically from international bodies such as the World Bank — which can facilitate a quicker recovery for medium-severity events, for instance.

But risks that are too costly or volatile to minimize and/or finance upfront (i.e., residual risks, as in Figure 2) require other types of financing: either (re)insurance solutions or other forms of risk transfer; or financial instruments that can mobilize larger amounts only for the most extreme scenarios and in a cost-efficient manner. As well as being critical to ensure coherent and cost-efficient risk management, a clear identification of priority risks (including those to be financed by retention versus transfer mechanisms) also offers the ideal starting point for risk transfer discussions with (re)insurers.

.

Figure 2: Residual risks



Source: Gallagher Re

A disaster risk financing strategy

Insurance is most effective if used in the right circumstances: to address relatively low-frequency and high-severity loss scenarios.

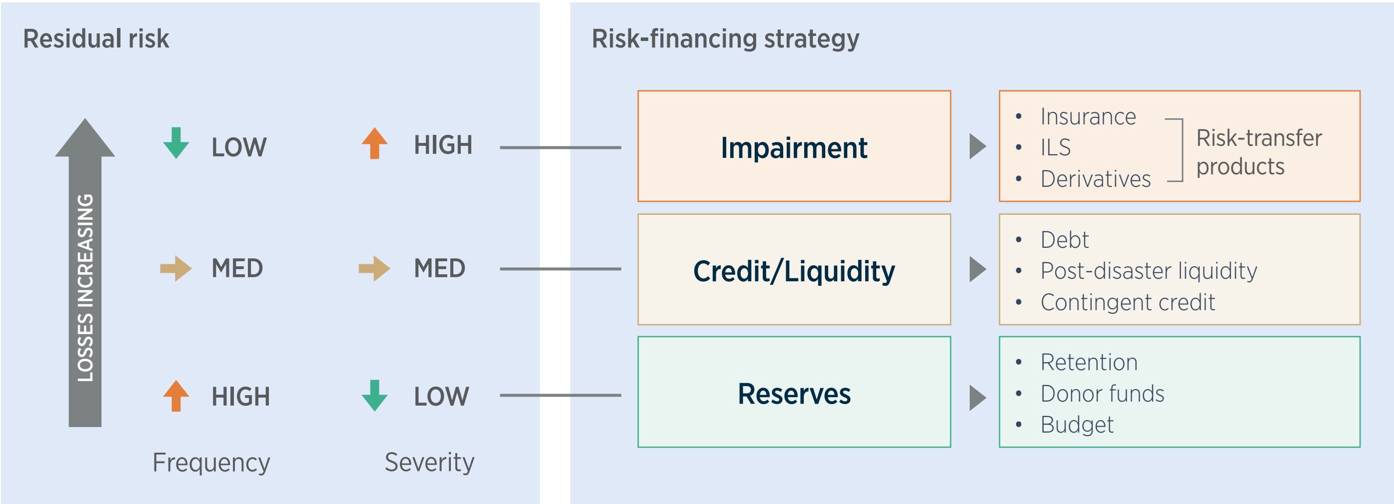
Public authorities will often produce a bespoke Disaster Risk Financing Strategy document that sets out the risk assessment as well as their longer-term plans for climate resilience. This is critical in articulating the government's risk appetite, where pain points exist, and how various tranches of capital and other financial instruments complement each other. As a living document that reflects short and longer-term resilience plans, this will adapt as circumstances — and risk landscapes — change.

Some of the key elements of a typical strategy are outlined in Figure 3.

Public entities will first be able to call upon their own financial reserves. While this reduces dependency on third-party funding — particularly in the absence of significant loss activity — the buildup of reserves may take some time.

Contingent credit, which can be called upon in the event of disaster, typically forms the second tranche, with insurance-based risk transfer products making up the third line of defense, offering protection against the least common but most severe scenarios.

Figure 3: Elements of a Disaster Risk Financing Strategy



Source: Gallagher Re

Working with insurers

When designing an insurance risk transfer program, buyers need to take account of the needs of prospective insurers, reinsurers, and capital investors. Risk financing will be most efficient and sustainable when strong alignment exists.

Each participant in the value chain must determine its own ability to offer coverage, be that on a per-event or annual aggregate, proportional or non-proportional, a single-risk or portfolio basis. Perils, assets, and beneficiaries of the financial protection program need to be identified and prioritized at this stage too.

More sophisticated risk management frameworks will address questions around the absolute amount of tolerable loss with reference to the probability of that loss occurring. For example, financial decision-makers might tolerate losses amounting to 1% of their total budget every 1-in-50 years (a 2% probability) and 10% every 1-in-200 years (a 0.5% probability).

The disaster risk financing strategy helps capture the optimal levels of coverage required as well as the preferred mix of instruments, reflecting a buyer's risk appetite and budgetary constraints.

How much does it cost?

The budgets of risk protection buyers are often very restricted, particularly for sovereign clients in emerging economies. Given tight fiscal and financial constraints, they will be carefully evaluating what share should be spent on adaptation and mitigation activities versus purchasing external risk protection. During a harder market for insurance pricing, the balance might tip in favor of mitigation activities, which then feed through to lower premiums, for example. Diversifying the strategy — and adjusting it as conditions change — can reduce the net cost substantially.

Insurance premiums are elevated right now, primarily due to the long-term effects of elevated inflation and global political instability. This both hurts the value of insurers' investment portfolios and increases the value of their liabilities — as an example, crop values and home replacement costs go up with inflation, leading to larger insurance claims.

The good news is that (re)insurers regularly incentivize policyholders to take steps to mitigate exposures, offering lower premiums for reduced risk — for example, through climate adaptation measures. Building longer-term relationships can facilitate this, with reinsurers often willing to provide support and advice on such measures. Stability and long-term support are central tenets of the (re)insurance market, and benefit cedants during all market phases.

Advisors such as Gallagher Re also have a key role to play in the conversation. They invest heavily in evaluating and adjusting industry-standard natural catastrophe models for example, taking account of long-term climate change, and helping identify optimal trade-offs between adaptation, mitigation, and risk financing investments.

Using all the tools that are available

There is a similar advantage in combining multiple types of protection. A mixture of contingent credit and insurance is particularly effective in responding to extreme events. After an earthquake, for example, insurance recoveries could be used to fund repairs to damaged homes, while the government calls upon contingent credit from an international development agency to boost the general socioeconomic recovery of the area.

It is clear that the world has an ever-more urgent need to protect against climate-related risks. But our current challenges are constraining public budgets and increasing the cost of insurance.

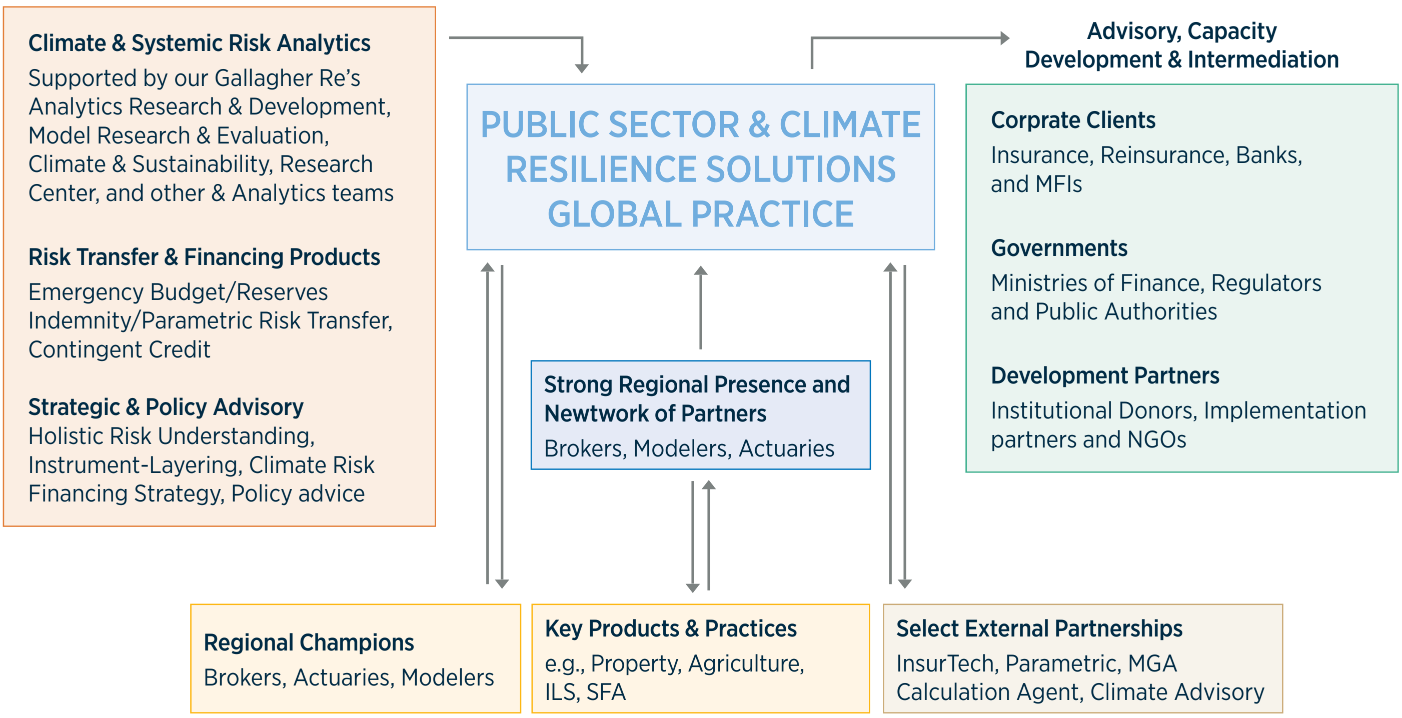
Those challenges are real but cannot be used as an excuse to put off difficult decisions. The choices that public authorities make today on how to pay for climate mitigation and disaster recovery will have implications for populations, businesses, and economies all over the world for decades to come. And Gallagher Re stands ready to support public and private sector clients better address their financial liabilities and make optimal use of risk transfer instruments.

How Gallagher Re can support

1. Holistic and robust climate risk advisory services to understand and anticipate new and future risks.
2. Climate-adapted risk analytics.
3. Translation of loss scenarios into financial impact analyses.
4. Design and structuring of risk transfer mechanisms, including optimal retentions, (re)insurance, and credit lines.
5. Facilitating alternative capital access without the need for balance sheet insurance companies.
6. Introduction of insurance-linked securities (ILS) capacity to the risk transfer framework/structure.
7. State-of-the-art analytics and strong network of academic research institutions to access the latest climate risk models and reliable risk information.
8. Best practices and practical lessons learned from international experience and public-private sector clients alike.

Gallagher Re's Public Sector, Parametric and Climate Resilience Solutions Group

Gallagher Re's Public Sector and Climate Resilience Solutions practice is dedicated to strengthening the resilience of public and corporate clients against the financial impacts of climate and disaster risks. The global practice uses a problem-solving approach that connects all dimensions of resilience and focuses on unlocking the full benefits of financial risk management. As a result, our clients are best positioned to better understand their financial vulnerability, minimize risk, and create new resilience pathways to sustainable growth.



Learn more about our client-focused, collaborative approach.
Connect with us today at **GallagherRe.com**.

Author:

Kavit Khagram
Climate Risk Advisor
Public Sector, Parametric and Climate Resilience Solutions
+44 7880 390 594

It's the *way* we do it.

Gallagher Re

GREGLOB102736