

Understanding the economic and societal value of reinsurance

Global Reinsurance Forum

August 2021



The Global Reinsurance Forum

Talstrasse 70 | 8001 Zurich | Switzerland

trade_barriers@grf.info | www.grf.info

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Foreword

The Global Reinsurance Forum (GRF) represents twelve leading global reinsurance companies. While for most industries, their impact on society is part of the public discourse, there is limited awareness of the economic and societal value the reinsurance industry creates. With this publication, the GRF provides an overview on the role of reinsurance helping society overcome some key global challenges. The GRF also addresses some of the challenges reinsurers face in performing their role in a modern economy characterized by tension between globalizing and localizing forces.

Global reinsurers have been and continue to be a notably robust and resilient industry to the benefit of the primary insurance market and ultimately society, not least during the current challenges we all face. All reinsurance companies need to ensure the quality of their risk management, the reliability of their financial strength and the diversification of their portfolio are strong enough to fulfil the role of providing support following catastrophes and other peak risks and major events worldwide. The reinsurance industry is constantly assessing the needs of the market and is developing innovative solutions to improve the coverage of risks. Besides absorbing a significant portion of the world's insurable risks and fostering product innovation, global reinsurers also facilitate loss mitigation techniques and share their risk knowledge, given their long track record of risk experiences and risk modelling. We are convinced that the reinsurance market is well prepared for today's rapid increase in the number of complexity of risks and will continue to support primary insurers, and thus society, in their efforts to better prepare for and manage risks in a resilient manner.

In their ability to conduct their business and provide economic and societal benefits, global reinsurers rely on free cross-border reinsurance and open markets. This is because building a globally diversified business portfolio is important to providing a high level of security at an affordable cost. Open markets are fundamental for reinsurers to best support communities who have suffered damage to lives, property or businesses. We hope that highlighting this challenge can help governments to avoid risk concentration in their local insurance markets and secure the reinsurance capacities needed so that we can play our part in protecting local economies and societies.

Jean-Jacques Henchoz

Chair, Global Reinsurance Forum

Chairman of the Executive Board, Hannover Re

1. Executive summary

There are five major economic and societal benefits provided by the global reinsurance industry: First, reinsurance enables **gains in capital efficiency which reduce the cost of risk**. The key distinction between insurance and reinsurance lies in the ability to pool risks. Most insurance companies generally operate domestically. Therefore, they pool risks on a limited geographical scale. While this level of mutualization is sufficient for smaller risks that occur frequently, it may turn out to be insufficient for certain peak events such as large natural and man-made catastrophes. For such catastrophic events, cost-efficient risk mutualization needs to be organized internationally or even globally. Due to their global diversification, reinsurers can assume a specific unit of risk at lower capital charges and cost than domestically operating primary insurers.

Second, reinsurers are center stage in global efforts to **narrow protection gaps**. By leveraging global diversification, reinsurance is an efficient source of capital for direct insurers. It allows them to issue insurance policies with higher coverage limits, notably for those peak risks which need to be diversified globally. In other words, reinsurance allows insurers to provide more substantial and affordable insurance coverage. Reinsurance is also an enabler or an outright source of innovation, for example through proprietary catastrophe risk modelling capabilities and support for insurers' product development. Reinsurance companies have also helped to design public/private partnerships to deliver proactive solutions that help close the protection gap for some of the world's largest risks, including climate change-driven natural catastrophes. Examples

of such successful public/private partnerships include the National Flood Insurance Program, the California Earthquake Authority, the New Zealand Earthquake Authority, and the Florida Hurricane Catastrophe Fund.

Third, reinsurers publicly **share their risk knowledge**, helping households, businesses and governments to "put a price tag on risks" in order to make the costs of risks explicit. This helps society can allocate resources to risk mitigation in the most effective way. Examples include risks associated with longevity, renewable energy, climate change and the cyber space.

Fourth, reinsurance cover significantly **helps economic recovery following a natural catastrophe**. If fully insured, these events do not have a lasting effect on a country's GDP level over the longer term, especially in the most vulnerable countries in the developing world. Following a disaster, affected countries can draw on readily available international resources to pay for losses. In addition, reinsurance can facilitate incentives for loss prevention, e.g. through improved building standards.

Fifth, reinsurers make a **vital contribution to sustainable development** by smoothing economic volatility, promoting the understanding of new, emerging and changing risks as well as by driving innovation and the implementation of new (green) technologies. Also, the global reinsurance industry has been vocal about climate change and started to explore this phenomenon as early as in the 1970s, accumulating extensive data, knowledge and experience over the past five decades.

Reinsurers were among the first to sound the alarm about climate risks. Ever since, reinsurance solutions have helped societies adapt to climate change and have paved the way for climate risk-mitigating technologies.

In order to provide these economic and societal benefits reinsurers have to rely on free cross-border reinsurance and open markets. This is essential to building a globally diversified book of business at the lowest possible cost of capital. Not being able to share risk with global reinsurers would compel domestic insurers to hold more capital than otherwise necessary, translating into higher prices for their customers. **Regulatory measures that aim to keep local risks within national borders** (e.g. by establishing a national reinsurer, backed by legislative measures that guarantee a monopoly) **make insurance not only more expensive but also less secure**, especially in the event of a major man-made or natural disaster where large domestic risk concentrations can prove problematic. It is therefore obvious that geographical risk diversification through cross-border reinsurance has the potential to enhance a jurisdiction's financial stability at the macro level, as acknowledged, for example, by the International Association of Insurance Supervisors' (IAIS) Insurance Core Principle (ICP) 13.

Despite the convincing case for open reinsurance markets, more than 50 jurisdictions worldwide continue to operate, or have plans to implement, barriers to the transfer of risks through global reinsurance markets. The main types of barriers include, first, restrictions on the ability of reinsurers to freely conduct business on a cross-border basis; second, requirements for reinsurers operating on a cross-border basis to provide a minimum deposit, collateralise or localise assets; third, restrictions on foreign ownership of subsidiaries and other barriers to the establishment of branches, subsidiaries and operations and; fourth, the use of discriminatory and anti-competitive mechanisms such as compulsory cessions to domestic entities. Such barriers weaken competition, reduce customer choice, push up reinsurance (and therefore insurance) costs and significantly increase domestic exposure concentration.

2. Introduction

Buyers of insurance, both retail and commercial, have generally no dealings with a reinsurance company because reinsurance is a business-to-business transaction. Therefore, most people are not even aware of the existence of reinsurers who, at their end, have historically maintained a relatively **low profile**. This has changed as reinsurers publicly emerged as safety nets for direct insurers hit by massive disaster losses.

In its simplest form, reinsurance can be defined as **insurance of insurance companies**. Most insurers generally operate within their national boundaries and, more often than not, offer cover that is limited to certain regions and customer segments. The capital base of many of those companies is exposed to disaster risk, and cannot be simply strengthened without affecting affordability. As such, insurance companies rely on “risk capital” from third parties, in the form of reinsurance, to absorb large losses that unexpectedly deplete claims-paying resources and reduce underwriting capacity (Culp and O’Donnell 2010). Insurers transfer some of their risks to reinsurers, in order to protect their balance sheets and to free up capital which, in turn, enables them to provide more risk-bearing capacity to their customers.

Reinsurers can pay for catastrophic losses because of their **global diversification of risk portfolios and investment**, making protection more broadly available at lower cost and higher security. This is how reinsurance creates value (GRF 2014). The essential role of reinsurance is to support recovery efforts after disasters (such as earthquakes, typhoons, and floods) strike. Reinsurers are

able to support community recovery efforts by paying claims that help communities rebuild. No less important is the contribution of reinsurers to alleviating the financial consequences of mortality and health shocks. The current COVID-19 pandemic serves as a case in point where reinsurers support their direct insurance customers in paying the costs of those who fall ill with the virus and require medical attention as well as by compensating families that have suffered the death of the main breadwinner.

Figure 1 illustrates how reinsurance works. By paying a premium to their direct insurer(s), individuals, households and corporates seek protection against a wide spectrum of specific risks, ranging from car accidents to flood disasters. Direct insurers, in the reinsurance context known as cedants, pass on entire portfolios of risks (where usually all premiums and losses are shared) or large single risks (covering losses exceeding a certain threshold) to globally operating and diversified reinsurers. The original policyholder is not involved in this transaction – the direct insurer remains the contractual partner. Reinsurers assume the risk and add it to their portfolio of diverse risks. Typically, reinsurers are careful to diversify geographically and by type of risk. In order to limit their own exposure, reinsurers may sometimes pass on some of their risks to other reinsurers (known as retrocession) or to institutional investors who invest in insurance-linked securities (Swiss Re 2015 and Swiss Re 2016).

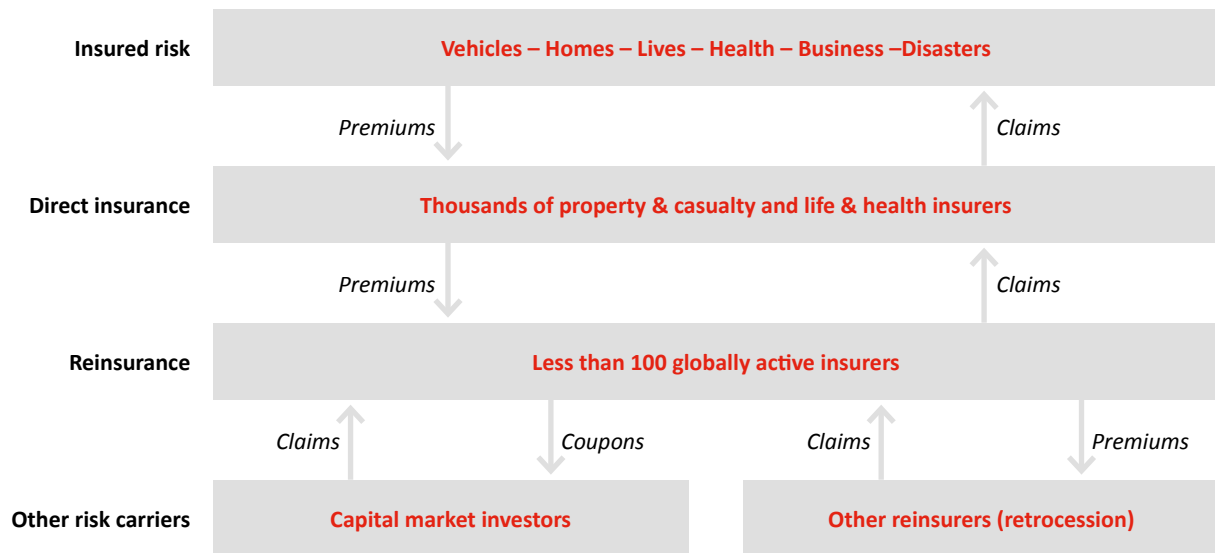


Figure 1: The mechanics of risk transfer in insurance and reinsurance

Source: GRF, adapted from Swiss Re 2015

With annual premiums of close to USD 400 billion and a capital base of about the same size, the reinsurance industry is an important element of the global financial system. More than a third of global reinsurance premiums originate from North America, a region whose direct insurers are heavily exposed to natural

catastrophes and liability risks (see figure 2). Insurers in emerging markets tend to rely even more on reinsurance (in terms of direct premiums ‘ceded’), given their exposure to natural disasters and the relatively low capitalization of local insurers.

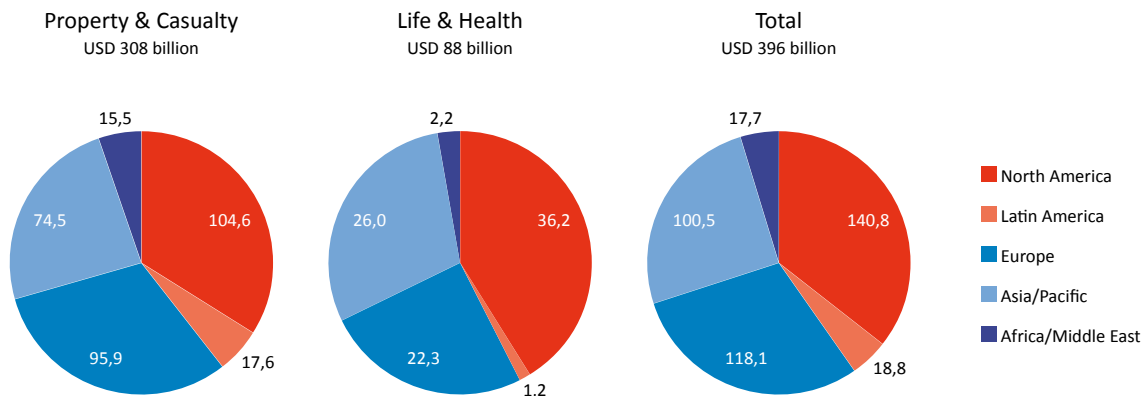


Figure 2: Global reinsurance cessions, 2019, in USD billion

Source: Munich Re Economic Research; USD values based on average 2019 EUR-USD exchange rate

After many major insured disasters in modern history the reinsurance industry has proven its mettle as a reliable partner in sharing insured losses. Examples include the **terrorist attack on the World Trade Centre on September 11, 2001**, as well as the **hurricane Katrina in 2005** where reinsurers picked up 60% and 45%, respectively, of the total insurance bill (see figure 3). The value of reinsurance is even more compelling in the context of major natural catastrophes hitting relatively small economies such as the severe earthquakes in Chile and New Zealand in 2010 and 2011, respectively. Around 90% of all insured losses were absorbed by global reinsurers thanks to their balance-sheet strength and unique ability to spread risks around the world. In smaller economies disaster risk protection would be

virtually unavailable in the absence of reinsurance, with economic losses remaining largely uninsured. Situations where almost none of the risk is insured have the potential to destabilize entire economies and overwhelm public coffers, especially in developing countries with weak fiscal capabilities. Reinsurance can mitigate these vulnerabilities. As shown empirically, catastrophic events that benefited from higher levels of reinsurance coverage led to less economic disruption and even an economic performance that was better than projected, suggesting that the inflow of reinsurance payments supported a **quicker recovery of disaster-stricken economies** and highlighting the significant economic cost of trade barriers in reinsurance (see section 3.3).

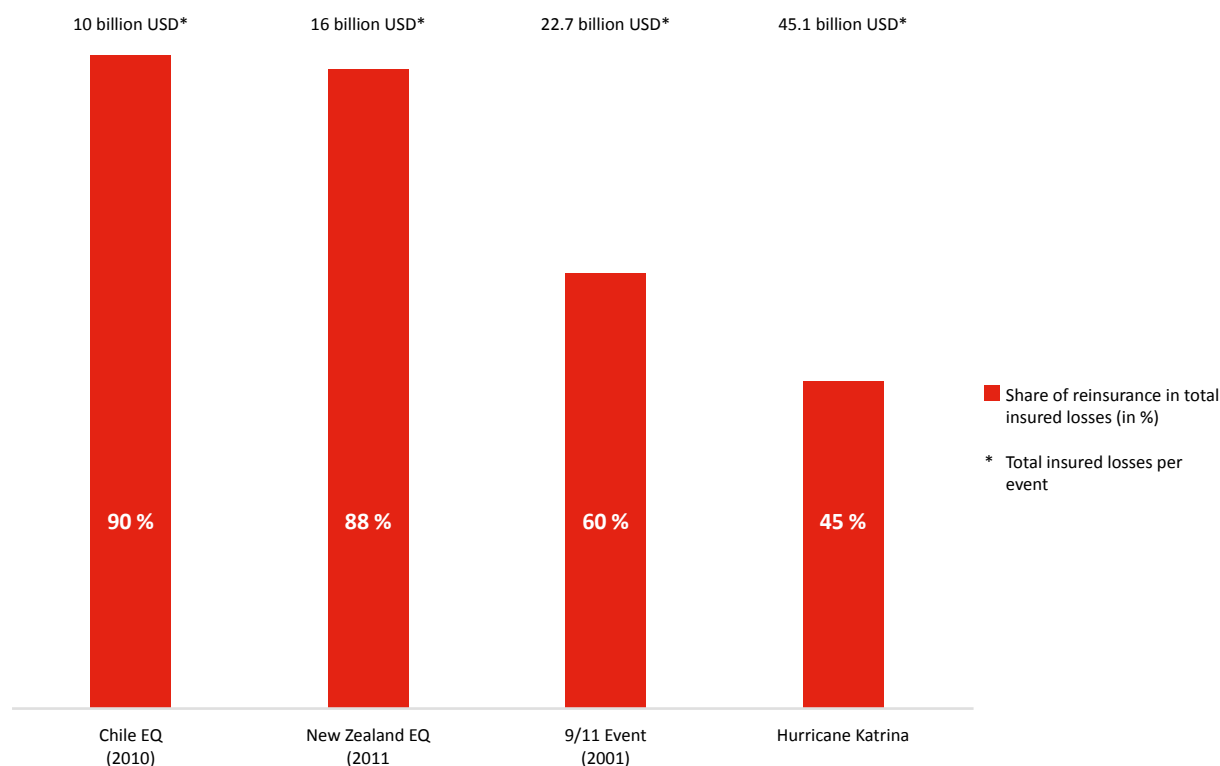


Figure 3: Share of insured losses paid by reinsurers for major catastrophic events (in %)

Sources: III 2011, Mayer Brown / Willis Re 2011

3. The economic and societal benefits of reinsurance

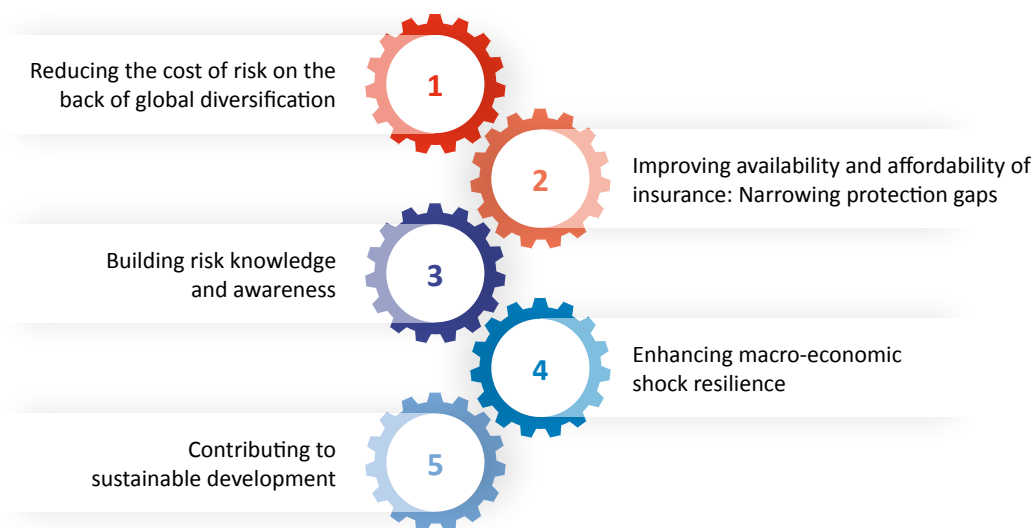


Figure 4: Five key benefits of reinsurance

Source: GRF

3.1. Reducing the cost of risk on the back of global diversification

Insurance is fundamentally about **pooling**: individuals or companies pay a premium in return for financial compensation in the event of a covered loss. The premium paid by the insured (the ‘policyholder’) is calculated so that it allows the insurer to honor its claims payment obligations and meet its non-claims costs such as administration expenditure and the cost of capital. Insurance premiums are a function of the risk covered: the greater the probability of the risk occurring and / or the potential severity of the risk, the higher the premium.

Insurance essentially works as a *redistribution mechanism*: the premiums paid by policyholders who experience no (or little) claims finance the indemnification of those who are

less fortunate. This mechanism works because not all policyholders suffer a large loss at the same time. It is in this sense that the pluricentennial motto of Lloyd’s of London – which defines insurance as “*the contribution of the many to the misfortune of the few*” – shall be understood. This **principle of “collective solidarity”** which constitutes the very foundation of the insurance and reinsurance business model is rooted in science. The underlying mathematical principles are known as the ‘**law of large numbers**’ and the ‘central limit theorem’. Intuitively, they state that when one combines a large number of risks which, to a significant extent or at least to some extent, are independent from each other, there is a ‘compensatory’ effect between these different risks. In the case of insurance, this effect occurs between the policyholders who suffer a loss and the policyholders who are not impacted. On this basis, the aggregate loss experience over the entire risk portfolio

becomes relatively ‘predictable’. In other words, aggregating a vast number of individual policyholders’ risks creates a risk portfolio which benefits from a **lower volatility of claims**. How does this mechanism enable the insurer to offer **coverage at a lower cost**?

Insurers are required by regulators to hold capital that is sufficient to absorb large losses and meet their commitments to all their policyholders with a certain probability, which can be seen as a ‘security level’. The corollary to the diversification effect is that, for a given security level, the total amount of capital that the insurer is required to hold decreases in relative terms when its risk portfolio becomes more diversified, everything else being equal. In other words, **diversification reduces the amount of required capital** for the coverage of a given policyholder risk and, consequently, lowers the ‘cost’ of insuring that risk.

Now enter the distinction between insurance and reinsurance. It primarily lies in the ability to pool risks. Most insurance companies – including the very large ones – have a local, national or regional footprint, due to the need to maintain distribution networks and close contact with their customers. Therefore,

insurers only mutualize risks on a limited geographical scale. While this level of mutualization is sufficient for smaller risks that occur frequently, it may turn out to be insufficient for certain peak events such as a large natural catastrophe hitting a significant proportion of property insurance policies within a given country. For such a catastrophe, risk mutualization needs to be operated internationally or even globally. This is precisely the role of reinsurers. Contrary to most insurers, reinsurers generally have an international or even truly global footprint, allowing them to pool and mutualize risk exposures worldwide.

This is at the heart of the **fundamental value proposition of reinsurance** companies: They are able to assume a specific unit of risk at lower capital charges and cost than primary insurers who are limited to mutualization on a national level only. This differential in capital requirements for a particular block of business (section E in figure 5) reduces the cost of risk and constitutes the added value of reinsurance, benefiting all insurance policyholders. It also explains why reinsurance is intrinsically a global industry, relying on diversification of risks across the globe, a wide spectrum of business lines and geographies.

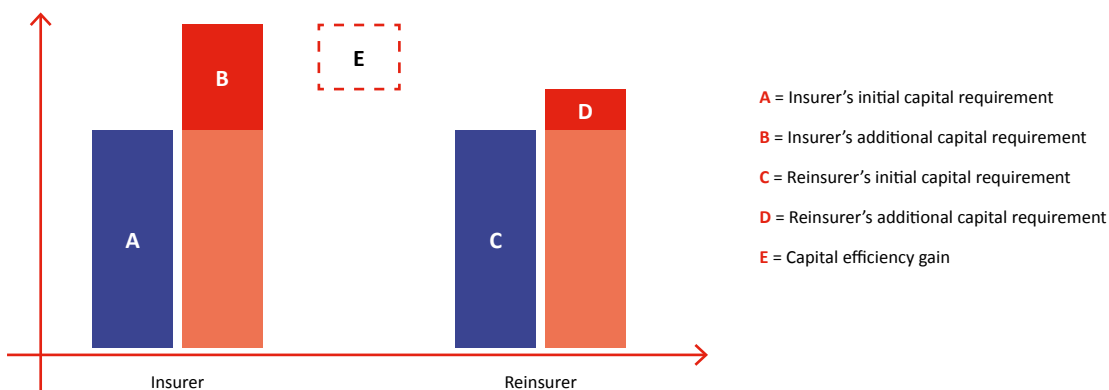


Figure 5: The fundamental value proposition of reinsurance

Source: GRF

3.2. Improving availability and affordability of insurance: Narrowing protection gaps

Increasing underwriting capacity

By leveraging global diversification reinsurance is an efficient source of capital for direct insurers (as illustrated by figure 5). Tapping into it increases insurers’ risk underwriting capacity and allows them to issue insurance policies with higher coverage limits, notably for those peak

risks which need to be diversified globally and, in the absence of reinsurance protection, could remain completely uninsured. In other words, reinsurance allows insurers to provide more substantial and/or affordable insurance coverage to their individual policyholders, making the latter benefit from the diversification benefit afforded by global risk spreading through reinsurance. By enabling more and less expensive insurance, reinsurers make a vital contribution to narrowing global protection gaps, i.e. the difference between economic and insured losses.

Box 1: Harnessing alternative capital for additional capacity

Reinsurers rely not only on equity, debt or their own reinsurance (retrocession) for offering risk-bearing capacity to their clients. Over the past two decades, reinsurers have also increasingly tapped into institutional money as a source of capital. Institutional investors such as pension funds seek direct exposure to underwriting risks without becoming shareholders of individual reinsurance companies, for example by investing in catastrophe bonds the coupon of which depends on insured disaster events. The biggest share of this so-called pool of “alternative capital” is provided by collateralized capacity where the collateral is put up by investors or third-party capital providers to cover in full the potential claims that could arise from a reinsurance contract. This way of sourcing risk-bearing capital now accounts for almost a quarter of dedicated reinsurance capital (figure 6).

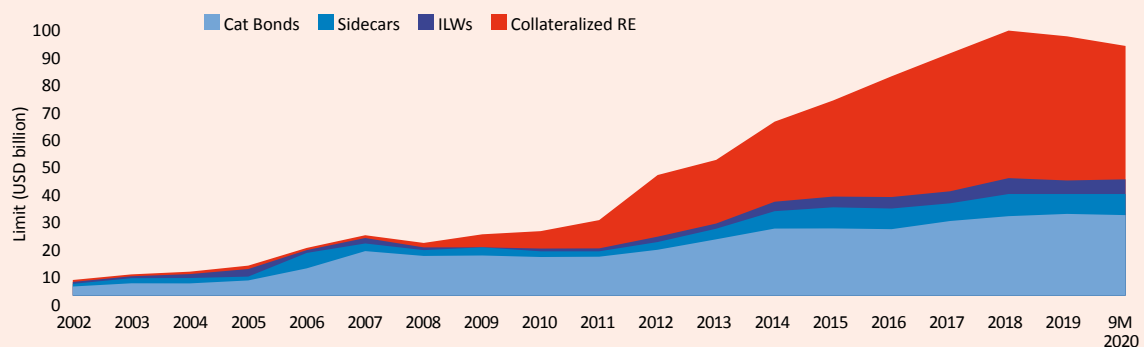


Figure 6: Alternative capital deployment

Source: Aon Benfield 2021

Enabling innovation

In addition to providing cost-efficient capital, reinsurance is also an enabler or an outright source of innovation, not least due to the major players' **proprietary catastrophe modelling capabilities** which have spurred the insurability of major natural disasters, for example. Efforts to model cyber exposures are a more recent example. Also, reinsurers play a major role in **supporting their customers' product development**, for example in

the areas of critical illness and occupational disability. Ultimately, reinsurers' innovative credentials help expand the limits of insurability, deepening and broadening available insurance cover and, narrowing protection gaps. Having said this, reinsurers face challenges, too, in this context as the frequency of non-modelled risks seems to be rising and climate change trends are blurring the ability to forecast natural disasters.

Box 2: A spotlight on the benefits of product development

Insurance products can differ significantly from one another – particularly so in life insurance. They are less like commodities on which their sellers compete on service and price. The uniqueness of many insurance products makes their design, development and distribution challenging and costly. These factors weigh into insurers' decision to develop and launch new products at the pace the market might demand.

Reinsurers are of assistance to their insurer clients not only by facilitating the spreading of risk associated with the issuance of new policies, but also by providing technical assistance and financing to insurers to help with the development of new products. Reinsurers commonly provide the following services and benefits to their client ceding insurers: Product design assistance, underwriting expertise, risk sharing/risk spreading, financing of commissions and other acquisition costs and facultative services.

Product design assistance

It is both time-consuming and costly for an insurer to design insurance products. The burden is particularly heavy for smaller, local life insurers, or insurers located in less developed countries. Reinsurers often help in this regard. Multinational reinsurers have experience with products and marketing channels around the world and can bring their expertise to the assistance of insurers to launch products that are new to the market and would otherwise remain unavailable. This is particularly important to the insurance industries of developing countries and smaller players in developed countries.

Underwriting expertise

Life reinsurers typically have gathered a large amount of data and using that data they may engage in a predictive type of risk modeling, e.g. for mortality and catastrophe risks. As a result of this modeling and significant research that reinsurers conduct, they are well positioned to offer underwriting expertise to their client insurers. Examples include the provision of underwriting manuals for life insurance that may be used as guidance for their clients, or assistance with catastrophe risk modelling.

Risk sharing/risk spreading

Sharing risk with their reinsurers allows smaller, local or regional insurers to spread risk associated with new products. The degree to which a new product will be successful or not is hard to predict. An insurer can spread some of the costs of an unsuccessful product to the reinsurer through a reinsurance arrangement entered into prior to going to market. By spreading the risk associated with new insurance products, insurers are able to offer more products in a market than would otherwise be possible, bringing increased choices for consumers and the inherent benefit of increased competition.

Cost-sharing

It is expensive for the life insurer to put new business on its books. Reinsurers compensate insurers for the reinsurance ceded to them. The insurer can cede some of the popular new product policies to a reinsurer and thereby share some of the costs involved, alleviating the related financial strain on the insurer and stabilizing its capital position by smoothing out earnings.

Facultative Services

Perhaps the most significant service a reinsurer may offer comes through the provision of what is known as facultative underwriting. Many risks are special in one or several aspects. An example could be a consumer who desires a life insurance product but is aware of health issues that might impact his or her longevity. Life insurers may contact their reinsurers and submit the information to the reinsurer with the approach of looking first to see if the reinsurer is willing to reinsure the applicant's life. With a commitment from the reinsurer, the life insurer is able to make an offer to insure the person who may not otherwise obtain the desired coverage. Because of life reinsurance, more people get insurance, and typically in a greater quantity at a given price, than otherwise would be possible. This is perhaps the reinsurer's biggest connection to the public.

Disseminating risk knowledge and building risk awareness

Risk knowledge is in its essence “**putting a price tag on risks**” so society can allocate resources to risk mitigation in the most effective way. As many risks are interconnected and global in today’s world, reinsurers, based on their global pool of data and expertise, are a key resource for tracking these connections and making all stakeholders aware of them. Examples include:

- **Longevity**, which is influenced by food security, nutrition, climate change, public health care and education. All these influencing factors vary by country and region but are interconnected at the same time. Understanding these interconnections makes it possible to design sustainable pension solutions and provide (real-time) prevention and other services to insureds.
- **Renewable energy** is key to mitigating climate change. But the sun does not always shine, droughts make hydropower unavailable and no wind means no energy. Insurance coverages for the lack of sunshine, water or wind smooth revenue streams and make renewable energy projects more attractive to investors. This ultimately accelerates the energy transition.
- **Climate change** affects the frequency and severity of natural catastrophes, something that the reinsurance industry generally expects and models. For example, 2020 was another active year for natural catastrophes in the U.S. with a record-breaking 30 named storms in the Atlantic and a widespread wildfire season

on the West Coast. Insuring farmers, homeowners, businesses, etc against these perils provides economic stability even if disaster strikes, thereby assuring better livelihoods for the growing population on our planet.

- The **cyber space** has developed into the backbone of modern economies. Today, cyber insurance helps companies to be back online fast, so that the damage from cyber attacks and incidents does not jeopardize their survival.
- All of the above is only possible if risks are identified, assessed for frequency and severity, and analyzed with an eye to their potential for mitigation so that affordable premiums commensurate with the risk can be determined.

The first step in the risk management examples above is the identification of new or “emerging risks”. Emerging risks come with high uncertainty. They have still to be modelled and are potentially unquantifiable, or they evade or challenge current modelling. Examples include risks associated with new technologies like **genetic engineering, nano-technology, robotics or artificial intelligence**.

By identifying and analyzing emerging risks the reinsurance industry provides a societal service. In an important second step, reinsurance is instrumental in translating these risks into widely available and affordable insurance solutions. As an absorber of peak risks, reinsurance has developed a unique focus and expertise when it comes to scanning for emerging loss accumulations. Also, reinsurers’ emerging risk research not only enables potential prevention measures but also helps identify limits of prevention and insurability.

3.3. Enhancing macro-economic shock resilience

Re/insurance cover significantly **helps economic recovery following a natural catastrophe**, as shown in various academic studies (Von Peter et al 2012, Breckner et al 2016, OECD 2018). According to these studies, a higher level of coverage in general is accompanied by significantly better economic performance following a catastrophe. This effect is measured by the long-term effects of large natural disasters on economic activity. If fully insured, these events do not have a significant lasting effect on a country's GDP level over the longer term. On the other hand, in the absence of insurance cover, there is evidence of a lasting negative effect on economic activity.

Large-scale natural catastrophes have massive economic effects, both direct and indirect. Besides the immediate negative effects resulting from the destruction of production sites, infrastructure, etc., the longer-term consequences should be considered as well. Emerging and developing economies in general are more heavily affected by extreme natural disasters than industrialised countries, not least because their resilience and preparedness levels are (much) lower.

The role of (re-)insurance in limiting the negative implications of extreme events and the resulting macroeconomic costs especially for the most vulnerable countries, is multifaceted. First, given the global scope of reinsurance, affected countries can draw on readily available international resources to pay for losses. As shown before, this risk-bearing capacity can be provided more cost-efficiently than through self-insurance on a national level. Secondly, (re-)insurance provides **incentives for loss-prevention**, e.g. through

incentivising better building standards. And finally, by setting a price tag on insured properties or business activities, insurance mechanisms increase the efficiency of disaster prevention – as opposed to post-event foreign aid inflows.

3.4. Contributing to sustainable development

By its very nature, reinsurance is an important contributor to achieving sustainable development. By mitigating major losses reinsurers **smooth economic volatility** and reduce economic shocks. Their extensive expertise uniquely positions them to contribute to the **assessment and understanding of new, emerging and changing risks**. Furthermore, reinsurers have a long record of **driving innovation and the implementation of new technologies such as space technologies** (satellites) or, more recently, green tech solutions.

Reinsurers are also well aware of their “corporate responsibility” and are committed to global initiatives such as the UN Sustainable Development Goals (SDGs), the Paris Agreement on Climate Change and many others. Global partnerships for sustainable development as well as voluntary commitments to standards such as those embodied by the UN Global Compact (UNGC), the Principles for Sustainable Insurance (PSI) and the Principles for Responsible Investment (PRI) are common for the reinsurance industry. A good example of cooperation between (re-)insurers and supranational organizations is the production of “Global guidance on the integration of environmental, social and governance risks into insurance underwriting” (UNEPFI PSI 2020).

As major institutional investors, reinsurers' **sustainable investing practices** support sustainable development. Given the risk competency of reinsurers, the integration of ESG criteria into the investment process is well established in the industry. The establishment of sustainable investment guidelines is common practice in the investment management of reinsurers as are large-scale investments in renewable energy and sustainable real estate and infrastructure. Reinsurers have taken on innovative sustainable finance instruments such as green bonds. Also, initiatives such as the Net-Zero Asset Owner Alliance are supported by several reinsurers.

Climate change is one of the main drivers of sustainability management. Its societal implications are manifold, ranging from physical and economic risks to changing business models and climate-induced migration (Munich Re 2021). The global reinsurance industry has been vocal about climate change and started to explore this phenomenon as early as in the 1970s, accumulating extensive data, knowledge and experience over the past five decades (Munich Re 2015). Reinsurers understand climate risks and are compensated for assuming such risks in order to support recovery efforts after disasters strike by paying claims that help communities to rebuild.

Reinsurers play an important role in **helping societies adapt to climate change**. They assume a portion of the financial burden of those affected by natural disasters, allowing them to return to their daily lives more quickly after a loss event. This role is particularly relevant for emerging and developing countries which are most vulnerable to natural catastrophes. In addition to assuming underwriting risk, reinsurers also engage in a number of other activities and support mea-

asures that enable a more rapid adaptation to climate change. For example, they share information and provide education to raise awareness of natural catastrophe risks in both the public and private sector. They also assist in designing policy measures to incentivize the development of private sector risk transfer solutions (e.g. through conducive accounting and taxation rules) as well as Public-Private Partnerships such as catastrophe pools.

In addition to risk-reducing insurance solutions geared towards loss prevention and adaptation to climate change, reinsurers also **act as enablers of climate-friendly and sustainable technologies** and support the transition to a low carbon economy. Knowledge and innovative coverage concepts help expand the frontiers of insurability and facilitate the breakthrough of new technologies. Insurance solutions enabled by reinsurance can protect against specific risks, thereby enhancing the appeal of green technologies for investors and strengthening their financing viability. This includes performance guarantees for renewable energy technologies (offshore wind farms and solar parks, for example) and support for hydrogen or methane fuel cell technology.



4. The economic case for open markets and freedom of reinsurance

4.1. Enabling global diversification to the benefit of local policyholders

In order to continue to protect their direct insurance customers, free cross-border reinsurance and open markets are an eminent precondition for reinsurers to build a **globally diversified book of business at the lowest possible cost of capital**. Full access to reinsurance markets is therefore of significant importance to local insurance companies that need to place portions of their risks with reinsurers. Not being able to do so would compel domestic insurers to hold more capital than otherwise necessary, translating into higher prices for their customers. Regulatory measures that aim to keep local risks within national borders (e.g. by establishing a national reinsurer) make insurance **not only more expensive but also less secure**, especially in the event of a major man-made or natural disaster where large domestic risk concentrations can prove problematic if not dangerous. An instructive example is the 2010 Chile earthquake where global reinsurers absorbed about 90% of the total economic loss. One can even argue that in the absence of reinsurance such exposures would be domestically uninsurable.

It is not only access to financial capacity that matters to locally operating insurers, but also the **access to reinsurers' expertise**, for example in risk modelling. Large peak risks, whether earthquakes, floods, wildfires, terrorism or pandemics, which by their nature occur infrequently may not only be too severe but also too complex for a locally operating insurer to bear on its own. Reinsurers regularly share their expertise with their clients, bringing a state-of-the-art understanding of risks to local markets.

Regulators need to acknowledge that the **reinsurance business model is distinct from the insurance business model**. One of the main strengths of any global reinsurance company is a flexible and globally diversified capital base. Any fragmentation as a result of local capitalization requirements adds to the reinsurer's cost of capital and, ultimately impairs the security it can offer to its clients across the globe.

4.2. Fostering financial stability on the back of geographical diversification

It is obvious that geographical risk diversification through cross-border reinsurance has the potential to enhance a jurisdiction's financial stability at the macro level. International reinsurance from well-regulated regimes **provides capital in the event of a catastrophe**, relieving the strain on domestic ceding insurers and mitigating the downside of domestic risk concentrations (OECD 2018).

With that in mind, the International Association of Insurance Supervisors (IAIS), with member insurance regulators and supervisors from more than 200 jurisdictions in nearly 140 countries, recommends in its Insurance Core Principle (ICP) 13 that regulators and supervisors should take into account the benefits of reinsurance in terms of geographical diversification of exposure, both for individual cedants and for insurance markets (and economies) more generally. ICP 13 stresses the importance of designing regulatory regimes that duly take into account the risk-mitigating effects of reinsurance:

- “Geographical diversification of risk, which typically involves risk transfer across jurisdictional borders, is a key element of ceding insurer’s and reinsurer’s capital and risk management”;
- “By ceding insurance risk across borders, ceding insurers in the jurisdiction, and the jurisdiction as a whole, can benefit from a reduced concentration of insurance risk exposures at the ceding insurer and jurisdiction level respectively. This may also contribute to the financial stability of the jurisdiction”;

- “The supervisor should be aware of and take into account the potential impacts of such limitations on individual ceding insurers and reinsurers as well as on the soundness and efficiency of the insurance market.” (IAIS 2017)

4.3. The continued prevalence of protectionism and discriminatory regulatory practices

Despite the convincing case for open reinsurance markets, a significant number of jurisdictions continue to operate, or have plans to implement, barriers to the transfer of risks through global reinsurance markets. As discussed in previous sections of this paper, such barriers reduce competition, leading to reduced customer choice, higher reinsurance (and therefore insurance) costs, increased and concentrated domestic exposure and less risk-bearing capacity over the long-term horizon. These reinsurance trade barriers and market access issues include but are not limited to:

- **Restrictions on the ability of reinsurers to freely conduct business on a cross-border basis**, thus limiting the capacity of global reinsurers to spread risk globally and to prevent domestic concentrations of risk. For instance, certain jurisdictions do not allow domestic insurers to purchase reinsurance from a foreign reinsurer, unless it operates a branch in the country or holds an ‘admitted’ status. Other restrictions may include capital charges for credit risk applicable to placements with overseas reinsurers or mandatory requirements for reinsurers to have a minimum financial strength rating.

- **Requirements for reinsurers operating on a cross-border basis to provide a minimum deposit, collateralise or localise assets**, preventing the global reinsurance market from transferring and spreading risk on the basis of a competitive, level playing field across borders.
- **Restrictions on foreign ownership of subsidiaries and other barriers to the establishment of branches, subsidiaries and operations.** Whilst some jurisdictions do not permit foreign subsidiaries or branches, others introduce requirements on staff qualifications and experience. This restricts the ability of reinsurers to deliver their full economic benefit by providing local underwriting expertise and direct services to transfer risk out of domestic markets on an open and competitive basis.
- **The use of discriminatory and anti-competitive mechanisms** including compulsory cessions to domestic entities such as national reinsurers, systems of 'right of first refusal', mandatory retention requirements and maximum cession limits as well as compulsory, subsidized or monopolistic governmental mechanisms limiting the competitive capacity of global reinsurers to operate on a level playing field. Such practices concentrate risk domestically (to an extent that could jeopardize financial stability at a macro level), whilst limiting customer choice.

The GRF regularly compiles and updates an inventory of reinsurance trade barriers, covering over 50 jurisdiction across the globe (<https://www.grf.info/publications/barriers-to-trade>, GRF 2021).

5. Conclusions and recommendations

For reinsurance to benefit the economy and society it needs to operate globally. Global scale and risk diversification allow reinsurers to assume very large and complex risks in an affordable way. As such, reinsurers are a major source for stable and shock-resilient domestic insurance markets. In countries like Chile and New Zealand, for example, global reinsurers generally pay for the lion's share of earthquake disasters, which otherwise may not be insurable at all, falling on domestic households, businesses and taxpayers in their entirety.

Reinsurance can play its economically and societally beneficial role only if certain basic policy and regulatory conditions are met. A key prerequisite is reinsurers' unfettered ability to operate on a cross-border basis, i.e. the freedom to provide services. Reinsurers also require the ability to use their worldwide pot of premium to pay for local claims. Restrictions on the free flow of capital, e.g. through deposit requirements imposed on foreign reinsurers, impair their ability to move capital to cover major events which would ultimately drive up the cost of cover.

In light of the analyses and evidence offered by this paper, the Global Reinsurance Forum calls upon policymakers to refrain from introducing new barriers to reinsurance trade and to dismantle existing ones, most notably

- Restrictions on cross-border reinsurance transactions, such as barring domestic insurers from purchasing reinsurance from a foreign reinsurer unless it operates a branch in the country or imposing capital charges for credit risk applicable to placements with overseas reinsurers;
- Minimum deposit, collateralization or asset localization requirements which prevent global reinsurers from cost-efficiently moving capital to where it is needed;
- Restrictions on foreign ownership or local operations such as equity caps or an outright ban on establishing branches, restricting the ability of reinsurers to provide local underwriting expertise and direct services and
- The use of discriminatory measures such as compulsory cessions to national reinsurers or systems of 'right of first refusal' which limit the competitive capacity of global reinsurers and dent their value to domestic insurance markets.

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The Global Reinsurance Forum

The Global Reinsurance Forum (GRF) is composed of twelve leading global reinsurers; its main objective is to promote a stable, innovative, and competitive worldwide reinsurance market. The members of the GRF, all private companies, are AXA XL, Gen Re, Hannover Re, Lloyd's, MAPFRE Re, Munich Re, PartnerRe, RenaissanceRe, RGA, SCOR, Swiss Re and Toa Re. The GRF secretariat is managed by The Geneva Association.

In support of its main objective, the GRF helps to define industry positions on regulatory, legal, tax, and accounting developments. It represents these positions in discussions with relevant regulatory and supervisory bodies (especially international ones). It works to advance understanding of the value of reinsurance to the economy, and encourages an open and fair international framework for the development of reinsurance markets.

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Christian Mumenthaler, CEO, Swiss Re

John Neal, CEO, Lloyd's

Kevin O'Donnell, President & CEO,
RenaissanceRe

Eduardo Perez de Lema, CEO & Chairman,
MAPFRE Re

Contributors


Tomás Canas da Costa, Hannover Re
Panos Charissiadis, Munich Re
Andrew Gifford, General Re
Edward Mishambi, RenaissanceRe
Cameron Murray, Lloyd's
Guillaume Ominetti, SCOR
Kai-Uwe Schanz (co-ordinating author),
The Geneva Association
Anika Stehr, Hannover Re
Dana Wiele, RGA
Lutz Wilhelmy, Swiss Re

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An aerial photograph of a large forest fire. The fire is concentrated in a horizontal band across the middle of the image, with bright orange and yellow flames visible. Thick, white and grey smoke billows upwards from the fire, filling the upper half of the frame. The forest below is dark green, with some areas appearing charred or blackened. The sky is a pale, hazy yellow, suggesting a bright, overcast day.

Companies, cities and entire nations are under threat from natural disasters, disruptive technologies, political turmoil, terrorist attacks, and environmental degradation. Large, unpredictable, and costly disasters are inevitable – but global reinsurers play an essential role in absorbing disaster shocks by providing predictable financial relief and strengthening societal resilience.

The members of the Global Reinsurance Forum (GRF) have extensive experience in assessing current and future risks, in managing risks, and in creating tailor-made risk transfer solutions. Regulation and supervision play a critical role in ensuring that the reinsurance market works effectively, in terms of risk sharing/pooling and long-term investing. The GRF is committed to maintain active dialogue with policy-makers, regulators, and other stakeholders with an interest in anticipating, mitigating, and adapting to today's and future risks enabling society to advance further.