



# **Insurance and Resolution in Light of the Systemic Risk Debate**

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**A contribution to the financial stability discussion in insurance**

**February 2012**

# **The Geneva Association**

## **(The International Association for the Study of Insurance Economics)**

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On 26 February 2010, The Geneva Association released a seminal report on *Systemic Risk in Insurance—An analysis of insurance and financial stability* (download from [www.genevaassociation.org](http://www.genevaassociation.org)) which since has become required reading for anybody interested in the relation of insurance and systemic risk.

After the publication of this report a number of follow-up questions and issues were identified and brought up to The Geneva Association by national and international regulatory, supervisory, policymaking and other special bodies concerned either specifically with insurance or the wider domain of financial services. We felt that these would benefit from further investigation and discussion, thus producing a second report called *Key Financial Stability Issues in Insurance*, released in July 2010. It comprised analytical work carried out on specific issues such as investment management, liquidity management, limits of insurability, crisis resolution mechanisms in insurance and the confused concept of an “insurance run” (supposedly akin to a bank run).

In April 2011, The Geneva Association published the third report, *Considerations for Identifying Systemically Important Institutions in Insurance*. In the first part, it detailed the development of a comprehensive approach for identifying potentially systemically risky activities and the entities that carry them out. In the second part, the report addressed the many misconceptions about the factors contributing to the demise of American International Group (AIG) whilst highlighting how the methodology proposed in Part 1 of the report would have addressed the issues raised in that case.

This most recent, fourth report in the FSI series is based on the work of the Resolution Work Stream, a subgroup to the FSI-WG, comprising many specialised experts at member companies as well as The Geneva Association’s own in-house intelligence on the subject. These resources were enhanced through cooperation with Oliver Wyman, who had originally also provided external support for the first report.

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## Foreword

In the wake of the financial crisis, a broad swathe of international financial services regulation is being drafted and implemented, aimed at in particular curtailing the systemic risks posed to our financial system. The initiatives are being driven top down by the G-20 and through both long-established as well as newer bodies in international financial services regulation whose ambitions to reform the financial services sector are important and necessary. At the same time, they are subject to very tight deadlines for their work. With limited resources of their own, they have to manage as best they can, wrestling with very complex issues.

The recent decoupling of insurance from the banking decisions and regulatory timeline in 2011 has been crucial in providing necessary additional time for increased consideration of insurance specificities. It was a demonstrable separation between these two industries that fulfil such different economic roles and that use distinct business models. With much done overhauling banking regulation already, key decisions on insurance are next and the Systemically Important Financial Institutions (SIFIs) designation process of the Financial Stability Board (FSB) will cover insurance in the coming months: a final methodology is expected to be approved in June by the G-20 and the results of the full designation process are scheduled for the end of the year.

The Geneva Association has been a prolific producer of analytics and background papers ever since the issue of systemic risk and financial stability in insurance gained relevance for the industry. Indeed, it has tackled several issues through the work on the financial crisis since as early as February 2008. The Geneva Association's efforts in the field of financial stability in insurance continue with this report which addresses a fundamental area that is currently occupying policymakers' and regulators' agenda: recovery and resolution mechanisms in insurance.

This complements earlier work, in particular the three distinct reports<sup>1</sup> released in the past two years:

- *Considerations for Identifying Systemically Important Financial Institutions in Insurance* (April 2011) which in Part I proposes "A Methodology to Identify Systemically Important Financial Institutions (SIFIs) in Insurance", which is activities-based and differentiates between potentially systemically risky activities and those that are not; and in Part II carries out "An Analysis of the AIG Collapse: [with an aim to] understanding systemic risk and its relation to insurance", demonstrating that what failed at AIG was not the core insurance operations but high-risk banking-type business that was run without proper risk control and outside appropriate supervision.
- The two prior reports on systemic risk and financial stability in insurance produced by The Geneva Association in March and July 2010 laid the foundation to understand better the role that insurance plays for financial stability and how in turn, financial stability affects insurance operations. The key takeaway from those two reports was that core insurance

<sup>1</sup> All three reports are freely available from The Geneva Association's website [www.genevaassociation.org](http://www.genevaassociation.org). A special section under "Financial Stability and Insurance" hosts many more documents of relevance to the subject.

activities cannot cause systemic risk. Only quasi-banking activities and non-core insurance activities have the potential to cause systemic events that could threaten the stability of the financial system.

As we publish this fourth report in our series on Financial Stability and Insurance, the current discussions are in need of more detailed analysis of how insurance recovery and resolution mechanisms work. This analysis will provide a more solid foundation on which the ongoing discussions about systemically risky financial institutions can be based and inform the designation discussions underway at the FSB with support from the International Association of Insurance Supervisors (IAIS).<sup>2</sup> The issue of how an institution fares in its possible resolution is highly relevant to the final designation as a Globally Systemically Important Financial Institution (G-SIFI). Since, in full accordance with the FSB's approach, any institution that can demonstrate that its potential failure would not "cause significant disruption to the financial system and economic activity" cannot be deemed a G-SIFI as the precondition of causing systemic disruption would not be met.

## Key results of the analysis

Company failures are at the heart of the systemic risk discussion and have dominated much of the banking discussions where failures often create financial and economic chaos, and can quickly generate a systemic threat and consequently create an immediate need for substantial and very expensive government interventions. **Contrary to this experience, insurer wind-downs are stable processes that do not pose a systemic risk** and do not trigger the same government reactions. This recognition is based on some key elements:

- The insurance balance sheet does not react to stresses in the same way as the banking balance sheet:
  - o Ongoing reserving requirements stabilise the wind-down process,
  - o Reserves are predominantly held in local legal entities,
  - o Reserves are covered by securely invested "tied assets" (depending on local law).
- The insurance resolution processes are well established in the different jurisdictions and apply to all companies operating in the sector while policyholders' claims generally receive priority in insurer's insolvencies.
- No accelerated wind-down processes are required, in particular as insurance liabilities cannot usually be triggered voluntarily by policyholders and only manifest themselves over time and as a consequence of largely uncorrelated occurrences:
  - o Insurers are not likely to be confronted with immediate calls for cash,
  - o Low lapse rates due to numerous disincentives for life policyholders (also during run-off),
  - o Liabilities mature over many years which allows for the recovery of market values of tied assets.

As a consequence, the resolution of insurers can take place in a more orderly fashion, especially if compared to banks which often require almost immediate intervention. **The "systemic risk" developments in the banking world would therefore be a poor guide to what changes are necessary in the regulation and supervision of insurance**, given the differences in business models and types of institutions.

It is important to remember that **throughout history the wind-down of an insurer has never caused a systemic financial crisis**. Insurance companies' wind-down and exit from markets have

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<sup>2</sup> This report focuses on mechanisms and financial and economic aspects of resolution in insurance; it does not address specific legal issues which are dependent on jurisdiction and varying legal provisions and interpretation.

traditionally been conducted in an orderly manner, which contrasts markedly with the experience of the banking sector.

Following the careful analysis that lies at the heart of this report, we consider it important to note in particular that:

- **All necessary recovery and resolution tools are already available for all insurance operations; and,**
- **Any wider development of arrangements for re-organisation and winding down of cross border insurance undertakings should be based on an extension of existing practice rather than imposing a framework designed to resolve banking problems.**

Given the experience of the recent financial crisis, it is clear that all stakeholders are required to contribute to the strengthening of the global financial system. Insurance, with its inherent stability and much longer time horizon than typical investors, occupies a special position in the financial markets.

**Recommendations from The Geneva Association work on recovery and resolution include the following:**

- **Insurance management** should
  - o Define what the core businesses are, and test the strategic validity of running any expansion into potentially systemically risky activities (such as some bank-like businesses);
  - o Ensure that an appropriate risk appetite is agreed for each activity and adequate risk management exists throughout the whole group; and,
  - o Evaluate the implications of their corporate group structures, and how operating entities receive support in stress events.
- **Investors, rating agencies and markets** should
  - o Scrutinise the business models of the companies they invest in, and
  - o Look beyond the day-to-day volatility and the standard contractual clauses to understand the dynamics of an investment in extreme events.
- **Policymakers and international fora** should
  - o Continue with their effort to create the global rules that help avoid a repeat of the current crisis in the financial industry; and,
  - o Directly target those activities that have the potential of creating systemic risk (rather than simply leading to some insulated losses) and where incentives and burdens are misaligned.
- **Supervisors** should enhance current frameworks to better deal with global insurance-led financial groups
  - o Adopt group-wide, risk-based supervision to ensure all activities conducted within a group are supervised properly;
  - o Implement a system of surveillance, to identify emerging pSRAs in insurance-led entities, and measure their relevance for global financial systems;
  - o Where pSRAs are measured as relevant and the company engaging in the pSRAs is classified as a G-SIFI, the supervisors may consider implementing additional policy measures if the respective risk is not already provided for in the applied solvency and supervisory regime;

- o Co-ordinate the relevant mechanisms such as policyholder protection, resolution and protection of (derivative) counterparties internationally, to distribute any possible burden of failure to stakeholder groups more fairly; and
- o Create greater transparency about the commitments of insurers to stakeholder groups in the event of stress, and ensure that the risks that policyholders face are aligned with expectations and protection mechanisms.

An open dialogue between industry and supervisors/regulators is vital for the development of an appropriate macro-prudential surveillance framework for the insurance sector. The Geneva Association is pleased to provide continuous input to the IAIS and FSB as well as to other relevant national and international institutions on the key strategic issues facing the sector worldwide. We hope that the following report will leave readers better informed about recovery and resolution issues in insurance and provide a constructive contribution to the ongoing discussions concerning systemic risk and financial stability issues.

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# 1. Preface

Since the beginning of the global financial meltdown in 2008, the world's political leaders have been determined to strengthen the supervisory and regulatory structures to rebalance the risks and burdens, reduce moral hazard, and make the global financial system more robust. Mandated by The Group of Twenty (G-20), the “Basel institutions”—the Financial Stability Board (FSB) in conjunction with the Basel Committee on Banking Supervision (BCBS) and the International Association of Insurance Supervisors (IAIS)—are designing the framework for new rules that meet those requirements.

This framework will have two main elements:

- Identify “Systemically Important Financial Institutions” (“SIFIs”): while the criteria that lead to the SIFI designation will include a level of judgment, the Basel institutions are using financial indicators to measure the systemic relevance of the institution—at least as a proxy—and to compare institutions (but not necessarily sectors); and,
- Develop new policy measures to help contain the systemic risk of financial institutions.

The FSB recommendations<sup>3</sup> have defined SIFIs as “*financial institutions whose disorderly failure, because of their size, complexity and systemic interconnectedness, would cause significant disruption to the financial system and economic activity*”. Consequently, the manner in which institutions fail plays a significant role.

It is generally accepted that financial institutions can and sometimes do fail, and while the new systemic risk regulation aims to protect the financial system from failures that would threaten its systemic functionality, it stops well short of propagating a no-failure set-up for financial institutions in general. In its paper on *Key Attributes of Effective Resolution Regimes for Financial Institutions*,<sup>4</sup> the FSB points out that

*“The objective of an effective resolution regime is to make feasible the resolution of financial institutions without severe systemic disruption and without exposing taxpayers to loss, while protecting vital economic functions through mechanisms which make it possible for shareholders and unsecured and uninsured creditors to absorb losses in a manner that respects the hierarchy of claims in liquidation.”*

This is, of course, also applicable to insurers and reinsurers that form part of the collective of financial institutions, even though they exhibit some very particular characteristics, both when operating and when confronted with a failure scenario.<sup>5</sup>

3 See, for instance, the FSB report *Reducing the moral hazard posed by systemically important financial institutions* ([http://www.financialstabilityboard.org/publications/r\\_101111a.pdf](http://www.financialstabilityboard.org/publications/r_101111a.pdf)).

4 Cf. *Key Attributes of Effective Resolution Regimes for Financial Institutions* (Financial Stability Board, October 2011).

5 See, among others, *Anatomy of the credit crisis*, Geneva Report no. 3 of January 2010, which analyses how differently to banks insurers fared during the credit crisis (2007-2009) and how resilient the sector has been even

The interest here in looking at resolution mechanisms for insurers and reinsurers is to determine how those schemes relate to the FSB goals and whether the resolution regimes in place and the toolbox available to supervisory authorities for insurance are strong enough to protect the global financial architecture from the failure of a large insurance or reinsurance company.

At the same time, it has to be understood that resolution mechanisms are closely linked to the work the G-20 has tasked the FSB with to identify the systemically risky institutions on the global level. While a series of tests and quantitative and qualitative indicators<sup>6</sup> might lead to the identification of an internationally operating, very large financial institution as a potential Globally Systemically Important Financial Institution (G-SIFI), the issue of how such an institution fares in its possible resolution has to be key to the final designation as a G-SIFI. In other words, and in full accordance with the FSB's approach, **any institution that can demonstrate that its potential failure would not "cause significant disruption to the financial system and economic activity" cannot be deemed a G-SIFI** as the precondition of causing systemic disruption would not be met. Consequently, the discussion about the resolution process of a financial institution becomes a central element in protecting the financial system and in reducing any systemic risks that could stem from their failure.

In this report, The Geneva Association looks into the existing regimes for resolving insurers, and reinsurers, with international operations that fail. We discuss what the possible impacts could be for some distinctive cases and how supervisors (can) go about resolving them using the available supervisory and regulatory tools at their disposal. Finally, we provide a number of policy recommendations to strengthen the international resolution regimes further. Some of the analyses carried out in this document represent extreme cases with exceptionally stressed conditions and most unlikely scenarios that are outside any historic experience and usually considered by industry experts and many supervisors as very much beyond any plausible crisis setting. However, we felt that it was necessary to go to extremes to draw the appropriate conclusions.

As it becomes clear from this analysis—and fully consistent with the experience from many decades of handling failures in the insurance sector when they occur—the recovery or resolution of a failed insurer or reinsurer could be managed in an orderly fashion and would have no disruptive effect on the global financial system. While insurance failures and subsequent wind-downs of course happen, they have no potential to disrupt the financial system. As historic experience in all relevant jurisdictions shows, specific insurance resolution processes are well established and tested, and applied consistently to all insurers.

The experience of the typical insurers and re-insurers during the recent financial crisis has shown that the insurance industry can provide a backbone to longer-term financial flows into assets and therefore contribute to the overall stability of the financial system. This is chiefly due to the resilient business model of insurance and the way in which insurance activities are carried out.

The way in which insurers fail—in the rare instances where they do—demonstrates that the event follows altogether different timelines than those experienced by other, more unstable financial institutions. The procedures for recovery and resolution, with very high emphasis on policyholder protection and continued claims-paying ability even in the event of run-offs, benefit from well-defined and tested mechanisms, including elements such as closely supervised technical reserves and matching assets, comprehensive risk governance and a long history of deeply embedded front-line risk management in the sector.

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when submitted to a scenario of severe global financial stress. Or see The Geneva Association's special report on *Systemic Risk in Insurance—An Analysis of Insurance and Financial Stability*, of March 2010.

6 For banks, this process is well underway and already 29 institutions have been identified as systemically risky. For insurers and reinsurers, the process is currently being designed by the IAIS and will be submitted to the FSB and then to the G-20 in June 2012.

It follows that the “systemic risk” developments in the banking world would be a poor guide to what changes are necessary in the regulation and supervision of insurance, particularly when it comes to resolution mechanisms.

It is only when insurance and reinsurance companies engage in activities outside of the core insurance business, specifically in banking-like potentially systemically risky activities (pSRAs), that risk to the financial system may arise if left unmanaged and conducted massively and under inadequate supervision. Where insurance-led groups participate in banking-like pSRAs, the activity needs to be understood in the context in which it is being carried out with similar approaches applied and the applicable sector solvency regime being used to capture the risk, e.g. under Solvency II a capital addition where appropriate. The supervisory approach needs to be commensurate with the level and size of the specific pSRAs being conducted—after all, it is the size and nature of systemically risky activities and not that of other stable activities that pose a potential threat to the financial system.

In consequence, efforts by global policymakers to create global rules that help avoid a repeat of the current crisis in the financial industry need to be directly targeted at those activities that have the potential of doing the damage, i.e. the pSRAs, and where incentives and burdens are misaligned. As the crisis has shown, these are foremost banks’ excessive leverage, and the interconnectivity created through the global derivatives markets.

But it is important that in the course of these efforts, those activities in the financial industry that help to stabilise global money flows—as do insurance businesses—are strengthened, and not weakened. A situation where widespread regulatory innovation and expansion is initiated under the header of “Systemic Stability” in areas where there are no doubts about the effectiveness of the existing regulation needs to be avoided.

In order to be able to deal better with global insurance-led financial groups, supervisors should:

- Adopt group-wide, risk-based supervision to ensure all activities conducted within a group are supervised properly;
- Implement a system of surveillance, to identify emerging pSRAs in insurance-led entities, and measure their relevance for global financial systems;
- Where pSRAs are measured as relevant and the company engaging in the pSRAs is classified as a G-SIFI, supervisors may consider implementing additional policy measures if the respective risk is not already provided for in the applied solvency and supervisory regime;
- Internationally coordinate the relevant mechanisms such as policyholder protection, resolution and protection of derivative counterparties, to distribute any possible burden of failure to stakeholder groups more fairly; and
- Create greater transparency about the commitments of insurers to stakeholder groups in the event of stress, and ensure that the risks that policyholders face are aligned with expectations and protection mechanisms.

Finally, regulators and supervisors in the insurance sector need to test the existing global mechanisms to work through a financial crisis and the large-scale failure of an insurance-led group in their jurisdiction(s). Such tests may highlight gaps in each jurisdiction’s resolution toolbox and their ability to accompany a large transnational insurance or reinsurance failure with the existing supervisory resources. However, while there probably is a need to strengthen certain supervisory instruments in global insurance, this is not because of “systemicity” or an outright threat to the global financial system, but rather because of the need to coordinate classic creditor/policyholder protection better between jurisdictions, to suit global institutions and markets and to streamline the execution of resolution regimes among different authorities.





## **2. Insurers and insurance activities and their relation to financial stability**

### **2.1. Insurance and insurance activities**

The main roles of insurers are to provide protection by accepting risks from policyholders, pooling these risks, managing them actively and potentially transferring them in part to reinsurers (or the financial markets). Insurers have large amounts of direct investments under their management to back future claims—insurers may also manage third-party funds as an asset management business, however these funds are not part of the insurer’s assets. Insurers are able and willing to take a longer-term investment perspective given the horizon of these future claims.

Particular features of the core insurance business model, compared to the business model of other financial institutions, ensure that insurers are a source of financial stability:

- The origination of insurance obligations is being pre-funded by receiving premiums from the inception of the policyholder relationship (“inverted” or “pre-funded” production cycle).
- Investments are funded by premium income and managed to match liabilities.
- Insurance and reinsurance obligations are not callable. Claims and benefits payments require the occurrence of an insured event and disincentives to cash in policies prematurely (e.g. surrender charges, loss of tax benefits and inability of replacing policies under the same conditions).
- Insurer liabilities are dominated by insurance provisions with leverage to other financial institutions comparatively lower.
- Insurers underwrite large, diversified pools of mostly idiosyncratic and uncorrelated risks.
- Insured loss events are not normally correlated with financial crises or economic cycles.
- Insurers require that the policyholder has an insurable interest which prevents speculation in risks.

Core insurance activities help to stabilise global financial markets, as they have done in the current crisis, rather than adding to or amplifying systemic risk.<sup>7</sup> In contrast to the banking system, they pre-fund future payments and invest in stable investment portfolios for the long term. Their investment activities in equities and bonds provide a link between markets, supporting liquidity for savers and borrowers. Insurance plays a key role in financial intermediation by re-investing long-term savings through debt and equity holdings. Insurers’ funding profiles and diverse customer bases allow them to take a long-term asset allocation, which is key for financing enterprises—including other financial institutions—with long-term capital.

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<sup>7</sup> See Liedtke, P.M. (2010), *Anatomy of the credit crisis—An insurance reader from The Geneva Association*, Geneva Report No.3, The Geneva Association, available at [http://www.genevaassociation.org/PDF/Geneva\\_Reports/GA-2010-Geneva\\_report\[3\].pdf](http://www.genevaassociation.org/PDF/Geneva_Reports/GA-2010-Geneva_report[3].pdf).

Core insurance and reinsurance activities do not create systemic risk as research by The Geneva Association and the International Association of Insurance Supervisors (IAIS) report *Insurance and Financial Stability*<sup>8</sup> has shown.

In their report, the IAIS came to the conclusion that:

*“The traditional business model of insurance builds on the underwriting of large diversified pools of mostly idiosyncratic and uncorrelated risks. Based on such a business model, traditional insurance is unlikely to become a source of systemic risk.”*

In their conclusion, they assert that “...there is little conceptual reason for life and non-life insurance activities to either trigger or amplify systemic risk”.

These views are substantiated by the earlier analytical work of The Geneva Association<sup>9</sup> which methodically analysed all relevant activities of insurers against the criteria developed by the FSB to identify systemic risk in financial institutions.<sup>10</sup> The conclusions were that none of the core insurance activities give rise to systemic risk as they do not fulfil the four criteria set by the FSB and the IAIS.<sup>11</sup>

The following activities of the core insurance universe have been analysed in detail, and none of them manifested the potential to create systemic risk:<sup>12</sup>

- Investing policyholders’ and shareholders’ investments as cash or through derivatives, including:
  - Asset Liability Management (ALM) and Strategic Asset Allocation; and,
  - Derivatives activities on insurance balance sheet.
- Traditional insurance business of originating liabilities by providing protection/guarantees, including:
  - Underwriting catastrophe risks;
  - Underwriting long-term risks;
  - Writing business with redemption options; and,
  - Writing life business with embedded guarantees.
- Transferring insurance and market risks to third parties, including:
  - Hedging with derivatives;
  - Reinsurance and retrocessions; and,
  - Insurance-linked securities.
- Capital raising, short-term and long-term funding, liquidity management for investment management and liability origination operations, including:
  - Treasury-related activities; and,
  - Long-term capital raising.

Regulators and supervisors are often concerned that new and innovative activities might emerge with a different risk profile, possibly creating a potential for systemic risk. Some forms of insurance currently carried out may be considered innovative by some market observers. Examples of such insurance activities are certain types of reinsurance that provide multi-year and multi-line coverage, or market-linked life insurance products with investment guarantees such as variable annuities. However, innovation and novelty alone are not indicators for risk and much

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8 IAIS (2011) *Insurance and Financial Stability*, November, available at [http://www.iaisweb.org/\\_\\_temp/Insurance\\_and\\_financial\\_stability.pdf](http://www.iaisweb.org/__temp/Insurance_and_financial_stability.pdf).

9 See Haefeli and Liedtke (2010) *Systemic Risk in Insurance: An analysis of insurance and financial stability*, March, available at [http://www.genevaassociation.org/PDF/BookandMonographs/Geneva\\_Association\\_Systemic\\_Risk\\_in\\_Insurance\\_Report\\_March2010.pdf](http://www.genevaassociation.org/PDF/BookandMonographs/Geneva_Association_Systemic_Risk_in_Insurance_Report_March2010.pdf).

10 See, for instance FSB (2010), *Reducing the moral hazard posed by systemically important financial institutions* ([http://www.financialstabilityboard.org/publications/r\\_100627b.pdf](http://www.financialstabilityboard.org/publications/r_100627b.pdf)).

11 The four criteria are size, interconnectedness, substitutability and timing.

12 See Haefeli and Liedtke (2010) *Systemic Risk in Insurance: An analysis of financial stability and insurance*, op. cit.

less systemic risk.<sup>13</sup> Consequently, these activities should be assessed using the features of core insurance as stated above to determine the degree and sufficiency of regulation of the activity, quality of risk management and scale of the activity in order to understand whether these activities potentially expose the institution and the broader financial system to systemic risk. Where these innovative forms of insurance have the basic features of core insurance activities, they should not be considered as pSRAs as they do not pose any systemic risk.

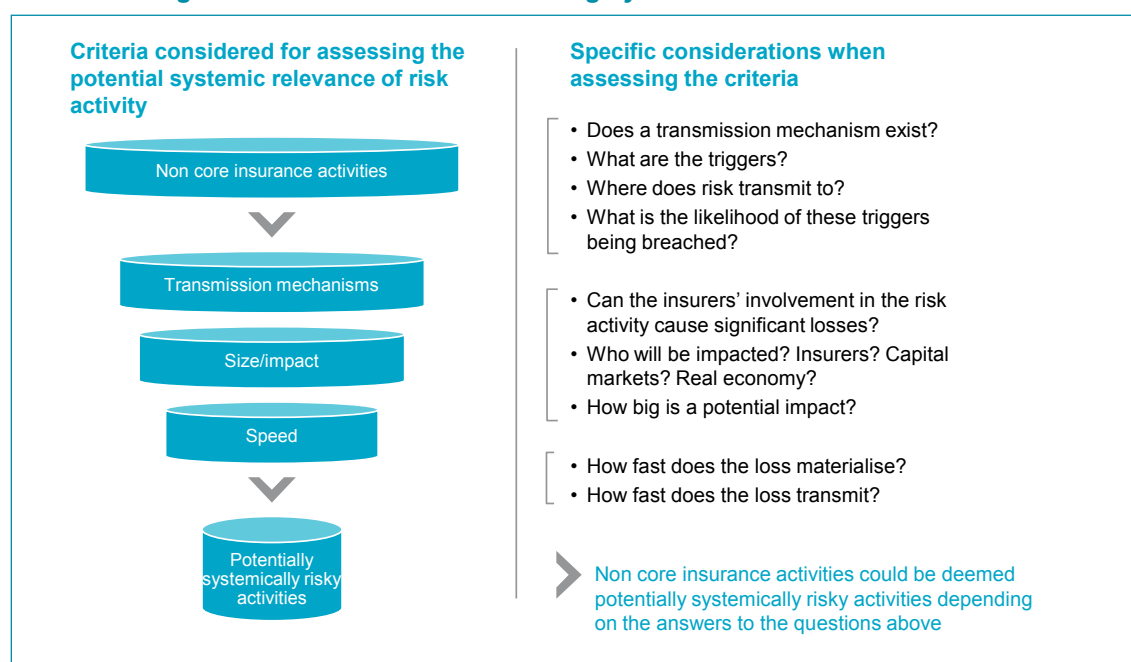
In contrast to core insurance activities, key banking and banking-like activities are based on the transformation of maturities, the provision of credit, and the provision and running of utility functions such as payments and clearance systems. Such activities have turned out to be problematic under special circumstances, usually involving deficient risk management and inadequate supervision coupled with an economic or financial shock to the institution carrying them out. If they are then sizeable enough compared to the overall market (and hence beyond the markets' capability of absorption), they can pose systemic risk. Any existing or new activities that exhibit the same characteristics should be carefully analysed for systemic risk potential and, in case this exists, institutions carrying out such activities on a large scale ought to be properly scrutinised with respect to such activities and how they are managing them.

## 2.2. Institutions and systemic riskiness

To understand whether an institution poses a potential risk for the financial system, it is important to investigate the type of activities the institution is engaged in, as it is ultimately these activities that are or are not potentially of systemic relevance.

Following the FSB and IAIS definition of systemic relevance, The Geneva Association research<sup>14</sup> applied a filtering approach based on the four key criteria (see Exhibit 1) to assess activities of insurers for systemic relevance.

**Exhibit 1: Approach used to analyse and assess non core insurance activities against the criteria for determining systemic risk**



<sup>13</sup> Some insurance companies offer for example combinations of insurance products with special services, such as referrals or direct repairs in case of damage, that are certainly innovative yet completely uninteresting from a systemic financial risk perspective.

<sup>14</sup> A detailed description of this methodology can be found in *Systemic Risk in Insurance: An analysis of insurance and financial stability*, op. cit.

The Geneva Association identified that certain activities undertaken by some insurance companies could potentially pose a systemic risk under certain circumstances where the institution engages in these activities in a regulatory deficient environment to such a massive scale that their failure or disruption could lead to instability in the system. The two activities are:

- **Mismanagement of short-term funding:** An insurance company may invest liquid collateral it receives from stock lending (for example) in illiquid assets in order to generate additional investment returns. However there is a mismatch and potential loss if the counterparty calls its collateral and the insurer is unable to realise sufficient value from its illiquid assets to repay the collateral;<sup>15</sup> and,
- **Derivatives speculation:** An insurance group may own an unregulated (or deficiently regulated) non-insurance subsidiary as these transactions are normally not permitted to be carried out by insurance-regulated entities. The subsidiary may engage in derivatives trading (e.g. writing CDS) on the non-insurance balance sheet to generate additional revenue. The derivatives trading may rely on the credit rating of the insurance group. If the credit rating is downgraded then additional collateral may need to be posted, which could lead to a sudden strain on liquidity.

It is noteworthy—and a view shared widely among experts—that both activities are outside of what can be understood as core insurance business.<sup>16</sup>

A much cited example for a financial conglomerate with significant insurance operations experiencing massive problems during the credit crisis was AIG. The group had conducted both of the afore-mentioned activities on a huge scale, without proper risk management and under inadequate supervision, leading to a government bail-out when it suffered immediate liquidity problems so typical of such banking-like activities under distress which thwarted its continued operation.<sup>17</sup> It is hence a real-world case of risky non-core insurance activities creating financial distress to the system on a large scale.<sup>18</sup>

When assessing the non-core, banking-like activities insurers may undertake, it is relevant to understand at what scale these transactions are carried out especially in comparison to other players like banks or shadow-banking entities. And although it is not the size of the overall institution that is interesting—after all even a very large financial institution can be systemically benign if no risky activities are carried out—it is instructive to look at how insurers compare to banks. The following chart provides a comparison of large global banks and insurers indicating the total of issued securities and total assets. It highlights the fact that insurers depend on third party financing to a much lesser degree than banks, as insurer assets are invested using policyholders' premiums and that the general size of insurers is significantly smaller than comparable banking entities.

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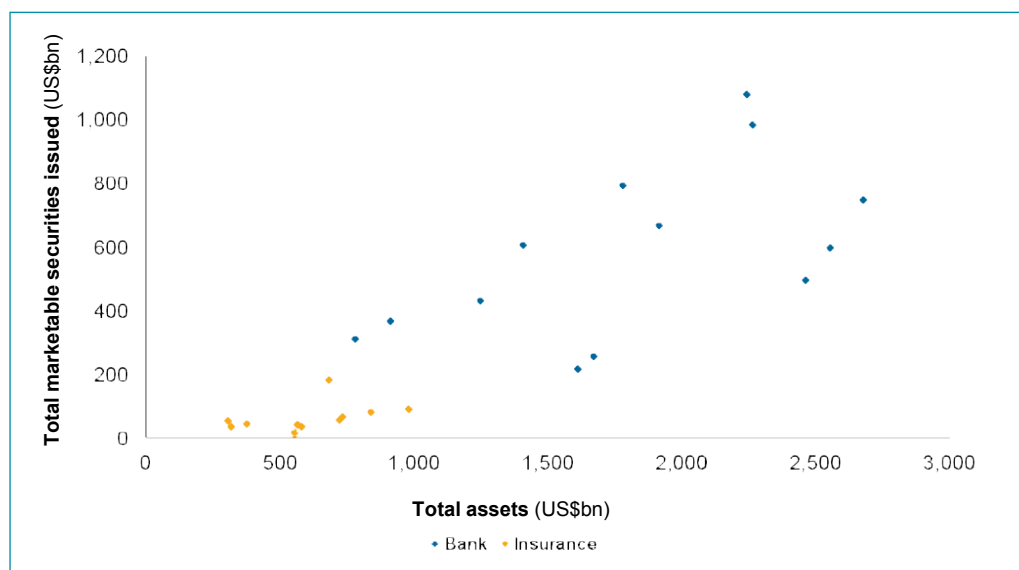
15 Note that this can be managed/mitigated through risk management (e.g. stock lending is often over collateralised and typically has restrictions on the minimum quality of the collateral).

16 In its recent review, *Insurance and Financial Stability*, op. cit., the IAIS uses a slightly different terminology and delimitation (traditional, non-traditional and non-insurance) but the basic view that the traditional insurance activities are not systemically risky is generally shared.

17 For a detailed discussion of the AIG case, see The Geneva Association (2011) *Considerations for Identifying Systemically Important Financial Institutions: Part II An Analysis of the AIG case*, April, available at [http://www.genevaassociation.org/PDF/BookandMonographs/GA2011-Considerations\\_for\\_Identifying\\_SIFIs\\_in\\_Insurance.pdf](http://www.genevaassociation.org/PDF/BookandMonographs/GA2011-Considerations_for_Identifying_SIFIs_in_Insurance.pdf)

18 The issue whether AIG had to be bailed out by the U.S. government to avert a larger and possibly systemic crisis of the financial system is to a certain degree contested among experts, with some of them claiming that the system could have handled a distressed AIG. Others claim that a division into a sound insurance business and a "bad" financial speculation unit (settled with the key losses but underpinned by some form of U.S. government guarantee) could have been a better alternative than a direct bail-out.

**Exhibit 2: Comparison of large global banks and insurers**



Source: Oliver Wyman analysis of selected global financial institutions (2011)

It is important to understand that insurers' ability to fulfil their role in society will be negatively impacted, if subjected to unwarranted costly recovery and resolution planning, resolvability assessments, pre-emptive supervisory powers and additional capital charges. This is especially the case where such mechanisms would be introduced in addition to existing (and already designed and soon to be implemented) regimes that adequately take care of recovery and resolution for insurance.

Consequently, it is important to appreciate fully the impact of insurance failure, i.e. where such failure might cause loss and to which extent and in particular whether such failure has the potential to trigger a systemic financial crisis rather than remaining an adverse event for a particular stakeholder group. The following sections will not only look at the mechanisms involved in failures, the (potential) sequence of events and its wider impact but also the historic experience to situate the issue of insurance recovery and resolution. Where a financial institution can demonstrate that its potential failure would not cause significant disruption to the financial system and economic activity, it will have to be considered non-systemically risky and ought not to be burdened with special regulation or supervisory requirements justified by controlling systemically risky institutions.



## 3. The impact of insurance failure

### 3.1. Introduction

The event of business failure is hard to define precisely, and different contexts have different interpretations: at one extreme, the term refers very widely to the, even only temporary, prospect that a company cannot meet all the expectations of its clients and prospects; at the other extreme the term refers to the inability to meet all legal claims against the company that are uncontested or have been established in a court of last instance. While in the context of the impact of failure on financial stability, a very narrow, legal definition is most appropriate, the regulatory environment in which insurers operate almost entirely excludes a situation where an insurer is forced to breach existing contractual obligations without already having been deemed by regulatory action to have failed because of previous events.

The insurance industry, as many other industries in the financial sector, is subject to comprehensive supervision on a going concern basis. Insurance supervision seeks to secure an appropriate level of protection for policyholders. For insurers, national insurance laws typically implement this through requirements around technical provisions for liabilities, the appropriateness and adequacy of assets to match these, and requirements for insurers to hold additional assets for specific solvency standards.

Most supervisors utilise a risk-based assessment framework to identify potential failures in the industry and concentrate their resources and actions accordingly. Insurance supervisors utilise supervisory ladders which define pre-emptive and escalating degrees of oversight and intervention in the running of a firm by supervisors. Two examples of these supervisory ladders are presented hereafter.

In the context of the impact on the financial stability therefore, the event of an insurer's failure should be defined as either the moment when the insurer is unable to meet substantial contractual obligations, or supervisors need to impose dramatic preventive actions to reduce the extent or probability of such a situation in the near future.

However well-managed and regulated the insurance industry is, any individual insurer can fail; and while such a failure is unfortunate in many regards, the exit of weaker insurers through failure<sup>19</sup> may be necessary to strengthen the industry overall and improve its ability to protect customers. Any failure of an insurer is likely to have negative effects for stakeholders, including policyholders, employees, and customers who would rely on their continued service. In some instances, such a failure can lead to loss (as described in the table on page 19), but there are no scenarios in which it can lead to a *“disruption to the flow of financial services that is (i) caused by an impairment of all or parts of the financial system; and (ii) has the potential to have serious negative consequences for the real economy.”*<sup>20</sup>

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<sup>19</sup> Note that insurers may exit the market for reasons other than failure, e.g. due to changes in corporate strategy.

<sup>20</sup> Definition of systemic risk (FSB).

**Table 1: NAIC's supervisory ladder of intervention**

<b>Total Adjusted Capital/ Authorised Control Level</b>	<b>Status</b>	<b>Consequence</b>
> 200%	No action	• No regulatory consequences.
150% – 200%	Company Action Level	• Insurer to submit a comprehensive Risk-Based Capital (RBC) Plan to its regulator identifying, among other things, the cause of the capital deficiency and proposing specific corrective measures designed to solve the problem.
100% – 150%	Regulatory Action Level	• Insurer to submit a (revised) RBC Plan. • Regulator authorised to conduct a comprehensive examination of the company's operations and the (revised) RBC Plan. Regulator empowered to order the company to take remedial actions.
70% – 100%	Authorised Control Level	• In addition to aforementioned consequences: – regulator automatically authorised to take control of the insurer. – regulator has discretion on measures, e.g. continued pursuance of (revised) RBC plan, rehabilitation, liquidation, etc.
< 70%	Mandatory Control Level	• Regulator to take insurer under control.

Source: National Association of Insurance Commissioners.

**Table 2: Supervisory ladder of intervention under Solvency II**

<b>Capitalisation</b>	<b>Consequence</b>
Eligible Own Funds (EOF) > Solvency Capital Requirement (SCR)	• No regulatory consequences.
Minimum Capital Requirement (MCR) < EOF < SCR	• Insurer to immediately inform the regulator. • Insurer to submit a comprehensive and realistic recovery plan to its regulator. • Regulator to require the insurer to take the necessary measures to achieve compliance with the SCR.
EOF < MCR	• Insurer to immediately inform the regulator. • Insurer to submit a short-term realistic finance scheme to the regulator for approval. • Regulator may restrict or prohibit the free disposal of the assets of the insurer. • Ultimate supervisory intervention: the withdrawal of authorisation.

Source: European Commission

Insurance failures do not occur overnight. Rather—by the very nature of the insurance business—the developments that ultimately lead to economic loss of any stakeholders take time to emerge, and during such time, regulators and stakeholders can prepare and take action to contain the damage the failure can cause, and stop it from spreading through the system.

In reality, sometimes governments decide to step in and shoulder some of the burden. However this is typically for the benefit of policyholders rather than to save the institution itself or to avoid systemic risk. The justification for this lies in the role that insurance businesses can have in pursuing social policy objectives, in particular in helping individuals to save for their own retirement; it is never the systemic stability that is at risk, as the insurance balance sheet—even that of a reinsurer—is not interconnected in any relevant way to the rest of the financial system, and in contrast it provides stability to the financial flows even in times of crisis.



Where insurance groups go beyond their core insurance activities, in certain situations there may be a risk that the non-core part of the balance sheet interacts with the financial system in a way that can cause systemic risk. It is these situations that require attention for systemic risk supervision, and therefore need to be properly identified.

The fact that the failure of insurers has no potential to disrupt the financial system becomes obvious by taking a closer look at the order of events in the case of an insurer's failure.

### **3.2. Options for recovery and resolution of an insurance company**

While it is a rare event in most jurisdictions, insurers' business can fail for a variety of reasons.<sup>21</sup> However, the process a failed insurer goes through is almost the same, whatever the circumstances. Before an insurance business requires winding down, the company will have moved through multiple stages of intervention, each of which can typically take several weeks. It is this prolonged order of events that distinguishes failing insurers from failing banks, where immediate actions are typically required.

Most financial stresses that lead to a deterioration of an insurer's solvency position can be dealt with autonomously by the company's management, which will take corrective actions and enforce implementation. If the supervisor is not convinced that the insurer's management is able to stabilise the solvency position, they can direct a selection of recovery options in an attempt to correct deficiencies and prevent the company from becoming non-viable. These recovery options include intensified supervisory oversight; de-risking (constraining or reducing risk); restricting the payout of dividends to shareholders; freezing assets; requiring a capital injection as a condition to business continuation; and revoking the license and close to new business to stop the dilution of resources available to existing policyholders.

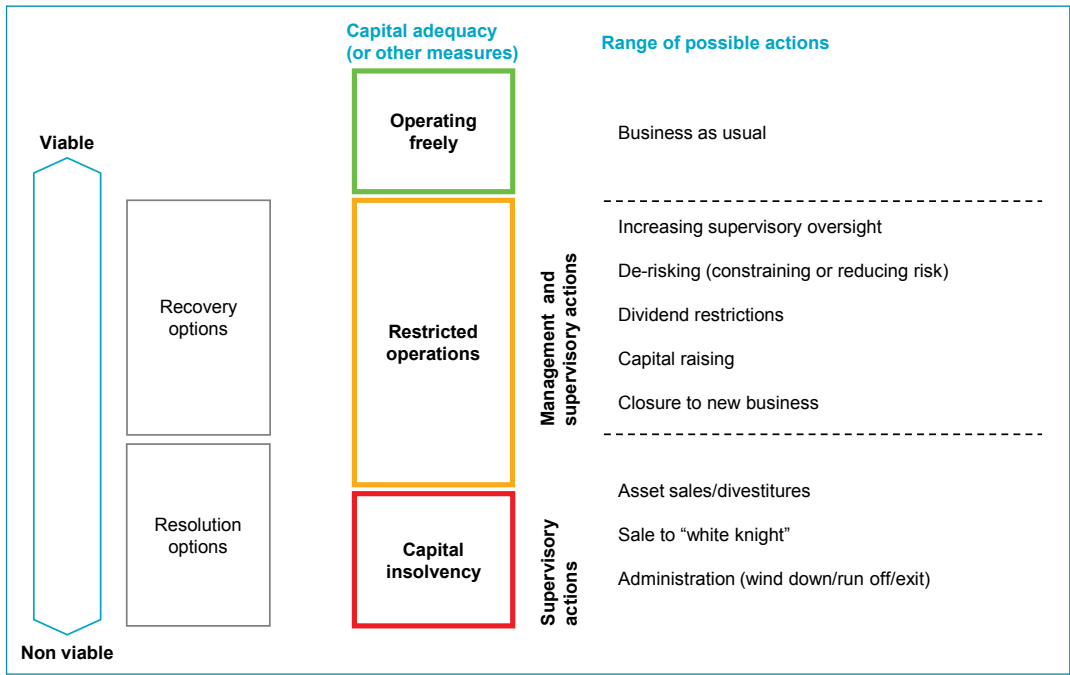
If the authorities deem an insurance company no longer viable, they will take actions to resolve the business, and can transfer all or part of the management's authority to an administrator. Again, in most situations there is considerable flexibility that allows authorities to choose a course of action that protects policyholders and at the same time limits the economic and social impact of the failure. The option that is typically preferred is the divestment of assets and the transfer of existing policyholder obligations together with the matching assets to a private sector purchaser or to a "white knight". This can comprise the whole business of a failed insurer, or individual parts and portfolios, and would typically ensure that customers do not suffer from an interruption of insurance coverage and services provided for policyholders.

Only if no such transfer into the custody of a viable business is possible will the authority force the failed insurer into run-off. In this event, an administrator is appointed who, within the legal provisions and under the supervision of the courts, will decide how to sell assets, settle existing policyholder obligations, and wind down the insurance operations.

Exhibit 3 on the next page lists the range of possible actions to be undertaken as an insurer moves towards non-viability.

<sup>21</sup> See, for instance, the "Sharma Report" for an analysis of causes of insurance failures (Conference of the Insurance Supervisory Services of the Member States of the EU 2002, *Prudential Supervision of Insurance Undertakings*), available at [http://ec.europa.eu/internal\\_market/insurance/docs/solvency/solvency2-conference-report\\_en.pdf](http://ec.europa.eu/internal_market/insurance/docs/solvency/solvency2-conference-report_en.pdf)

Exhibit 3 : Range of actions as insurer moves towards non-viability



### 3.3. Consequences of insurance failures

#### 3.3.1. Historic experience and systems of protection

While insurance failures and subsequent wind-downs of course happen, they generally have no potential to disrupt the financial system. As experience in all relevant jurisdictions shows, specific insurance resolution processes are well established and tested, and applied consistently to all insurers.

In every single case where an insurance company had failed, its wind-down has not posed any systemic risk to the financial system, and insurance companies' wind-downs and exits from markets have been conducted in an orderly manner, and also policyholders have, at worst, suffered only a limited loss. Table 3 summarises the resolution and impact of a selection of high-profile insurance failures.

Insurance regulation typically provides a series of preventive measures that will help ease the consequences of any potential resolution. Most prominently, insurers are typically obliged to set up prudent provisions for all future payouts,<sup>22</sup> and required to match them with suitable high-quality assets. These assets in turn are typically "tied" legally in a form that provides straightforward seizure if required. This makes it easier to protect the assets tied to the technical reserves in every single insurance entity with its assets at any time and isolate them from troubled areas. The matching with suitable assets will remain robust even through periods of stress and wind down, as insurers have no need for immediate cash (e.g. low lapse rates during run-off due to penalties and other disincentives for life policyholders), and liabilities mature over many years, which allows for the recovery of market values of tied assets, or agreed upon actions to improve solvency.

<sup>22</sup> Provisions have to be set up for claims advised by policyholders, for incurred but not yet reported claims, and for future benefits in life and health business. Also, provisions have to be set up for risks that are not yet expired, and for situations where future premiums will not be sufficient to fund future claims and costs. Typically, all such provisions are required to be set prudently so that they are sufficient to cover payouts even in adverse scenarios.

**Table 3:** Selected high-profile insurance failures (1990-2010)

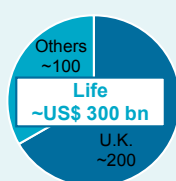
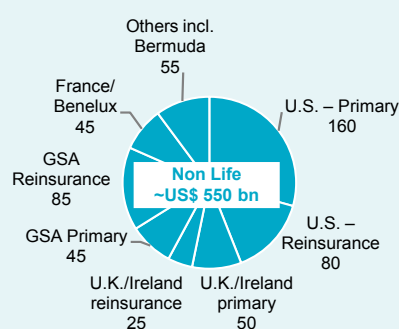
<b>Failed Business</b>	<b>Causes</b>	<b>Resolution and impact</b>
Quinn (2010; Ireland) – P&C	<ul style="list-style-type: none"> <li>Financial guarantees provided to speculative equity transactions of owners in Anglo-Irish Bank shares</li> </ul>	<ul style="list-style-type: none"> <li>Placed in administration and subsequently sold to consortium of former AIB and Liberty Mutual</li> </ul>
AIG (2008; U.S.) – Financial Products	<ul style="list-style-type: none"> <li>CDS business (Non-insurance activities) written by AIG Financial Products and guaranteed by AIG Holding in order to leverage AAA rating that was generated by AIG insurance business</li> <li>Risky re-investment of collateral from stock lending</li> </ul>	<ul style="list-style-type: none"> <li>“Ring-fencing” of insurance assets due to existing insurance regulation (“assets covering reserves”)</li> <li>Government bail-out of AIG Holding due to non-insurance activities</li> <li>Insurance sub-group of AIG Holding pledged to government</li> </ul>
Mannheimer (2003; Germany) – Life	<ul style="list-style-type: none"> <li>Investment guarantees to customers</li> <li>Risky asset allocation and weak capital base at the start of the equity crisis</li> </ul>	<ul style="list-style-type: none"> <li>Placed in administration</li> <li>Policies transferred to newly-created protection scheme financed through a levy on German life insurers</li> </ul>
HIH (2001; Australia) – P&C	<ul style="list-style-type: none"> <li>Aggressive expansion through acquisitions and joint ventures</li> <li>Inadequate underwriting and loss reserves</li> <li>Fraudulent behaviour of key staff</li> </ul>	<ul style="list-style-type: none"> <li>Placed in administration</li> <li>In run-off; settling outstanding claims at a potential loss to policyholders</li> <li>Largest corporate failure in Australia</li> </ul>
Various Korean life insurers (1998-2001)	<ul style="list-style-type: none"> <li>Investment guarantees on short-term products</li> <li>Prolonged period of low interest rates</li> <li>Large low-quality corporate loan portfolio</li> </ul>	<ul style="list-style-type: none"> <li>Put in administration and forced to cease operations</li> <li>Much of industry restructured and recapitalised by the government and sold</li> </ul>
Various Japanese life insurers (1997-2001)	<ul style="list-style-type: none"> <li>Investment guarantees on short-term products</li> <li>Prolonged period of low interest rates</li> <li>Large low-quality corporate loan portfolio</li> </ul>	<ul style="list-style-type: none"> <li>Put in administration and forced to cease operations</li> <li>Financial support through policyholder protection scheme (3 out of 7 insolvent life insurers did not need any financial support)</li> <li>Transfer of policies to financially sound insurers</li> </ul>
Equitable Life (2000; U.K.)	<ul style="list-style-type: none"> <li>Guaranteed annuity options</li> <li>Inadequate reserves</li> </ul>	<ul style="list-style-type: none"> <li>Placed in administration</li> <li>Operating assets acquired by Halifax</li> <li>Run-off in a compromise scheme</li> <li>Part of the portfolio transferred to Canada Life and Prudential</li> </ul>
Various U.S. life insurers (1991)	<ul style="list-style-type: none"> <li>Investment guarantees on short-term products</li> <li>Large real estate and junk bond portfolio</li> </ul>	<ul style="list-style-type: none"> <li>Put in administration and forced to cease operations</li> <li>Transfer of policies to financially sound insurers</li> </ul>

Source: *Insurance and Issues in Financial Soundness*, IMF Working Paper (2003); Oliver Wyman.

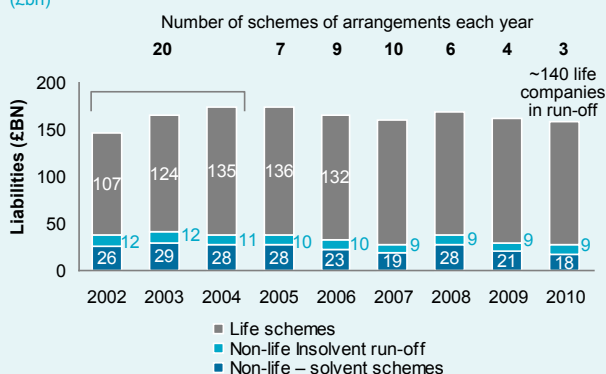
The procedure of “run-off” is a category of legal instruments<sup>23</sup> available to insurers and supervisors in most jurisdictions, and has historically been used by insurers to exit failed or undesired sections of their portfolios. Run-off is when an insurance company stops writing new business and uses its assets to pay off any current and emerging claims on its existing policies.

#### Exhibit 4: Statistics on insurance company run-offs across jurisdictions

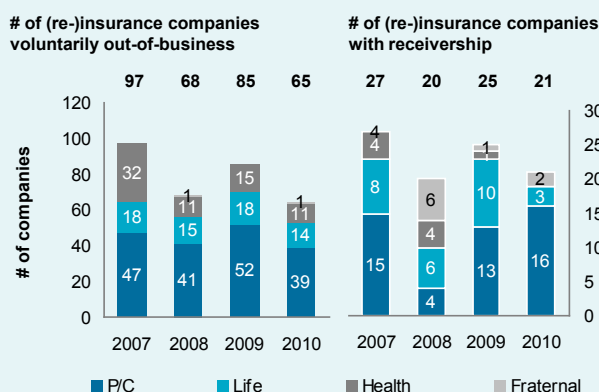
Breakdown of global insurance run-off reserves (US\$bn, 2009 estimated)



U.K. market: Size of the U.K. run-off market (£bn)



U.S. market



Source: KPMG, PWC, NAIC, FDR/GRID, Oliver Wyman

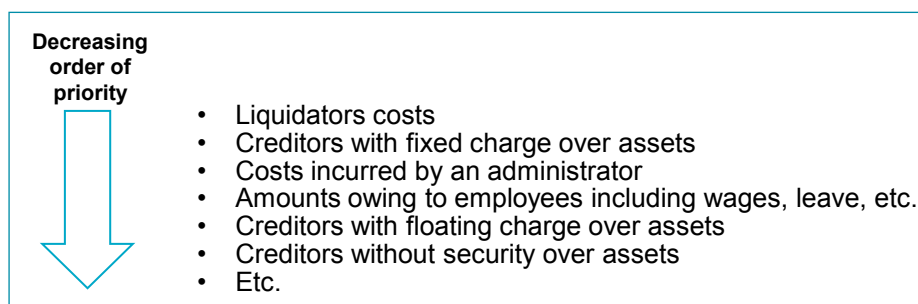
Legislative changes have allowed solvent insurers to exit from elements of their underwriting activities in a specific product category or market—for example through a “scheme of arrangements” in the U.K. and in the U.S.

The run-off insurance market is quite active, especially in the U.K. and increasingly in the U.S., with a few market players buying and consolidating insurers in run-off to extract value from these, through economies of scale and operational efficiency in running off the liabilities. Despite price fluctuations due to investors’ appetite and demand, active run-off markets, such as the U.K., offer small discounts or even premiums to net assets of insurers, thereby offering attractive exit opportunities for insurers deleveraging or willing to sell some of their operations.

On wind down, when a company is insolvent, all outstanding claims on the company’s assets are determined and satisfied in the manner and order prescribed by law in different jurisdictions. This hierarchy of claims is part of an effective resolution regime as described by the FSB.<sup>24</sup> The following exhibit shows a typical order of priority of the claims on a company’s assets.

<sup>23</sup> Run-off instruments include “arrangements/settlements with creditors”, solvent schemes of arrangements, portfolio transfers including part VII transfers and corporate reorganisations.

<sup>24</sup> FSB (2011) *Key Attributes of Effective Resolution Regimes for Financial Institutions*, *op. cit.*, p. 3.

**Exhibit 5: Typical priority of claims on company's assets on liquidation**

Policyholders are typically granted super-priority over other unsecured creditors, ranking only after the costs of insolvency proceedings, preferential creditors such as employees' salary and pension contributions, and secured creditors, which in turn typically include counterparties in derivative contracts (see below for further detail). In many jurisdictions there are also insurance guarantee schemes in place which compensate policyholders and claimants at least to a certain level if their insurer fails and claims cannot be satisfied with the insurer's assets.

Bankruptcy, administrative re-organisation and winding down procedures and rules for insurance companies can differ significantly between jurisdictions. They are therefore an important target of international coordination, both to ensure protection of policyholders, but also to provide greater certainty for other creditors such as counterparties in derivatives contracts.<sup>25</sup>

### The resolution of international insurers in the European Union

In 2001, the European Union (EU) introduced the directive on *Reorganisation and winding down of insurance undertakings* (Directive 2001/17/EC), which rules that when an EU insurer with branches in other EU countries fails, the winding down process will be governed exclusively by the proceedings initiated in its home country. This approach is consistent with the home-country supervision principle of EU insurers. By having one winding down proceeding rather than several, policyholders in different countries will receive the same protection, and the procedure will be quicker and less costly.

Before the adoption of the Directive, if an EU insurer with branches had to be wound down and its assets distributed among its creditors, the authorities in each EU country were likely to open their own insolvency proceedings, which could lead to conflicts of jurisdiction and unequal treatment of policyholders. Similarly, if an undertaking has to be reorganised to restore its financial health, approaches in different Member States could be divergent.

The Directive also establishes the principle of insurance claims over other creditors in the event of an EU insurer's reorganisation or winding-down. In particular, it provides that EU Member States must opt for one of two systems to ensure preferential treatment: (i) insurance claims receive absolute precedence over any other claim with respect to assets representing the technical provisions, or (ii) insurance claims receive precedence with respect to the whole of the insurance undertaking's assets over any other claim, with the possible exception of salaries, social security, taxes and on assets subject to *rights in rem*, which, for instance, protect secured creditors.

As the Directive, however, did not regulate Insurance Guarantee Schemes across the EU, there is still uncertainty which policyholders would be—if at all—compensated by which country's scheme (if any) in the event of an insurance failure within the EU. There are currently plans also to harmonise the existence and application of insurance guarantee schemes across the EU with a new directive. Further details on policyholder protection and insurance guarantee schemes can be found in section 4 of this document.

<sup>25</sup> See also (IAIS (2011) *Issues Paper on Resolution of Cross-Border Insurance Legal Entities and Groups*, June, available at [http://www.iaisweb.org/\\_\\_temp/Issues\\_paper\\_on\\_resolution\\_of\\_cross-border\\_insurance\\_legal\\_entities\\_and\\_groups.pdf](http://www.iaisweb.org/__temp/Issues_paper_on_resolution_of_cross-border_insurance_legal_entities_and_groups.pdf).

The interaction between different authorities and jurisdictions—with all the potential for misalignment of expectations and conflict between the different stakeholder groups—is particularly relevant in the context of large and diversified groups. Group subsidiaries will often have different licenses and are supervised by different bodies. Also, many financial groups try to increase financial efficiency by shifting physical capital and liquidity to central carriers, and support a substantial part of the statutory and ratings requirements of operating subsidiaries only with guarantees.

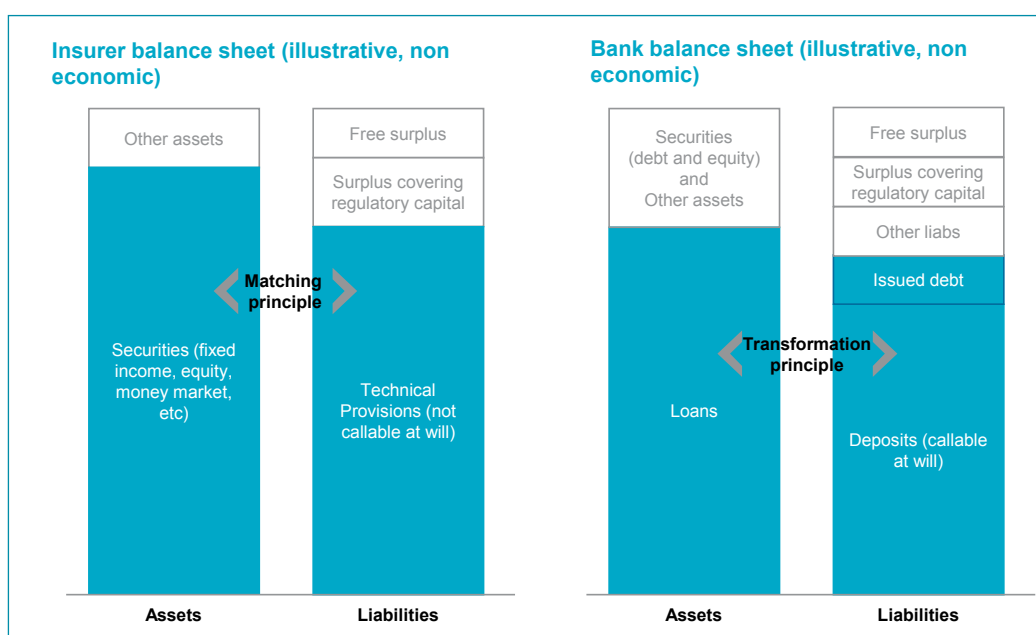
### 3.3.2. Systemic resilience of the insurance balance sheet

The underlying reason for the ability to reorganise or wind down an insurance business without disruption to the wider system is that the process can be geared towards matching the available financial resources of the company with the obligations to claims holders, in particular policyholders. Wind-down proceedings in insurance follow the contractual outflows of cash to settle claims and pay benefits, and would therefore extend over months and often many years.

An insurer's liabilities will not normally be accelerated through the wind-down. Policyholders and claimants normally do not have the right to terminate contracts in case of insolvency. Of course, in the interest of efficiency, the administrator may try and commute or novate policies to accelerate settlements; in some jurisdictions, authorities can even assign policies to solvent insurers. Insurers also do not rely on funding through debt instruments to any significant degree or on short-term liquidity that would dry up in case of financial distress.

In contrast, for banks, the funding side of the balance sheet will begin to evaporate as soon as doubts over its solvency emerge—the expectation of financial stress often triggers a run on the bank as customers attempt to recover their funds and short-term investors stop rolling over their investments. In turn, the liquidity position of the bank would deteriorate further, leading to rating downgrades and wider consequences such as termination of important contracts, margin calls on derivatives, etc. While central banks are typically available as lenders of last resort for solvent banks that experience liquidity issues, they are usually not willing to step in if they consider the particular bank to be no longer solvent, in which case it usually becomes an obligation for governments.

**Exhibit 6: Different balance sheet dynamics of insurers and banks**



Because of this particular stickiness of the insurance balance sheet, it is not necessary to introduce a new systemic layer of resolution capabilities for insurance businesses: step-by-step escalation of insolvency allows for a coordinated and graded response from authorities and appropriate allocation of available financial resources to creditors. While planning ahead and providing greater clarity about how management would work through the recovery and resolution of large and complex groups can help to make the impact on all stakeholder groups—in particular policyholders in different countries—fairer and more predictable, there is no basis to require insurance groups to maintain formal resolution plans (living wills) for the protection of financial stability.

In principle, a number of situations can be conceived in which a failing insurance business interconnects with the rest of the global financial system: insurers as investors/capital providers; insurers as market participants; the failure of a reinsurer, which quite obviously affects the cedents (i.e. their policyholders, being insurance companies themselves); insurers that operate bank-like business from within the regulated insurance entity; and insurance groups that operate other financial business from a non-insurance subsidiary.

We now describe each of these different channels of interconnections and how the failure of an insurer may impact other market players.

### **3.4. Failure of insurers that are interconnected with other financial institutions**

#### **3.4.1. Insurers as participants in capital markets**

Insurance companies' holdings of traded securities are nearly as large as those of pension funds or mutual funds, but all three together are less than those of banks and other financial institutions, as Exhibit 7 below shows. Insurers typically have predictable liquidity needs, match assets to liabilities, hold capital against investment risks, and therefore generally have stable portfolio structures with investment holdings for the longer term.

The Bank of International Settlements (BIS), in their July 2011 paper,<sup>26</sup> considers the impact regulatory changes will have on insurers' roles within the institutional investment space. They conclude that, while regulatory changes will bring important benefits in terms of financial soundness, the resulting changes in investment holdings will have potential financial markets implications.

Of course, insurers' portfolios will often contain allocations to the debts and equities of other financial institutions, and this link may expose insurers as potential recipients of systemic risk. However, a recent industry report<sup>27</sup> showed that for the significant majority of European insurers, their total exposure to the debt of European banks was less than 10 per cent of their investment portfolio (covered bonds are not considered to be banking exposure given the underlying collateral that is ring-fenced from the balance sheet of banks; structured assets and money market funds sponsored by banks are also not included for similar reasons). These exposures are held as part of a balanced portfolio of investments by insurers, with financial positions held alongside sovereign, corporate and secured assets, forming a diversified balance sheet.<sup>28</sup>

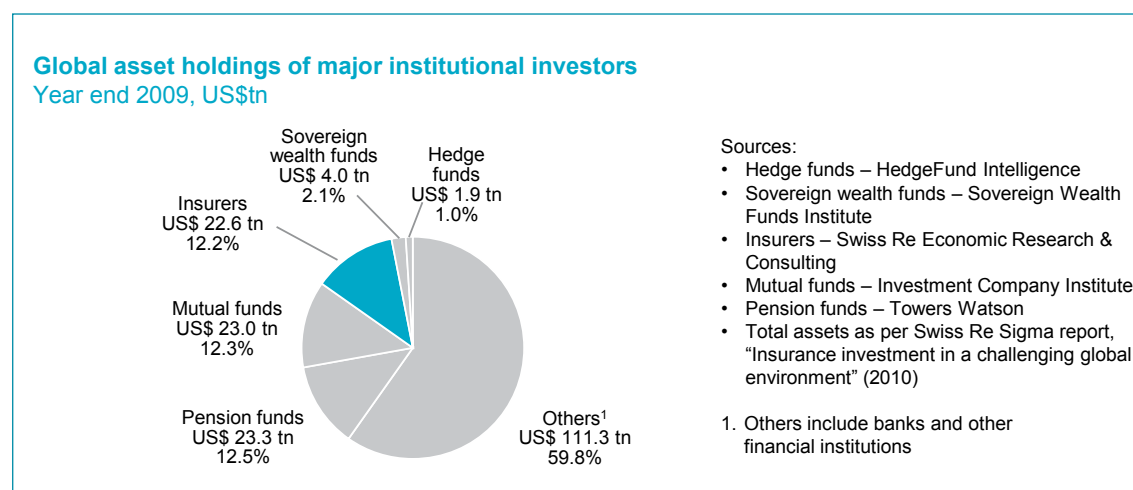
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26 BIS Committee on the Global Financial System (2011) *Fixed income strategies of insurance companies and pension funds*, CGFS Papers No 44, July, available at <https://www.bis.org/publ/cgfs44.pdf>.

27 Bank of America Merrill Lynch (2011) *Insurance Pan-Euro Investment Handbook*, May.

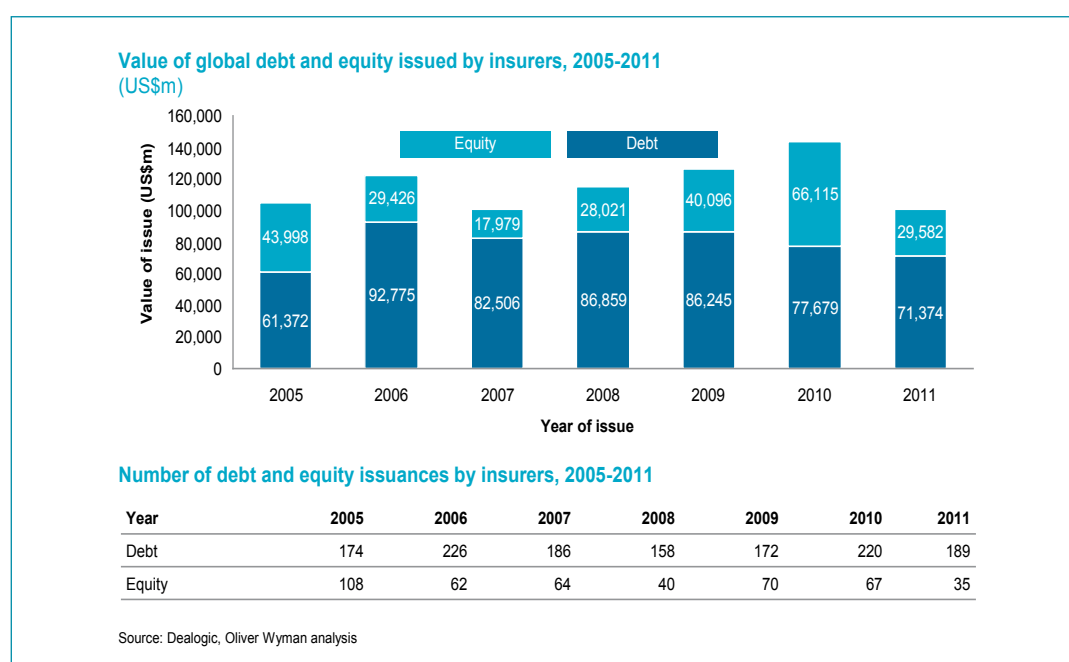
28 Calculated as total bank exposure (e.g. including senior debt). Source: Company reports and BofA Merrill Lynch Global Research estimates.



**Exhibit 7: Total investments of major institutional investors**

Insurers also regularly go to the market as issuers of equity and debt, which may then be bought by other financial institutions as an attractive investment that provides to some extent a diversification from the rest of the financial industry. Through this interconnection it is possible that failure in the insurance industry is transmitted into the financial system; however this does not necessarily imply systemic importance and this risk needs to be monitored on the side of the financial institutions that invest in such securities.

The chart below demonstrates the limited size of insurance-issued debts and equity securities in relation to the total investments of major institutional investors. The sum of the total issuances during the last 6 1/2 years (2005 to July 2011) is less than 0.5 per cent of total investments as per Exhibit 7 above. This volume is far too small to create any systemic risk even if all issued debt- and equity-securities of the insurance industry were held by other financial institutions.

**Exhibit 8: Debt and equity issuances by insurers, 2005-2011**



### 3.4.2. Insurers as market participants

Insurance companies may wish to (temporarily) hedge some of the risk they have taken on, whether through the guarantees and options embedded in the liabilities or through the assets they have invested in. These hedges are purchased from other financial institutions.

Insurance companies have been writing life insurance and variable annuities with additional guarantees for many years that offer a variety of guarantees to policyholders, including guarantees on investment performance.

Insurance products in general are heavily regulated and require conservative reserves and statutory capital including margins for extreme stress events. As a result insurers ensure that assets are invested to match key characteristics of liabilities and ensure capital markets risks are hedged.<sup>29</sup>

A feature of many of these products, including variable annuities, particularly in the U.S., is that the product is separated into two elements: a separate account where the assets and liabilities for the individual policyholder are kept and the guarantee portion which forms part of the insurer balance sheet. The separate account assets are not accessible by the insurer if anything happens to the insurer balance sheet.

#### Scenario study: life insurance and variable annuities with additional guarantees

Let us consider the impact of a significant market event on a hypothetical insurer writing life insurance and variable annuities with additional guarantees, how the company could react to this impact and any potential knock-on effects on key external stakeholders.

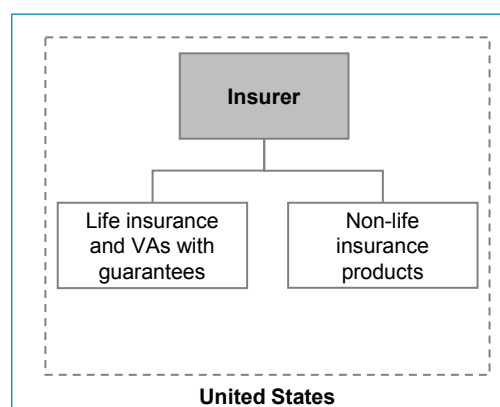
The hypothetical insurer operates via a group structure in the U.S. The insurer has operated normally over the last few years and is capital adequate. The company writes a large volume of variable life insurance and variable annuities with additional guarantees and a number of other non-life insurance products providing cover to policyholders.

The insurer has implemented a hedging strategy for the minimum investment guarantees offered on its life insurance and variable annuities with additional guarantees. It uses a series of static and dynamic hedges to protect itself from market movements—the strategy is implemented using a series of futures and swaps that are purchased using an exchange and a number of over-the-counter deals. The current strategy hedges out approximately 50 per cent of any market movements due to the minimum guarantees.

Let us assume that a turbulent economic environment results in significant investment losses for the insurer—here are large equity market falls, low interest rates and deterioration in the overall credit environment.

Importantly, however, in our example the hedging programme fails as previously correlated markets diverge in the market turbulence and the hedges no longer prove effective. The insurer takes significant losses as a result which, combined with the weakness of its assets, technically results in insolvency or capital inadequacy as shown hereafter.

**Exhibit 9: Group structure of hypothetical insurer**



<sup>29</sup> See *Key Financial Stability Issues in Insurance: An account of The Geneva Association's ongoing dialogue on systemic risk with regulators and policy-makers* (The Geneva Association, July 2010) and "Variable Annuities with Guarantees and Use of Hedging", *Insurance and Finance*, SC 10 (The Geneva Association, March 2011).

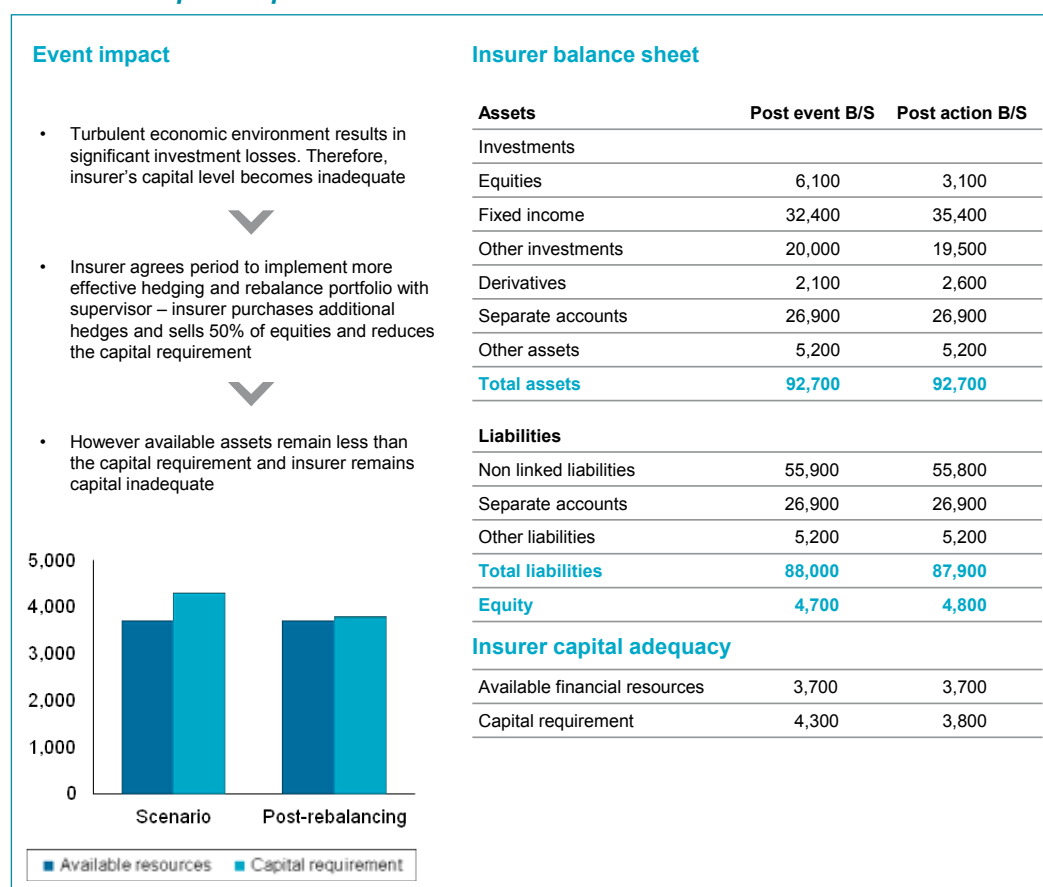
**Exhibit 10: Impact of events on insurer balance sheet**

<b>Insurer balance sheet</b>			
<b>Assets</b>	<b>Pre event B/S</b>	<b>Post event B/S</b>	
Investments			Investments drop due to deteriorating economic conditions
Equities	10,200	6,100	
Fixed income	37,300	32,400	
Other investments	25,300	20,000	
Derivatives	0	2,100	The derivatives are used for hedging guarantees. The value of the derivatives increases post event.
Separate accounts	33,600	26,900	
Other assets	5,200	5,200	
<b>Total assets</b>	<b>111,600</b>	<b>92,700</b>	
<b>Liabilities</b>			
Non linked liabilities	62,000	55,900	Liabilities drop due to expected decrease in payouts and fall in asset values
Separate accounts	33,600	26,900	
Other liabilities	5,200	5,200	
<b>Total liabilities</b>	<b>100,800</b>	<b>88,000</b>	
<b>Equity</b>	<b>10,800</b>	<b>4,700</b>	
<b>Insurer capital adequacy</b>			
Available financial resources	9,800	3,700	Market shock results in capital inadequacy
Capital requirement	5,800	4,300	Capital requirement reflects the impact of the hedges

As the impact of the events on the insurer's balance sheet emerges (the losses due to market movements and the ineffectiveness of the hedging programme) there is a sequence of events with management and the supervisors working through various options for the business.

Management will look to reduce the impact of the market environment on the insurer and look at options to recover the insurer and prevent it from becoming capital inadequate.

In our example, management reduces the overall exposure to equities in the portfolio—this reduces the amount of capital requirement. It looks to increase the effectiveness of its hedging programme which was approximately 50 per cent effective during the downturn. It increases the effectiveness to 75 per cent; however this comes at a cost given the current economic conditions. It further reduces capital requirements; however it is assumed not to reduce it sufficiently and the insurer remains capital inadequate.

**Exhibit 11: Impact of potential action on insurer balance sheet**

Some of these additional options that management will consider once the de-risking has proven ineffective are described in the table hereafter.

**Table 4 : Possible options available to management focused on reducing the impact on the insurer**

Potential actions	Rationale and results
Restrict dividend	Reducing dividends paid to shareholders will increase the insurer's assets. This is done but, given the severity of the events, it is assumed to be ineffective in preventing the capital inadequacy as the dividend level is insufficient to make up shortfall in capital.
Raise capital	Raising capital will increase the insurer's assets. However, in this case it is assumed to be not possible as the capital markets are effectively closed due to the turbulence in the wider market place.
Sell non-strategic assets	Selling non-strategic assets results in additional cash for the insurer and reduces liabilities accordingly. Cash can be invested in more liquid assets and thus improves its capital base. This may be possible; however, for the sake of our demonstration let us assume that the sale of areas of the portfolio deemed desirable may not plug the gap with sufficient speed to avoid capital inadequacy.
Close to new business	Closing to new business will reduce the capital requirement of the insurer and remove any associated new business expenses. This is required but it proves ineffective as it does not provide sufficient capital relief to avoid capital inadequacy.
Increase surrender penalties/ apply market value adjustments	Applying adjustments to policies reduces liabilities and capital requirement based off these. This adjustment is required in this circumstance but it is assumed to prove ineffective. The market value adjustments result in some improvement in capital position (for those policies that do lapse) but in our example it is insufficient to rebuild the insurer's capital base.

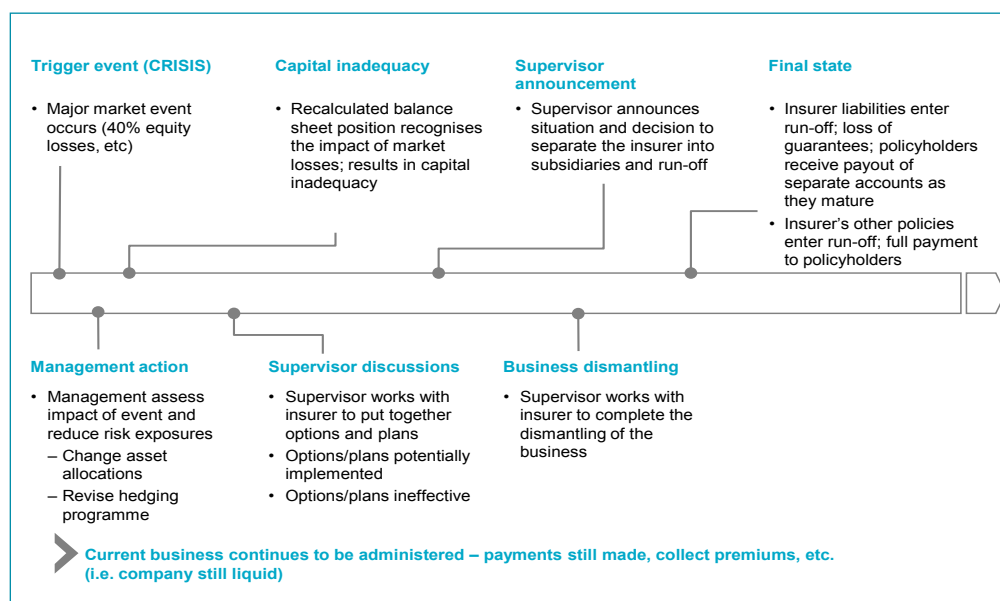
As management are considering and acting on various options for recovering the business, they will be in dialogue with their respective insurance supervisors on both the current state of the insurer as well as the possible actions and their impact. The supervisors will monitor the insurer and management; however, once it has become clear that capital inadequacy cannot be avoided, they will step in to look at alternative options for the insurer.

**Table 5 : Possible options available to the supervisors**

Potential actions	Rationale and results
De-risk the insurer	Further reducing the risks taken by the insurer will reduce the capital requirement. However in our example, let's assume that this is not possible as there is limited scope to further reduce market risk-taking given the changes already implemented.
Force capital injection by shareholders	<p>Upon completion of the injection, increase solvency level and overall financial strength. As new capital may be raised only at a discount, existing shareholders would suffer dilution and are therefore likely to resist this option; also, this may be viewed as "throwing good money after bad". In practice, supervisors rarely use this action.</p> <p>If the insurer is a mutual, this action would either require a de-mutualisation, or the injection of hybrid capital; a capital call from members is typically not an option.</p>
Weaken solvency rules	<p>Temporarily allowing the insurer to operate under weakened solvency rules may provide sufficient additional time for the insurer to recover. Capital guidance may be relaxed to ensure that the insurer moves back to adequacy following de-risking; although, the Minimum Capital Requirement provides a lower bound for action. Weakening of the solvency rules may also not be possible across jurisdictions where rules may be different.</p> <p>In principle, it may also be possible to reduce guarantees or options for policyholders and thereby improve the financial position of the insurer.</p>
Run-off	Placing the insurer and its subsidiaries into run-off to pay existing beneficiaries with the assets remaining in the company. In this example this is the assumed action taken with the supervisors deciding to force the insurer into run-off, splitting it into two run-off entities – one with the life insurance and variable annuities with additional guarantees book and the other with the non-life insurance business.

These events can be summarised on a timeline as follows.

**Exhibit 12: Sequence of actions**



The resolution of the insurer may have an impact on policyholders. For example where the policyholder has an investment guarantee, this guarantee will likely not pay out (if the assets in the resolved insurer are insufficient to pay all liabilities) and they may suffer some financial losses as a result of this loss of guarantee. However the separate account of the policyholder will remain and will be paid out accordingly. In addition, guarantee schemes may provide a backstop for any minimum policyholder payouts on resolution.

**Table 6 : Impact on external stakeholders**

<b>Stakeholder group</b>	<b>Impact of insurer resolution</b>
Insurers and reinsurers	<ul style="list-style-type: none"> <li>• Ring-fencing protects contagion spreading across the insurance group (although complications with hedging activities carried out at group level).</li> <li>• Increased cost of capital: due to perceived increased risk of the insurance industry, the cost of capital for remaining insurers may increase, applying upward pressure on pricing.</li> <li>• Buy-out opportunities: opportunity will be available to other insurers to a) run-off the back book and, b) buy other valuable parts of business.</li> <li>• No significant impact on reinsurers.</li> <li>• Impact not relevant for systemic risk.</li> </ul>
Policyholders (variable annuity policyholders and other policyholders)	<ul style="list-style-type: none"> <li>• Loss (or partial loss) of guarantees for the policyholders affected. Remaining separate account paid out as required by policyholders.</li> <li>• Other policyholders have policy payouts as expected. Possible higher cost of any guarantees being offered due to repricing.</li> <li>• The experience of a failure in the industry may make the policyholder in general more likely to exercise their options under their policies if this is of value to them, resulting potentially in higher technical reserves also for other variable annuity providers.</li> <li>• Impact not relevant for systemic risk.</li> </ul>
Banks	<ul style="list-style-type: none"> <li>• Revised hedging portfolio <ul style="list-style-type: none"> <li>— Changes in insurer hedging portfolio will result in changes to fees to banks running the portfolio.</li> </ul> </li> <li>• Default on bank loans <ul style="list-style-type: none"> <li>— Some element of failed insurer financing may need to be marked down given likely reduction in credit rating of insurer.</li> <li>— Insurers often fund banks via the bond markets—therefore, insurer run-off may disrupt this activity. Although, as bonds are typically good matching assets, these will likely form a key element of insurer investment. The overall impact will likely be minimal due to size of insurer portfolio relative to market.</li> </ul> </li> <li>• Failure of insurer to post additional collateral as part of hedging agreements may transmit some losses to banks; however this would depend on the types of contracts and derivatives used and would not likely occur during an economic situation described in the case study (i.e., decline in equity markets and interest rates where hedge positions would increase in value for the insurer).</li> <li>• Impact not relevant for systemic risk.</li> </ul>
Asset Managers	<ul style="list-style-type: none"> <li>• Reduction in business due to the run-off of the insurer.</li> <li>• Impact not relevant for systemic risk.</li> </ul>
Pension funds/other investors	<ul style="list-style-type: none"> <li>• Investments fall <ul style="list-style-type: none"> <li>— As pension funds are large investors in insurer and other companies, when the insurer fails, they will incur a relatively small loss of a proportion of the value of shares that they hold.</li> <li>— Some additional loss in value may result from broader ownership of shares in other affected insurers.</li> </ul> </li> <li>• Impact not relevant for systemic risk.</li> </ul>
State/government	<ul style="list-style-type: none"> <li>• Political impact and impact on guarantee schemes.</li> <li>• Impact not relevant for systemic risk.</li> </ul>
Local (and international) economy	<ul style="list-style-type: none"> <li>• Unemployment due to job losses as insurer is run-off.</li> <li>• Placing insurer into run-off is likely to require significant cost reduction in the business – therefore, a number of sales-based job losses would result. Although, it is likely some employees involved in in-force management will be required during the run-off phase with the remaining employees released over a longer period of time for longer tail business.</li> <li>• Impact not relevant for systemic risk.</li> </ul>

The capital inadequacy and run-off of the insurer in this example has an impact on many external stakeholders, as discussed below; however these impacts are not systemic.

The failure of an insurer writing investment products with guarantees does not threaten the financial system, as the example in the case study illustrates. It shows that, as the crisis emerges, management and regulators take actions to reduce the impact on the insurer. If these prove insufficient the insurer is resolved using a standard insurance resolution process. While potentially there will be an impact from the failure of the insurer with some loss of wealth, there is no systemic impact. The process described in this case study is fully consistent with the resolution of any other insurance operation, and no specific provisions are required for the resolution of insurers writing policies with investment guarantees.

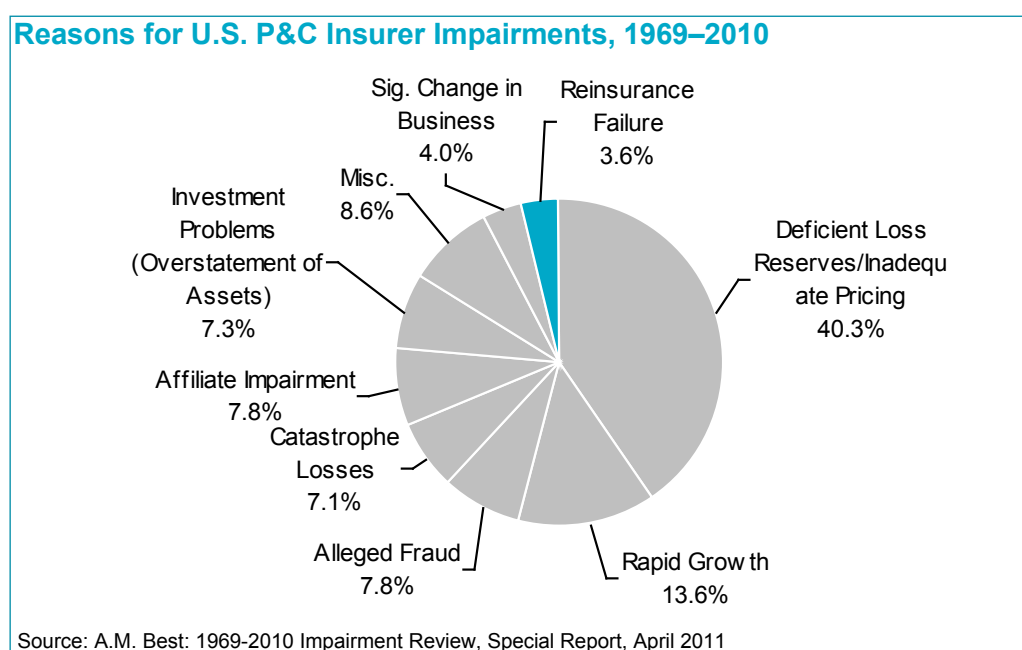
### 3.4.3. Failure of reinsurance companies

Insurers use reinsurance as a tool for risk and capital management and to reduce any concentration of exposures. The failure of one or several reinsurers could therefore transmit losses back to primary insurers (although a reinsurer failure may also indicate that a significant number of primary insurers are in difficulty already).

While reinsurance connects the insurance industry, in reality the portion that reinsurers accept from the primary insurers is too small for that interconnection to become a transmission channel of failure across the system. Furthermore, almost all large reinsurance programmes are syndicated and reinsurance coverage spread among many reinsurers, limiting concentration risks.

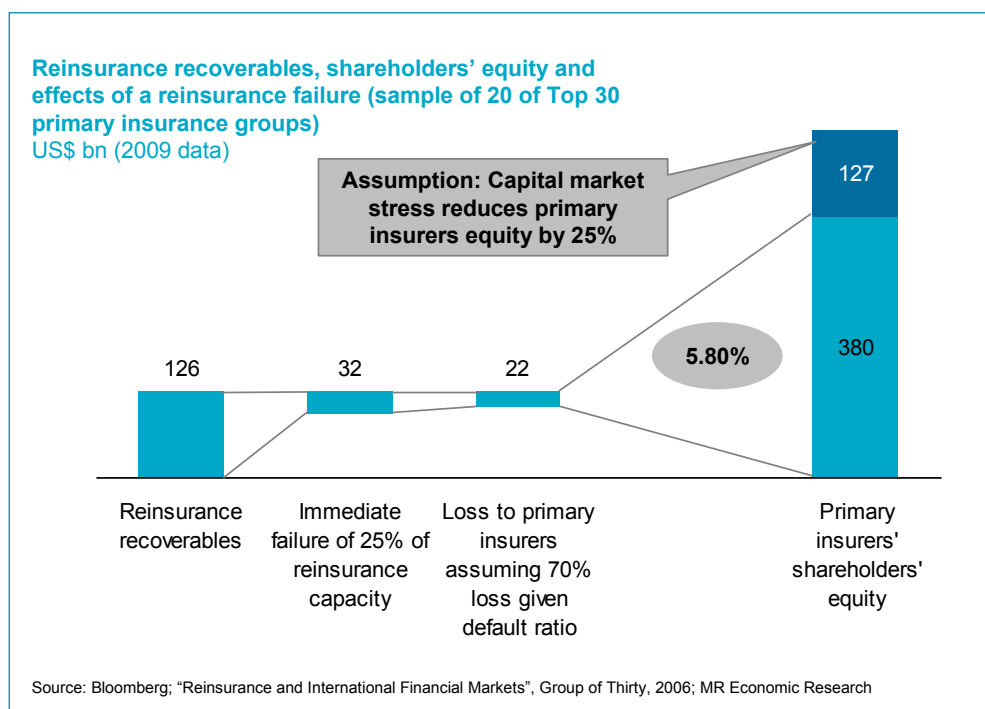
Primary insurers' exposure to reinsurers is manageable given their financial resources. The failure of one or more reinsurers is more likely to be a reduction in earnings for direct insurers than a capital threat. Research from A.M. Best shows that reinsurance represents a marginal cause of failure in the U.S. P&C insurance sector historically, with only 3.6 per cent of insurance impairments attributable to reinsurance failure (see Exhibit 13).

**Exhibit 13: Reinsurance historically represents a marginal cause of failure in the U.S. P&C insurance sector**



As illustrated in the exhibit below, using conservative assumptions of a capital market stress reducing primary insurers equity by 25 per cent and a loss given default ratio of 70 per cent for reinsurance recoverables, the total loss for the primary insurance industry of an immediate failure of reinsurers with a combined 25 per cent of the global reinsurance capacity would only be approx. 5.8 per cent of primary insurers' shareholders' equity. While this ratio may vary between markets and regions, it should never reach systemically risky dimensions or threaten the global economy.

**Exhibit 14: Impact of reinsurers' failure on primary insurers' equity**

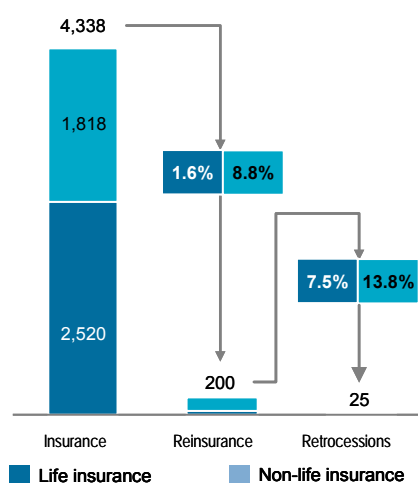


Premiums paid to reinsurers include payment for the transfer of risk and provide a measure of primary insurers' exposure to reinsurers. Exhibit 15 shows the small percentage of premiums paid by primary insurers to reinsurers. This risk is also diversified between reinsurers—reducing exposure to any given reinsurer.

Reinsurers themselves are financially strong, and able to withstand significant catastrophic events as their capital base, risk appetite and enterprise risk framework are built to withstand such events. This was particularly evident in 2011 when insured worldwide catastrophe events are expected to be approximately US\$100bn insured losses but without causing excessive damage to the reinsurance industry. Further, the direct total economic losses of catastrophic events are usually 5 to 20 times greater than the amount that reinsurers cover (see Exhibit 16 for a hypothetical "1 in 250 year" event of an earthquake in the U.S.).

**Exhibit 15: Comparison of connectedness between insurers and reinsurers**

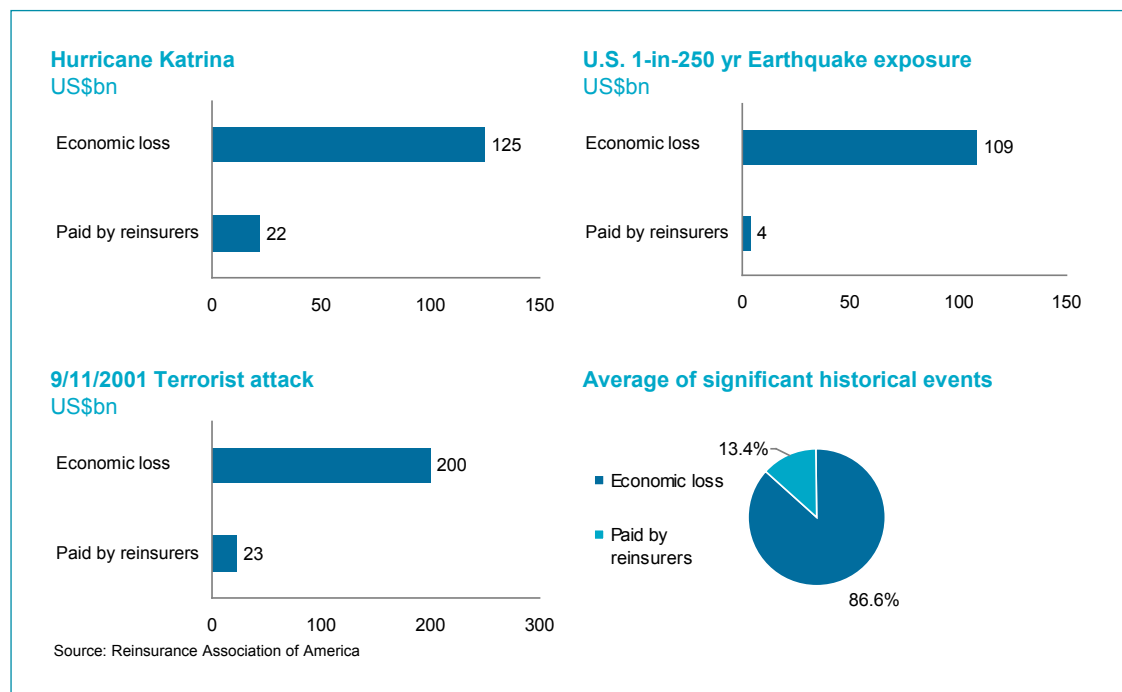
**Low level of premiums ceded by insurers**  
US\$ bn, 2010



Source: Swiss Re, Oliver Wyman analysis

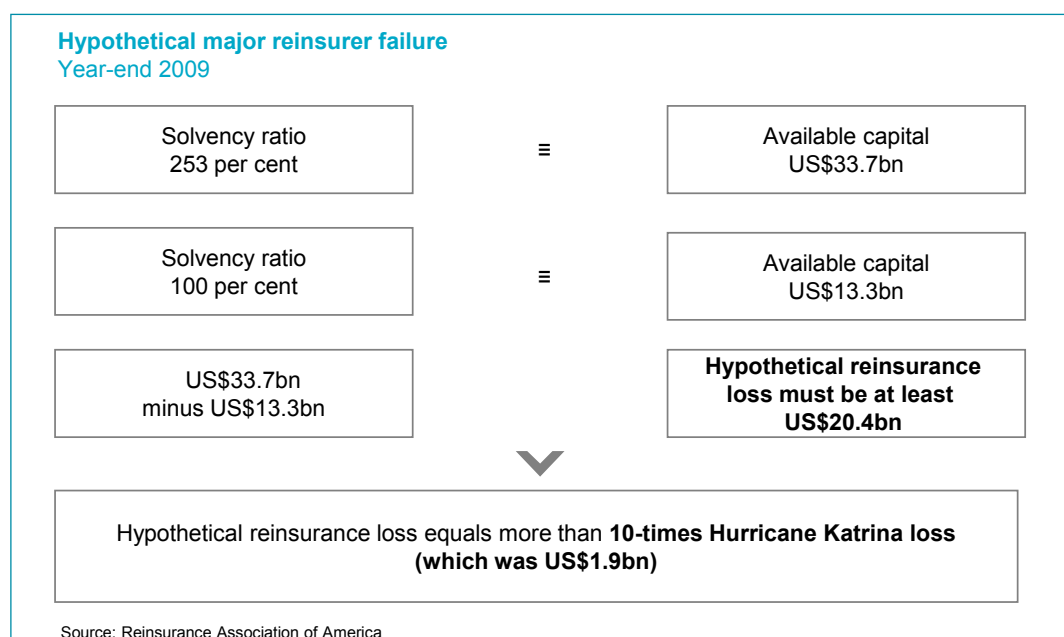


**Exhibit 16: Total economic losses of events are significantly larger than reinsurance losses**



The hypothetical losses needed to deplete solvency buffers of a hypothetical major reinsurer<sup>30</sup> would need to be more than 10 times the loss it suffered from Hurricane Katrina, which has been the single largest natural catastrophe causing total economic loss of US\$1.9bn for the hypothetical reinsurer,<sup>31</sup> as shown in the exhibit below.

**Exhibit 17: What would it take to bring down a major reinsurer?**



<sup>30</sup> For this example, we take the hypothetical major reinsurer as being a simple average of Swiss Re and Munich Re.

<sup>31</sup> Source: Reinsurance Association of America, Swiss Re and Munich Re.



Even such an extreme loss, which is beyond anything currently considered reasonable by supervisors or reinsurers in their risk assessments, would still only reduce capital to the regulatory minimum, and the reinsurer could pay all claims as a going concern. The respective total economic loss of this extreme scenario would by far exceed the insurer and reinsurance industry loss.

In the unlikely event of failure, the resolution mechanisms for insurers and reinsurers work together in such a way as to dampen and smooth any impact that this hypothetical failure might have over time.

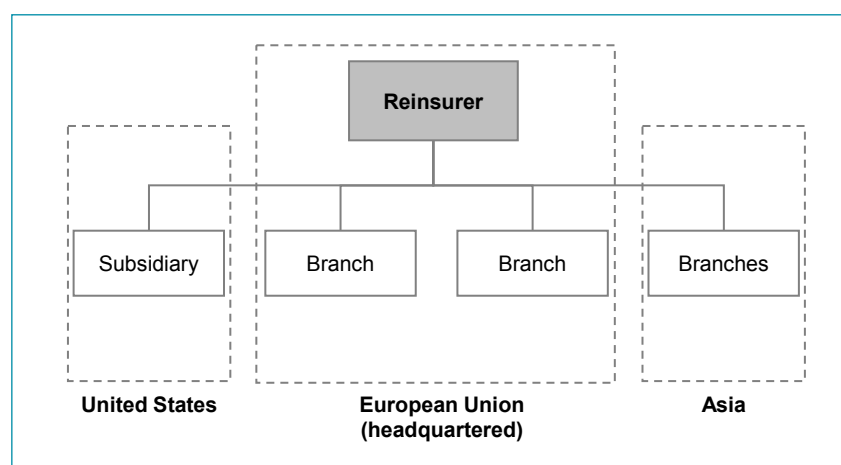
### Scenario study: Failure of a reinsurer

Even though we underlined that an extreme scenario would be required to cause a large reinsurer to fail and that the impact on a direct insurer would be limited, let us consider the hypothetical failure of a global reinsurer, how it is resolved and the impact its failure may have on key external stakeholders.

Let us assume that the hypothetical reinsurer operates via a group structure with headquarters and branches in the European Union, a subsidiary in the United States and branches in Asia. The reinsurer has operated normally over the last few years and is capital adequate both at a group and local level.

Let us assume that a series of significant events impact the reinsurer over a period of one month.

#### Exhibit 18: Group structure of hypothetical reinsurer



For example, first, a devastating natural catastrophe (U.S. windstorm season) wreaks havoc across multiple high-risk regions; a number of U.S. insurers take significant losses as a result and they have considerable exposure to the reinsurer. Secondly, there is a major terrorist attack in Europe leading to large loss of life in a major city and sizeable business interruption all of which are covered by insurers that have a significant exposure to the reinsurer. Finally economic conditions deteriorate considerably with equity markets dropping and credit spreads on corporate bonds widening, leading to decreases in the value of assets held by the reinsurer, primarily government and corporate bonds as well as equities.<sup>32</sup>

<sup>32</sup> Note that it requires a very extreme event to result in an overall 20 per cent decline in assets (with normal reinsurer asset mixes). It would require the reinsurer to have a high exposure to corporate bonds, equities, and poor quality government bonds. Usually, a crisis leads to a drop in interest rates which increases the value of the government bond portfolio (offsetting some of the losses). There were several companies with declines around 20 per cent between 12/2007 and 12/2008, while, for example, the median decline was around 5 per cent for major U.S. P&C companies and 7 per cent for larger U.S. life companies (GAAP basis).

The reinsurer has concentration risk inherent in its exposures in the U.S. and exposure to loss in Europe. The reinsurer takes significant losses as a result which, combined with the weakness of its assets, technically results in solvency or capital inadequacy as shown in the following.

**Exhibit 19: Impact of events on reinsurer balance sheet**

<b>Reinsurer balance sheet</b>		
<b>Assets</b>	<b>Pre event B/S</b>	<b>Post event B/S</b>
Investments	22,400	17,900
Affiliates (Non strategic assets)	1,000	800
Other assets	500	500
Retroceded share	0	0
DAC	400	400
<b>Total assets</b>	<b>24,300</b>	<b>19,600</b>
<b>Liabilities</b>		
Insurance liabilities	15,600	17,100
Other liabilities	2,000	2,000
Reinsurers deposit	900	900
<b>Total liabilities</b>	<b>18,500</b>	<b>20,000</b>
<b>Equity</b>	<b>5,800</b>	<b>-400</b>
<b>Insurer capital adequacy</b>		
Available financial resources	4,500	-300
Capital requirement	3,000	3,300

Investments drop due to deteriorating economic conditions

Liabilities increase due to expected increase in payouts to primary insurers

As the impact of the events on the reinsurer balance sheet emerge (i.e. the increase in expected claims—and liabilities<sup>33</sup>—as a result of the events and the decrease in assets as a result of the economic conditions) moving the reinsurer towards capital inadequacy there is an orderly sequence of events with management and the supervisors working through various options for the business.

Management will consider their options to recover the reinsurer and prevent it becoming capital inadequate. As claims payments develop over time, the reinsurer will have several options. Some of these options are described in the following table.

**Table 7: Possible options available to management to look to recover the reinsurer**

<b>Potential actions</b>	<b>Rationale and results</b>
Restrict dividend	Reducing dividends paid to shareholders will increase the reinsurer assets. This is done but, given the severity of the events, it is assumed to be ineffective in preventing the capital inadequacy as the dividend level is insufficient to make up shortfall in capital.
Raise capital	Raising capital will increase the reinsurer assets and its loss-absorbing capacity. However, in this case study, it most likely would not be possible as the capital markets are effectively closed due to the turbulence in the wider market place and investor appetite is limited to support a weak reinsurer.

<sup>33</sup> In our case study, the combined ratio for the reinsurer is 250 per cent as a result of the natural catastrophe and the terrorist attack.

Potential actions	Rationale and results
Sell non-strategic assets	Selling non-strategic assets will result in additional cash for the reinsurer. Cash can be invested in more liquid assets and thus improve its capital base. This may be possible. However, for the sake of our demonstration, let us assume that the sale of areas of the reinsurance portfolio deemed desirable may not plug the gap with sufficient speed to avoid capital inadequacy.
Close to new business	Closing to new business will reduce the capital requirement of the reinsurer and any associated new business expenses. Since it does not change the actual capital, it is an insufficient measure to bridge the gap of negative equity.

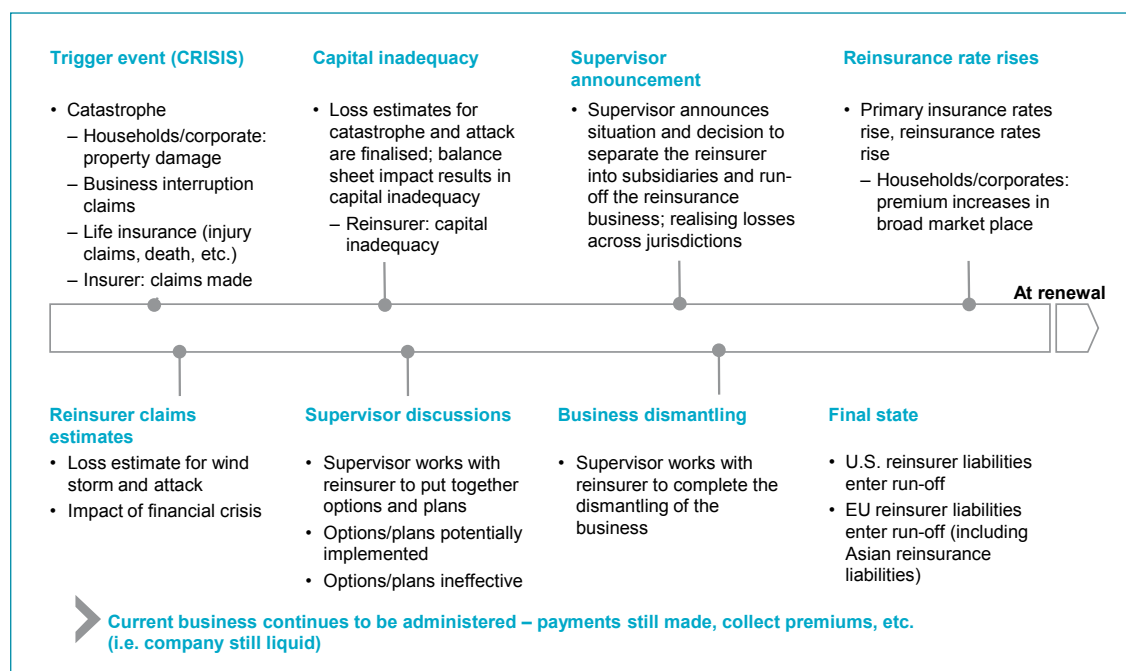
As management are considering and acting on various options for recovering the business, they will be in dialogue with their respective insurance supervisors on both the current state of the reinsurer as well as the possible actions and their impact. The supervisors will monitor the reinsurer and management; however, once it has become clear that capital inadequacy cannot be avoided they are likely to step in to look at alternative options for the reinsurer. The group supervisor is likely to discuss the implications of the reinsurer failure within the reinsurer supervisory college and consider the supervisory options. The EU and U.S. supervisors are likely to step in to ring-fence the assets held in their jurisdiction. This may be perceived as preventing further losses in that jurisdiction due to losses elsewhere. However such regulatory action will be detrimental to the business model of the reinsurer—pooling capital and risk to underwrite large events—and is likely to accelerate the deterioration of the situation.

**Table 8: Possible options available to the supervisors**

Potential actions	Rationale and results
De-risk the reinsurer	Reducing the risks taken with the reinsurer will reduce the capital requirement. However, in our example, let us assume that this is not possible since there is limited scope to reduce insurance risk-taking given the illiquid, long-tail nature of liabilities. Some asset positions are also illiquid, limiting the ability to reduce capital requirements related to investment risk.
Weaken solvency rules	Temporarily allowing the reinsurer to operate under weakened solvency rules may provide sufficient additional time for the reinsurer to recover.* However, in our example, let us assume that the level of capital inadequacy is below the Minimum Capital Requirement level removing the scope for the supervisor to relax the capital guidance. Weakening of the solvency rules may also not be possible across jurisdictions where rules may be different.
Run-off	Placing the reinsurer and its subsidiaries into run-off to pay existing beneficiaries with the assets remaining in the company. In this example this is the action taken with the supervisors deciding to force the reinsurer into run-off, splitting it into two run-off entities (one in the U.S. and the other in the EU) to minimise local impact.

\* For example, the extreme decrease in asset values in 2008 was only temporary for many insurers with asset values recovered quickly.

As described above, a key feature of distress of a (re-)insurance entity is that there is no need for immediate liquidation of positions to meet unexpected cash requirements, as would be the case for a failing bank. Rather, insurance payments are triggered externally, e.g. through the settlement of repairs and replacements. The events in this scenario can therefore be summarised on an extended timeline as shown in Exhibit 20.

**Exhibit 20: Sequence of actions**

The resolution of the reinsurer does have an impact on primary insurers in the markets in which the reinsurer operates. For example if a primary insurer had significant exposure to the reinsurer (through a concentration in their reinsurance programme) it may suffer some financial losses as a result of the reinsurer defaulting on a portion of its payments during run-off. However the loss given default ratio of reinsurance recoverable has historically been limited to 70 per cent and is not of systemic relevance to the cedants, the financial sector and the economy at large.

The capital inadequacy and run-off of the reinsurer in this example has an impact on many external stakeholders, as discussed in the following, however these impacts are not systemic.

**Table 9: Impact on external stakeholders**

Stakeholder group	Impact of reinsurance failure
Insurers and reinsurers	<ul style="list-style-type: none"> <li>• Insurer fully liable for claims to policyholder. However, if reduced claims from reinsurer (due to resolution/wind-down) result in assets of insurer being less than full liability to policyholder that may result in reduced payments to policyholders (technical provisions, capital requirements in place in the primary insurers reduce this impact). Overall allowance for ~60-70 per cent payment of reinsurance claims if reinsurer fails.</li> <li>• Increased cost of capital: due to perceived increased risk of the insurance and reinsurance industry, the cost of capital for remaining insurers and reinsurers may increase, applying upward pressure on pricing.</li> <li>• Buy-out opportunities: opportunity will be available to other insurers and reinsurers to: a) run-off the back book; b) buy the renewal rights of the portfolio; c) buy the underwriting technology/teams; and, d) buy other valuable parts of business.</li> <li>• Impact not relevant for systemic risk.</li> </ul>
Policyholders (commercial, households)	<ul style="list-style-type: none"> <li>• Premium increases due to increased costs to insurers.</li> <li>• Impact not relevant for systemic risk.</li> </ul>

Stakeholder group	Impact of reinsurance failure
Banks	<ul style="list-style-type: none"> <li>• Default on bank loans: <ul style="list-style-type: none"> <li>— Some elements of failed reinsurer financing may need to be marked down given the likely reduction in credit rating of reinsurer.</li> <li>— Insurers and reinsurers often fund banks via the bond markets—therefore, reinsurer failure may disrupt this activity. Although, as bonds are typically good matching assets, these will likely form a key element of insurer and reinsurer investment. The overall impact will likely be minimal due to size of reinsurer portfolio relative to market.</li> </ul> </li> <li>• Impact not relevant for systemic risk.</li> </ul>
Asset managers	<ul style="list-style-type: none"> <li>• Reduction in business due to the run-off of the reinsurer.</li> <li>• Impact not relevant for systemic risk.</li> </ul>
Pension funds/other investors	<ul style="list-style-type: none"> <li>• Investments fall: <ul style="list-style-type: none"> <li>— As pension funds are large investors in (re)insurance and companies, when the reinsurer fails, they will incur a relatively small loss of a proportion of the value of shares that they hold.</li> <li>— Some additional loss in value may result from broader ownership of shares in affected non-life insurers.</li> </ul> </li> <li>• Impact not relevant for systemic risk.</li> </ul>
State/government	<ul style="list-style-type: none"> <li>• Political impact, and impact on guarantee schemes, but not relevant for systemic risk.</li> </ul>
Local (and international) economy	<ul style="list-style-type: none"> <li>• Impact not relevant for systemic risk: <ul style="list-style-type: none"> <li>— Unemployment due to job losses as reinsurer is run-off.</li> <li>— Placing reinsurer into run-off is likely to require significant cost reduction in the business—therefore, a number of sales-based job losses would result. Although, it is likely some employees involved in in-force management will be required during the run-off phase with the remaining employees released over a longer period of time for longer tail business.</li> </ul> </li> </ul>

The analysis above illustrates that the failure and subsequent resolution of a large reinsurer, even based on an extremely unlikely scenario, does not have a systemic impact. It shows that, as the impact of the events emerges, management and regulators take actions to reduce the impact on the reinsurer and consider different options for the business. If these prove insufficient, the reinsurer is resolved using the insurance resolution process. There is a potential adverse impact of the failure of the reinsurer on any insurers that relied heavily on the reinsurer; however this impact is not systemic.

#### 3.4.4. Failure of insurance-led entities with potentially systemically-risky activities (pSRAs)

Insurers and insurance-led groups may engage in broader, non-core activities that may have risks correlated to the wider financial system. Some of these activities may be undertaken as insurance, while other might be undertaken by non-insurance undertakings within an insurance-led group. These activities include:

- Finite reinsurance contracts, where no significant insurance risk is transferred;<sup>34</sup>
- Third-party asset management;

34 Insurance accounting is often available only for contracts that transfer significant insurance risk (for instance, in IFRS 4 or FAS 113); finite reinsurance contracts are not considered insurance.

- Financial guarantees for bond enhancements;
- Derivatives for speculation purposes (e.g. CDS/CDO underwriting); and,
- Other financial transactions including maturity transformation.

While most of these activities do not lead to systemic risk, mismanagement of funding and derivatives speculation have been identified as pSRAs. While mismanagement of funding can occur within an insurance company, an insurance-led group would typically need to operate a speculative derivatives business from a subsidiary that is not regulated as an insurer, because of the restrictions contained in the insurance laws in many jurisdictions. The impact of pSRAs in the case of failure needs to be understood based on their effect on the whole group and should be part of normal capital and solvency monitoring and stress tests.

Counterparties in financial transactions often rely on super-priorities in the event of the other party's insolvency: to support the flow of money in global financial markets, frameworks have been developed that are designed to provide exceptional security for derivatives transactions, not only regarding ultimate repayment, but also liquidity.

#### **Securities for counterparties in financial transactions**

Typically (for instance, in the ISDA Master Agreement), three provisions operate to reduce credit risk between the parties in derivatives, repurchase transactions, securities lending and other financial market transactions:

1. Netting provisions allow the parties to offset mutual obligations and liabilities. These netting provisions apply to both payment netting and "closing out netting" in case of default under the agreement. As a party may be "in the money" on some transactions and "out of the money" on others, it is agreed that these are netted against one another. This reduces credit risk under the transaction (with payment netting reducing settlement risk and close-out netting reducing pre-settlement risk).
2. Arrangements for an "out-of-the-money" party to post collateral to support its net obligations to the other party. The required collateral is computed based on current market values and exchanged continuously.
3. Agreement that one party to the deal can close out, liquidate and terminate the transactions immediately if the other party becomes insolvent.

Source: International Swaps and Derivatives Association; NAIC; Oliver Wyman.

Due to these provisions, counterparties in such financial transactions may arguably have priority over policyholders. However, there is considerable uncertainty as to how the obligations of these provisions can be enforced against the insurer when it approaches insolvency. An administrator or supervisor is likely to attempt to freeze and even reclaim assets, avoid further payments, and in any case delay the proceedings considerably. While this is in the interest of policyholders, it may cause strain on the financial system and market disruption if the size of the effected transactions were sufficiently large. Even if counterparties succeed in asserting their claims, it is unclear what remedies are available to them, given the special status held in many jurisdictions by insurance assets.

If an insurance-led group with systemically-risky activities fails, their orderly resolution is the key to protecting the financial system. Typically, regulatory discussion in insurance is dominated by concerns about protecting policyholders. However, in certain situations, there can be a potential conflict between the two policy objectives, which can be different to an analogous situation in banks.

Policyholder protection aims to ensure that sufficient assets are available to meet all policyholders' claims and policyholders' benefits are protected, even in the event of the insurer's

financial distress. In contrast, systemic protection would demand availability of resources for systemically important stakeholders, in particular banks, to minimise the disruption to critical economic functions during financial difficulties. It is therefore important to understand the interdependencies and potential for contagion between the insurance activities and the pSRAs, and have the right resolution mechanisms to protect the systemically-risky activities without damaging the interests of policyholders.

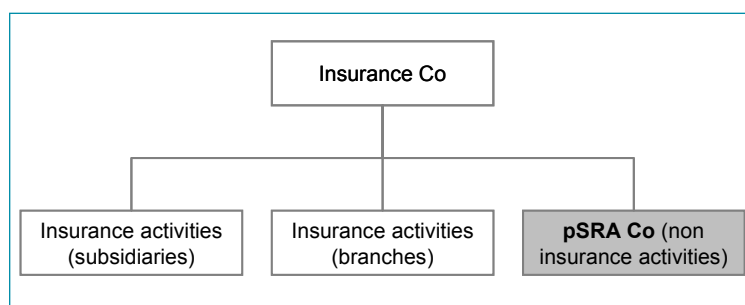
*Note:*

*Bankruptcy laws, the contract laws governing financial transactions, and insurance laws —while often broadly aligned in spirit—all differ greatly between jurisdictions. Also, insolvency situations involving complex financial groups are largely untested. Therefore, it is not possible here to state how a certain situation would be treated by different parties, and even less so how courts would adjudicate conflicts. In the following, possible hypothetical scenarios are argued for discussion. Their value is to highlight issues where clarification from various stakeholders is needed, not to present any form of legal opinion.*

### A. Scenario situation: Derivatives dealing on non-insurance balance sheet

A hypothetical insurer (Insurance Co) operates insurance business through subsidiaries and branches and non-insurance business. The organisational structure is shown below.

**Exhibit 21: Group structure of hypothetical insurer**



The insurer has a subsidiary (pSRA Co) which is a securities dealer and engages in derivatives trading (e.g. writing CDS) on the non-insurance balance sheet to generate additional revenue for the parent. pSRA Co is a major player in the over-the-counter (OTC) derivatives market writing significant amounts of CDSs. The CDSs are written on similar underlying assets, for example mortgage-backed securities.

pSRA Co enters into ISDA Master Agreements including Credit Support Annexes with each of the counterparties with which it trades derivatives. These agreements contain a number of elements relating to the OTC derivatives contracts, including early termination events (including the types of events, how the event is announced and what each party is required to pay on termination) and collateral obligations. These require pSRA Co to immediately (or once notice is given) pay amounts due under the contracts. In any case the counterparty usually would immediately stop serving settlements on transactions entered into under the agreement.

Let us assume that there are massive adverse price movements in the underlying markets as a result of a significant deterioration in the credit quality of the companies (compared to the transaction dates) underlying the CDS transactions the pSRA has written. This increases the payment obligations on pSRA Co in case of the companies defaulting. Note that sufficient actual defaults of underlying companies may also trigger the situation even if there is a moderate credit market stress so it is important to consider the concentrations within the pSRA Co portfolio of CDSs.



In our example, these price movements trigger collateral calls under the OTC contracts requiring pSRA Co to provide additional cash (the requirements regarding collateral calls are detailed in the Credit Support Annexes including how often collateral is required to be paid and the minimum amount of collateral required to be posted). Unfortunately pSRA Co does not have sufficient cash/liquid assets to enable it to post the required collateral.

If the non-payment of collateral is considered as an early termination event (which would be specified in the ISDA master agreement) then the additional amounts relating to the current value of the CDS contracts become payable. The method to calculate the amounts payable would also be specified in the ISDA master agreement and, in this example, results in a substantial additional payment being required from pSRA Co to the counterparties due to the requirement for pSRA Co to pay close-out payments on their net mark-to-market derivatives positions (which, in this example, puts pSRA Co in a large negative position due to the deterioration in credit quality of the companies underlying the CDS transactions).

As the impact of the events on pSRA Co emerges there is a sequence of events with management and the supervisors working through various options for the business.

Let us assume that pSRA Co does not have sufficient liquid assets to make the payments for collateral and the additional early termination payments. If guarantees are in place (either full or partial guarantees) between Insurance Co and pSRA Co, then the counterparties may have recourse to Insurance Co for any amounts due.

If there are no guarantees in place, Insurance Co may make additional funds available to pSRA Co if it has available capital and potentially if there are reputational risks to Insurance Co if pSRA Co fails (and has a knock-on impact on Insurance Co business). Insurance Co may choose not to make any additional funds available for pSRA Co and pSRA Co would then enter resolution (and likely liquidation).

**Table 10: Possible options available to pSRA Co and Insurance Co to reduce the impact of pSRA Co**

Potential actions	Rationale and results
Restrict dividend	Reducing dividends paid to shareholders will increase the insurer assets. This is done but, given the severity of the events and the need for immediate cash, it is assumed to be ineffective in providing sufficient cash for pSRA to avoid possible default on the OTC contracts.
Raise capital	Raising capital will increase assets and loss absorbency capacity. However in this case it is assumed not to be possible as the capital markets are effectively closed due to the turbulence in the wider market place. Even if markets would be open, the capital would be needed within such a short period, leaving insufficient time for raising capital.
Sell non-strategic assets	Selling non-strategic assets will result in additional cash for the insurer (as pSRA Co does not have additional assets). This may be possible however, for the sake of our demonstration let us assume that the sale of areas of the portfolio deemed desirable may not plug the gap with sufficient speed to avoid liquidity problems.
Close to new business	Closing to new business will reduce the capital requirement of the insurer and remove any associated new business expenses. However it is assumed that it does not help with immediate need for cash and would actually reduce liquidity sources significantly.

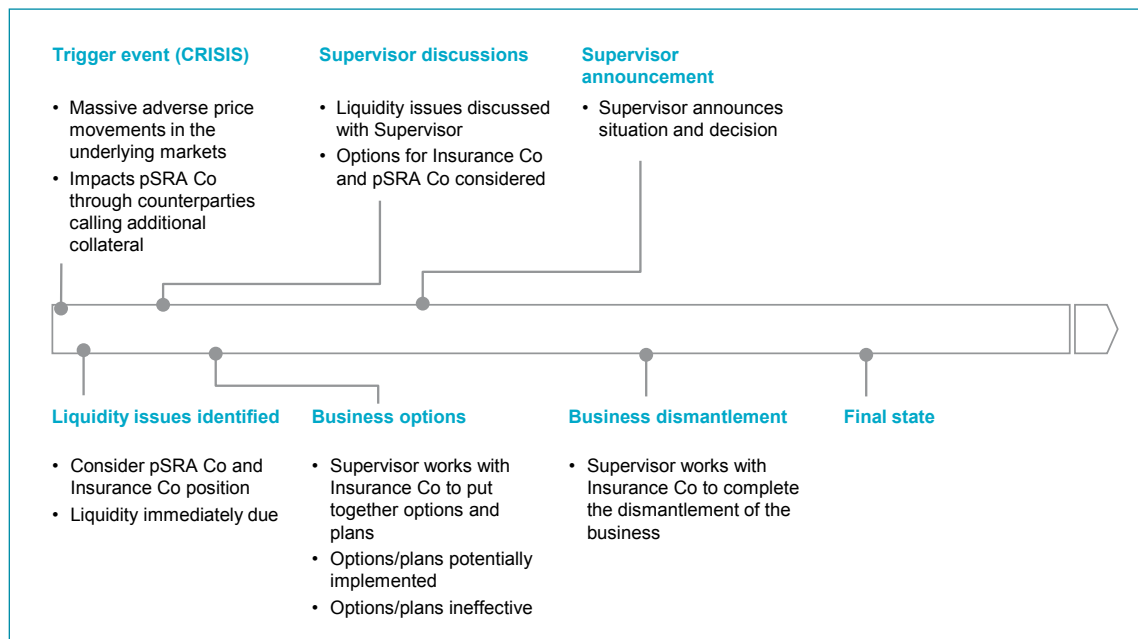
As management are considering and acting on various options for recovering the business, they will be in dialogue with their respective insurance supervisors on both the current state of the insurer as well as the possible actions and their impact. The supervisors will monitor the insurer and management, however once it has become clear that liquidity problems cannot be avoided they will step in to look at alternative options for the insurer.



**Table 11: Possible options available to the supervisors**

Potential actions	Rationale and results
Weaken solvency rules	Temporarily allowing the insurer to operate under weakened solvency rules may allow the insurer to make funds available to pSRA Co. It may allow sufficient additional time for the insurer to recover. Capital guidance may be relaxed to ensure insurer moves back to adequacy following de-risking; although, the Minimum Capital Requirement provides a lower bound for action. Weakening of the solvency rules may also not be possible across jurisdictions where rules may be different.
Ring-fence the insurance operations	Ring-fencing will prevent contagion from pSRA Co spreading to other elements of the insurer operations. However it may not be fully effective if guarantees exist between the insurer and pSRA Co.
Run-off	Placing the insurer and its subsidiaries into run-off to pay existing beneficiaries with the assets remaining in the company. In this example, this is the action taken with the supervisors deciding to force the insurer to split it into two entities—one with pSRA Co (which enters liquidation) and the other with the remaining businesses.

These events can be summarised on a timeline as follows.

**Exhibit 22: Sequence of actions**

The liquidity issues, ring-fencing and run-off of the insurer in this example have an impact on many external stakeholders, as discussed in the following.

**Table 12: Impact on external stakeholders**

<b>Stakeholder group</b>	<b>Impact of insurer resolution</b>
Insurers and reinsurers	<ul style="list-style-type: none"> <li>• Ring-fencing protects contagion spreading across the insurance group (although complications with any guarantees or transactions carried out at group level).</li> <li>• Increased cost of capital: due to perceived increased risk of the insurance industry, the cost of capital for remaining insurers may increase, applying upward pressure on pricing.</li> <li>• Buy-out opportunities: opportunity will be available to other insurers to a) run-off the back book; and, b) buy other valuable parts of business.</li> <li>• No significant impact on reinsurers.</li> <li>• Impact not relevant for systemic risk.</li> </ul>
Policyholders	<ul style="list-style-type: none"> <li>• Loss (or partial loss) of policy payouts if assets within the insurer are used to meet demands on pSRA Co (where the assets in the insurer end up less than the liabilities to policyholders and where ring-fencing is ineffective).</li> <li>• Impact not relevant for systemic risk.</li> </ul>
Banks	<ul style="list-style-type: none"> <li>• Possible default on collateral obligations, early termination payments and lack of protection: <ul style="list-style-type: none"> <li>— Where banks are counterparties, then default of pSRA Co will have direct impact.</li> <li>— Maybe some initial loss of coverage for product offered by pSRA Co but if pSRA Co is a small player in overall market so other players soon step in.</li> </ul> </li> <li>• Impact possibly relevant for systemic risk if size of activity is sufficiently large to cause counterparty to fail.</li> </ul>
Asset Managers	<ul style="list-style-type: none"> <li>• Reduction in business due to the run-off of the insurer.</li> <li>• Impact not relevant for systemic risk.</li> </ul>
Pension funds/other investors	<ul style="list-style-type: none"> <li>• Investments fall: <ul style="list-style-type: none"> <li>— As pension funds are large investors in insurers and other companies, when the insurer fails, they will incur a relatively small loss of a proportion of the value of shares that they hold.</li> <li>— Some additional loss in value may result from broader ownership of shares in other affected insurers.</li> </ul> </li> <li>• Impact not relevant for systemic risk.</li> </ul>
State/government	<ul style="list-style-type: none"> <li>• Political impact and impact on guarantee schemes, but not relevant for systemic risk.</li> </ul>
Local (and international) economy	<ul style="list-style-type: none"> <li>• Impact not relevant for systemic risk: <ul style="list-style-type: none"> <li>— Unemployment due to job losses as pSRA is liquidated.</li> </ul> </li> </ul>

The key issues in this example that need to be addressed to avoid the emergence of such situations are:

1. The reliance by counterparties of the derivatives-dealer business on the guarantees from an insurance group, as also reflected in the rating, prior to the emergence of difficulties;
2. The lack of a group-wide risk view of insurance supervision, that relied on the ability to ring-fence insurance assets, and had no mandate to look into non-insurance businesses; and,
3. A proper legal assessment by the group supervisor on the usage of inter-group guarantees between insurance regulated group entities and non-insurance regulated group entities.

## **B. Example of mismanagement of short-term funding**

An insurance company (pSRA Life) is engaging in a massive securities-lending programme. To enhance returns further, the cash collateral received for the securities is reinvested in very illiquid and high risk assets.

In the course of massive price drops of the securities in the lending programme, their recipients are entitled to a return of collateral, which they may need as liquidity to meet margin calls on derivative transactions. However, pSRA Life is not able to realise sufficient money from an immediate sale of securities given the prevailing market environment.

As pSRA Life fails to meet its obligations to provide liquidity to its counterparties, the supervisors are likely to intervene to stop pSRA Life from making any further provision of liquidity to counterparties with the goal to protect policyholder funds. The counterparties would then no longer be able to honour their matching obligations to other financial institutions, potentially leading to contagion and disruption of the financial markets. Of course, counterparties would attempt to receive assets from pSRA Life under the lending agreement, but even if successful, this would come too late to prevent a systemic effect.

The key issues in this example that need to be addressed to avoid the emergence of such situations are:

1. The lack of a risk-based view of all activities of the insurance company that fails to recognise the double-gearing that has happened; and
2. The failure to recognise the implications of the massive contingent liquidity provided by the life insurer in particular to derivatives dealers.

### 3.4.5. Bank comparison: understanding the cost of failure

Similar to the situation described above in insurance, banks also have a range of options to attempt to prevent failure, and manage impact of failure on stakeholder as it happens.

#### Exhibit 23: Resolution options for a bank (illustrative case example)

		Description	Practical limits	Implication on main stakeholders
Closed bank – bank is a gone concern	Liquidation/ deposit pay-off	<ul style="list-style-type: none"> <li>• Liquidate all assets</li> <li>• Pay back deposits and transfer remaining revenue to debt holders</li> </ul>	<ul style="list-style-type: none"> <li>• Liquidity of assets</li> <li>• Bondholder impact</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Depositors:</b> None</li> <li>• <b>Creditors:</b> Losses incurred</li> <li>• <b>State:</b> Some support required</li> <li>• No future losses</li> </ul>
	Closed Purchase and Assumptions (P&A)	<ul style="list-style-type: none"> <li>• Sell foreign operations (loans, deposits, infrastructure) to healthy and willing buyer</li> <li>• Sell domestic deposits and sell or liquidate domestic loans</li> <li>• Transfer revenue to debt holders</li> </ul>	<ul style="list-style-type: none"> <li>• Limited pool of strategic buyers</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Depositors:</b> None</li> <li>• <b>Creditors:</b> None</li> <li>• <b>State:</b> Costs to make bank buyable/ attractive for buyer</li> </ul>
	Bridge bank	<ul style="list-style-type: none"> <li>• Maintain current set up—Loan wind down over 10 years</li> <li>• Initialise actions to improve funding situation and to share cost burden with creditors</li> </ul>	<ul style="list-style-type: none"> <li>• Restructuring Bank's capital structure</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Depositors:</b> None</li> <li>• <b>Creditors:</b> Losses incurred</li> <li>• <b>State:</b> Im. capital injection to close funding gap; Further booking loss</li> <li>• May face further losses in future</li> </ul>
Open bank – bank continues as going concern	Government-assisted			
	Direct government aid	<ul style="list-style-type: none"> <li>• Inject new capital</li> <li>• Guarantee bad assets and thereby lower RWA</li> </ul>	<ul style="list-style-type: none"> <li>• Feasibility of bridge bank solution</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Depositors:</b> None</li> <li>• <b>Creditors:</b> None</li> <li>• <b>State:</b> Takes all the risk and costs</li> </ul>
	Assisted merger	<ul style="list-style-type: none"> <li>• Merge with another healthy financial institution with government assistance in the form of guarantees or direct support</li> <li>• Sell bank or individual functions</li> </ul>	<ul style="list-style-type: none"> <li>• Financial strength of strategic buyers</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Depositors:</b> None</li> <li>• <b>Creditors:</b> None</li> <li>• <b>State:</b> Has to bear the risk and costs of assisting merger</li> </ul>
	Private sector solutions	<ul style="list-style-type: none"> <li>• Infuse capital from existing shareholders or other interested parties</li> <li>• Merge with another healthy financial institution</li> <li>• Sell business lines</li> </ul>	<ul style="list-style-type: none"> <li>• Private capital infusion/merger with healthy fin. institution</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Depositors:</b> None</li> <li>• <b>Creditors:</b> Taken all the risk and costs</li> <li>• <b>State:</b> None</li> </ul>

In contrast to insurance, the key considerations in the banking context are:

- Whether ongoing funding can be secured from depositors and bond investors;
- How the settlement system can be protected from interruption;
- How the flow of credit into the economy can be maintained; and,
- How contagion of other financial institutions can be avoided.

As the experience shows, governments have repeatedly decided to commit state resources to avoid disorderly bank failures. The following exhibit shows the massive aggregated public interventions in the banking sector in the European Union covering capital injections, guarantees on bank debt, impaired asset relief measures and liquidity and bank funding support measures from October 2008 to December 2009.

**Exhibit 24: Public interventions in the EU banking sector**

Effective amounts			Committed amounts		
	In €bn	In % of GDP		In €bn	In % of GDP
Capital injections	226.5	1.9	Capital injections	393.0	3.3
Guarantees on bank liabilities	916.4	7.7	Guarantees on bank liabilities	2,899.1	24.5
Relief of impaired assets	329.3	2.8	Relief of impaired assets	329.3	2.8
Liquidity and bank funding support	66.8	0.6	Liquidity and bank funding support	123.2	1.0
<b>Total</b>	<b>1,539.0</b>	<b>13.0</b>	<b>Total</b>	<b>3,744.6</b>	<b>31.6</b>

Source: *Asset relief measures in the EU - Overview and Issues*, Boudghene, Maes and Scheicher (2011)

## 4. Policyholder protection in the insurance industry

The experiences of banks detailed above are in stark contrast to the existing resolution process in the insurance sector where failures are limited and do not result in such dramatic and costly public interventions.

### 4.1. Introduction

In its report, *Key Attributes of Effective Resolution Regimes of Financial Institutions* (October 2011), the FSB describes insurance policyholder protection as a key part of effective resolution regimes and states that after the avoidance of systemic risk, priority should be given to the protection of insurance policyholders and bank depositors (see Preamble and paragraph 2.3).<sup>35</sup> Providing secure policyholder protection may not directly assist with systemic stability; however, it provides policyholders and depositors with additional security regarding their individual savings and the promises received. This peace of mind can be an important element of stability, particularly during periods of financial stress and uncertainty.

Policyholder protection has historically been the dominant objective of supervision and regulation in the insurance industry because the policyholders are paying up front for a future promise necessitating the financial health of the companies. There are measures in place providing several levels of safety nets for efficient and comprehensive policyholder protection. These measures include the following:

- Solvency requirements; risk-based capital approach considering the basic elements of the insurance business model (including prudent technical provisions and asset-liability matching);
- Supervision of insurers; and,
- Insurance Guarantee Schemes (IGS).

The first two items have been extensively discussed in former Geneva Association publications and have been summarised in the first section of this report. In this section, we focus on IGS explaining the general concept and elaborating on the existing and planned IGS in Europe and in

35 FSB, *Key Attributes of Effective Resolution Regimes of Financial Institutions* (October 2011). Paragraph 2.3 “As part of its statutory objectives and functions, and where appropriate in coordination with other authorities, the resolution authority should: (i) pursue financial stability and ensure continuity of systemically important financial services, and payment, clearing and settlement functions; (ii) protect, where applicable and in coordination with the relevant insurance schemes and arrangements, such depositors, insurance policy holders and investors as are covered by such schemes and arrangements; (iii) avoid unnecessary destruction of value and seek to minimise the overall costs of resolution in home and host jurisdictions and losses to creditors, where that is consistent with the other statutory objectives; and (iv) duly consider the potential impact of its resolution actions on financial stability in other jurisdictions.”

the U.S. In the Appendix we provide a more detailed description of the scheme as currently exists in the U.S.

IGS have been created to provide last-resort protection to policyholders, where the failure of an insurer cannot be resolved without significant negative impacts (e.g. reduced benefits) for policyholders.

The main purpose of IGS is to **protect consumers**, which is important for most jurisdictions as some insurance products are important to the social system. Governments want to ensure that policyholders are protected from significant losses in wealth due to an insurer's failure.

By protecting the policyholder, the industry gains the **confidence** of consumers and provides **stability** to the financial system, albeit indirectly. Policyholders who are confident that their funds are secure will stop short of surrendering their accounts. However, at the same time, funding IGS is adding costs to a healthy part of the insurance industry and could potentially jeopardise other players of the sector.

As positive and important as the above arguments are, IGS can create issues that would negatively impact the market if not considered carefully. Introducing IGS can create incentives which may adversely affect the behaviour (moral hazard) of market participants and thus negatively impact competition. As IGS protection must be equal in a given market, the cost for new market entrants must be carefully assessed.

The costs and benefits of IGS must be weighed carefully. The benefits of consumer protection and market confidence and stability must be assessed against the costs of an IGS which can be classified in three categories: the costs for providing the guarantee, the administration costs for running an IGS and the indirect costs of potential negative market impacts. The costs for IGS have not been significant in the past, neither in Europe nor in the U.S. Following the Oxera study in 2007<sup>36</sup> the costs in Europe stayed below 0.1 per cent of total premiums. Markets with a few big players with large market-shares are more challenging for IGS than well distributed markets as a failure of a large player could create a significant problem for the whole market place. Costs of failures are distributed from failing companies to healthy companies and thus in the end to the policyholders of the healthy entities, since it can be expected that costs are ultimately passed to end-users. IGS can be set up on an ex-post or ex-ante funded basis.

For IGS to work they need to be embedded in an overall strategy of policyholder protection constructed from the various pillars stated at the beginning of this section. A prudent insurance business model, appropriate solvency regimes, comprehensive regulation and, as last resort, well balanced IGS.

## **4.2. Insurance guarantee schemes in Europe**

In Europe, 12 out of the 30 European Union and European Economic Area countries operate one or more IGS. In terms of gross written premiums, roughly two thirds of the total European insurance market is protected by an IGS.<sup>37</sup>

The Oxera study which had been commissioned by the EC provides an overview of the schemes existing in the EU and shows that they vary in coverage, funding and design—reflecting the corresponding markets, legal environments and particularities. On the basis of this study, a European Commission white paper analyses a Europe-wide introduction of an IGS on a minimum-harmonised basis. The different conditions prevailing in national markets and the existence

36 Oxera (2007) *Insurance Guarantee Schemes in the EU: Comparative analysis of existing schemes, analysis of problems, and evaluation of options*, available at [http://ec.europa.eu/internal\\_market/insurance/docs/guarantee\\_schemes\\_en.pdf](http://ec.europa.eu/internal_market/insurance/docs/guarantee_schemes_en.pdf)

37 European Commission (2010) *White Paper on Insurance Guarantee Schemes*, available at [http://ec.europa.eu/internal\\_market/consultations/docs/2010/whitepaper-on-igs/whitepaper\\_en.pdf](http://ec.europa.eu/internal_market/consultations/docs/2010/whitepaper-on-igs/whitepaper_en.pdf).

of moral hazard aspects at different levels, however, provide a case against an integrated IGS operating across Europe.

Currently, cross-border activities, either in the form of branch structures or using the freedom of service possibilities, are still limited throughout Europe but increasing cross-border activities in the future would have an impact on the different national IGS solutions. In particular, the different treatment of policyholders having purchased a policy with a domestic insurer or one operating under the freedom of service status has to be aligned in a future continental solution. Moreover, careful distinction between the situations in the life and non-life sectors is needed.

A legislative proposal on IGS in the EU is expected in summer 2012.

## **4.3 Insurance guarantee schemes in the U.S.**

### **The nature of U.S. insurance receiverships**

U.S. insurance companies are expressly excluded from the definition of a debtor under the federal Bankruptcy Code.

As a consequence, a failed insurance company does not enter bankruptcy, but rather is placed in receivership by the insurance regulator of the state that granted the insurer's charter. The receivership proceeding is conducted according to the state's insurance receivership statute, which in every state bears some resemblance to bankruptcy law. The proceeding is conducted before a state judge, and the insurance commissioner of the domiciliary state serves as the statutory receiver of the company.

Insurance receivership laws vary somewhat from state to state, but all have provisions for three basic levels of receivership: namely conservation, rehabilitation and liquidation.

#### **Conservation**

Conservation is a process in which the insurance commissioner, as conservator, maintains the status quo (e.g. custody of records and assets) while determining the seriousness of the insurer's problems. If the conservator is satisfied that any significant problems have been addressed, the company can be released from conservation. If not, the company may proceed to either of the more severe forms of receivership.

#### **Rehabilitation**

Rehabilitation is where the commissioner, as rehabilitator, is vested with title to the company's assets and control of company operations. Rehabilitation is in some ways analogous to a Chapter 11 bankruptcy reorganisation. The objective, if possible, is to develop a court-approved plan of rehabilitation intended to address the problems that made the receivership necessary. The outcome may be the eventual release of the company from rehabilitation, or it may be the most severe form of receivership, liquidation.

#### **Liquidation**

Liquidation is analogous to a Chapter 7 liquidating bankruptcy. The commissioner, as liquidator, is charged with responsibility for marshalling the assets of the insurer, evaluating the claims of policyholders and other creditors against the insurer, and distributing the marshalled assets to approved claimants in the manner prescribed by the state's receivership law.

## **The role of Guaranty Associations (GAs) in receiverships**

Under the insurance acts as adopted in the various U.S. states, NOLHGA's<sup>38</sup> member Guaranty Associations (GAs) become actively involved in an insurer insolvency resolution when their obligations to consumers are triggered by an order of the receivership court placing the insurance company into liquidation and finding it to be insolvent.

## **Guaranty Associations' coverage obligations**

Once triggered, a GA must pay, up to coverage limits, any claims that are or become ripe for payment and, in the case of non-cancellable contracts, such as life and annuity contracts, must make sure the coverage continues, as long as the consumer pays any required premium. Each state's legislature establishes by law the coverage for the residents of its state by adapting national model life/health and property/casualty GA statutes to local conditions and policy priorities. Most life/health GAs provide coverage at limits of at least US\$300,000 for life insurance death benefits, US\$100,000 for life insurance cash surrender values, US\$250,000 for annuity withdrawal or payment values and US\$100,000 for health insurance benefits.

## **Flexibility in the manner of satisfying Guaranty Associations' obligations**

GAs are provided with some flexibility in how to deliver mandated protections to consumers, and health benefits, depending on the type of contract. GAs do not cover contractual benefits that are not guaranteed by the insurer, or as to which the consumer has agreed to bear market risks (e.g. fluctuations in the value of variable annuity portfolios that are not the subject of insurer guarantees).

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38 National Organization of Life and Health Insurance Guaranty Associations.



## 5. Outlook

As discussed in Section 3, the recovery or resolution of a failed (re-)insurer can be managed in an orderly fashion and has no disruptive effect on the financial system. Only if insurance companies engage in activities outside their core insurance business could systemic risk be generated. These are the scenarios that supervisors have to focus on and develop a framework to respond to these potential risks.

In fact, the experience during crises has shown that the insurance industry can provide a backbone to longer-term financial flows into assets and therefore contribute to the overall stability of the financial system, which is supported by BIS research (July 2011).<sup>39</sup>

Some insurance groups and companies may engage in potentially systemically risky activities (pSRAs), and in many circumstances the failure of such entities can still be managed in such a way as to avoid a disruption of the financial system. As Section 3 shows, there may, however, be scenarios where entities operate pSRAs massively in a deficiently regulated environment in such a way that they pose a risk to the stability of the financial system should they fail.

Global financial supervisors should develop the instruments—including indicators and metrics—to identify and assess systemically risky activities. Supervisors should concentrate their efforts on companies engaging in those activities, on a massive scale, that potentially can become systemically relevant (pSRAs), where a disorderly failure could create harm to the financial industry and the wider economy, and should avoid wasting energy and attention on those activities that can pose no threat to the system—including all insurance activities.

There are a number of developments in the supervision of insurance groups and their broader activities that reinforce systemic stability.

Global supervisors should improve the ability to respond appropriately in the event of the failure of an insurance-led group that engages in pSRAs. For this, it is necessary in particular to identify the need for international cooperation, and understand the relationship between the stakeholders in the insurance business and the pSRAs in a recovery or resolution scenario.

As discussed in Section 2, insurance activities do not pose any systemic risks. Rather, insurance is a stabilising force in the financial system, and even within the connections of the insurance industry, the failure of a large reinsurer would have only a small disruptive effect on the direct insurance sector. However, there may be scenarios where insurance-led groups operate in other financial activities that are pSRAs, and whose failure could have severe implications for the financial system. All stakeholders are required to contribute to the strengthening of the global financial system and insurance's place in it.

39 BIS (2011) *Fixed income strategies of insurance companies and pension funds*, Committee on the Global Financial System, July, available at <https://www.bis.org/publ/cgfs44.pdf>.

In the first instance, **insurance management** is responsible for containing the potential risk posed by their institution to the financial system. They will define what the core businesses are, and test the strategic validity of running any expansion into bank-like businesses to ensure it is in the best interest of shareholders and customers to put financial and reputational capital at risk for activities outside insurance.

Also, the wider the activities of an insurance group are, the more important it becomes to ensure that an appropriate risk appetite is agreed for each activity and adequate risk management exists—from the top-level down to the operational controls. The risk management framework needs to look across all operations, and create an understanding of what events could bring the business down (“reverse stress testing”). Management needs to review regularly those “terminal events” to assess whether their consequences are truly in line with risk appetite.

Finally, management teams need to evaluate the implications of their corporate group structures, and how operating entities receive support in stress events in different parts of the group. For pSRAs, a Recovery and Resolution Plan should be developed to define how these activities can be disentangled from the actual insurance business. However, no such plan is needed for insurance activities.

In turn, **investors, rating agencies and markets** need to scrutinise the business models of the companies they invest in, and look beyond the day-to-day volatility and the standard contractual clauses to understand the dynamics of an investment in extreme events. For instance, AIG Financial Products is unlikely to have been able to operate as an apparently profitable derivatives-dealer business as it did, if CDS counterparties had not accepted the AAA-guarantees that the insurance group had provided to this business.

Global **policymakers and their international fora** need to continue with their effort to create the global rules that help avoid a repeat of the current crisis in the financial industry, where billions of taxpayer money had to be spent to bail out private companies. These efforts need to be directly targeted at those activities that have the potential of doing the damage and where incentives and burdens are misaligned. As the crisis has shown, these are banks’ excessive leverage, and the interconnectivity created through the global derivatives markets.

But it is important that in the course of these efforts, those activities in the financial industry that help to stabilise global money flows—as do insurance businesses—are strengthened, and not weakened. Also, as the agenda for regulatory reform in the financial sector is set at the political levels, decision-makers need to be clear about the objectives and the scope. A situation where widespread regulatory innovation and expansion is initiated under the header of “Systemic Stability” in areas where there are no doubts about the effectiveness of the existing regulation should be avoided as it will not result in an effective and well targeted regulatory framework.

Finally, **regulators and supervisors** in the insurance sector need to test the existing global mechanisms to work through a financial crisis and the large-scale failure of an insurance-led group. Such tests may highlight gaps in each jurisdiction’s resolution toolbox which should be considered relative to current and planned regulatory developments. However, while there probably is a need to strengthen certain supervisory instruments in global insurance, this is not because of “systemicity”, but rather because of the need to coordinate classic creditor/policyholder protection better between jurisdictions, to suit global institutions and markets.

In order to be able to deal better with global insurance-led financial groups, supervisors should look to enhance their current approach to supervising insurance-led financial groups through a number of measures, which are consistent with current regulatory and supervisory trends, and in particular Solvency II.

Supervisors should adopt group-wide<sup>40</sup> risk-based supervision covering all activities of a group. The activities should include risk and liquidity management and governance requirements. Group-wide supervision will ensure that every part of an international or cross-sectoral group is supervised properly, including intra-group commitments. There should be clear responsibilities of lead regulators and supervisory colleges which require them to engage with management in an open and challenging dialogue. It will require supervisors to be appropriately resourced to ensure they have the skills and capabilities.

Supervisors should implement a system of global surveillance to identify emerging pSRAs in insurance-led entities, and measure their relevance for global financial systems. Where pSRAs are measured as relevant and the company engaging in the pSRAs is classified as a G-SIFI, supervisors may choose to place limits on these activities or the volume of these activities within insurance groups. Supervisors may consider implementing additional policy measures for those specific pSRAs if the respective risk is not already provided for in the applied solvency and supervisory regime.

Supervisors should coordinate internationally the relevant mechanisms such as policyholder protection, resolution and protection of derivative counterparties. This will ensure that any potential burden of failure is distributed to stakeholder groups fairly. Supervisors should create greater transparency about the commitments of insurers to stakeholder groups other than policyholders (e.g. derivative counterparties) in the event of stress. This will ensure that the risks that policyholders face are aligned with expectations and protection mechanisms.

The “systemic risk” developments in the banking world would be a poor guide to what changes are necessary in the regulation and supervision of insurance, given the differences in business models and types of institutions. Where insurance-led groups participate in banking-like pSRAs, the activity needs to be understood in the context in which it is being carried out with similar approaches applied and the applicable sector solvency regime being used to capture the risk.

<sup>40</sup> The IAIS has presented principles for the supervision of international insurance groups, for setting up a group supervisor and for establishing supervisory colleges (*IAIS Position statement on key financial stability issues*, 4 June 2010, [http://www.iaisweb.org/\\_\\_temp/IAIS\\_Position\\_Statement\\_on\\_Key\\_Financial\\_Stability\\_Issues.pdf](http://www.iaisweb.org/__temp/IAIS_Position_Statement_on_Key_Financial_Stability_Issues.pdf), p. 5).



## Appendix

### Insurance guarantee schemes: further details of the U.S. system

We provide further details on how these protection schemes are currently set up and work using the U.S. system as an example. Information from the National Organization of Life & Health Insurance Guaranty Associations (NOLHGA)<sup>41</sup> has been used for the following section.

#### A.1. The U.S. system for policyholders protection in cases of failed insurers

The process in the U.S. includes a three-stage oversight and resolution as described in the following box:

U.S. insurance companies are expressly excluded from the definition of a debtor under the federal Bankruptcy Code.

As a consequence, a failed insurance company does not enter bankruptcy, but rather is placed in receivership by the insurance regulator of the state that granted the insurer's charter. The receivership proceeding is conducted according to the state's insurance receivership statute, which in every state bears some resemblance to bankruptcy law. The proceeding is conducted before a state judge, and the insurance commissioner of the domiciliary state serves as the statutory receiver of the company.

Insurance receivership laws vary somewhat from state to state, but all have provisions for three basic levels of receivership: namely conservation, rehabilitation and liquidation.

##### Conservation

Conservation is a process in which the insurance commissioner, as conservator, maintains the status quo (e.g. custody of records and assets) while determining the seriousness of the insurer's problems. If the conservator is satisfied that any significant problems have been addressed, the company can be released from conservation. If not, the company may proceed to either of the more severe forms of receivership.

##### Rehabilitation

Rehabilitation is where the commissioner, as rehabilitator, is vested with title to the company's assets and control of company operations. Rehabilitation is in some ways analogous to a Chapter 11 bankruptcy reorganisation. The objective, if possible, is to develop a court-approved plan of rehabilitation intended to address the problems that made the receivership necessary. The outcome may be the eventual release of the company from rehabilitation, or it may be the most severe form of receivership, liquidation.

##### Liquidation

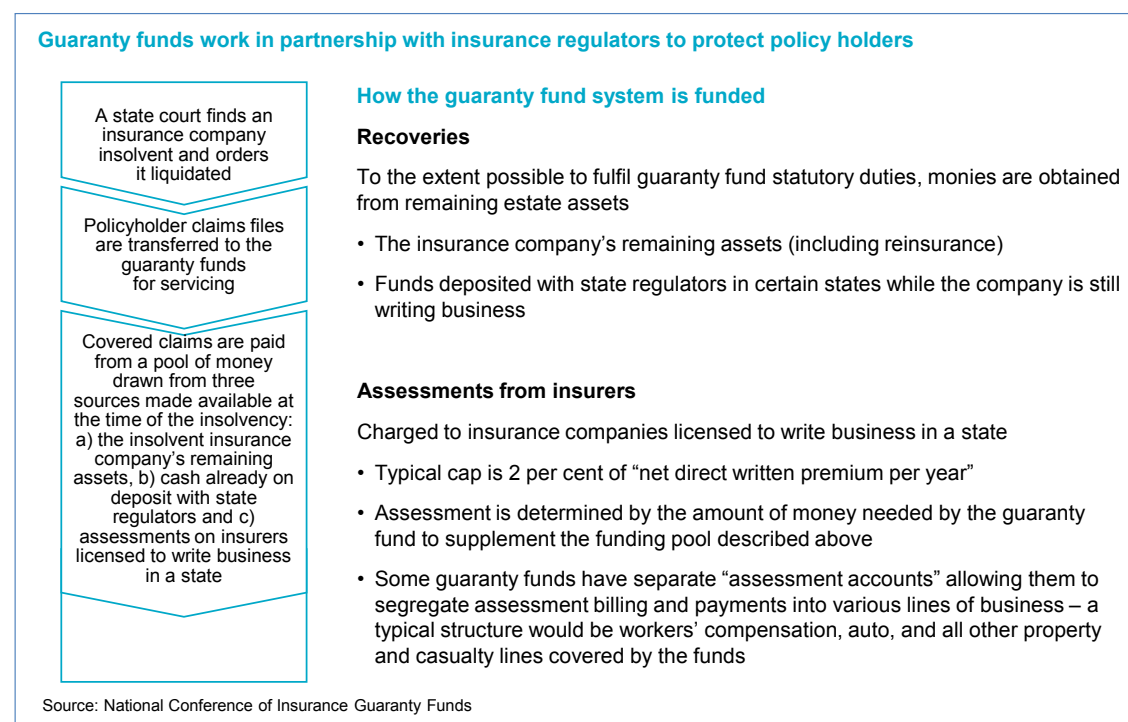
Liquidation is analogous to a Chapter 7 liquidating bankruptcy. The commissioner, as liquidator, is charged with responsibility for marshalling the assets of the insurer, evaluating the claims of policyholders and other creditors against the insurer, and distributing the marshalled assets to approved claimants in the manner prescribed by the state's receivership law.

<sup>41</sup> NOLHGA (2009), *The Life and Health Insurance Guaranty System, and the Financial Crisis of 2008-2009*, Peter G. Gallanis, President, NOLHGA, available at <http://www.nolhga.com/resource/file/NOLHGAandFinancialCrisis.pdf>.

## A.2 The funding of the guaranty funds in the U.S.

Using information from the National Conference of Insurance Guaranty Funds (NCIGF),<sup>42</sup> the following exhibit outlines the process of funding the guaranty funds in the U.S.

### Exhibit 25: Process of funding the guaranty funds in the U.S.



## A.3 Mechanism of the guaranty funds

NOLHGA provides an explanation of the process of payment highlighting the length of time to resolve to run-off.

### Assumption reinsurance transactions:

Particularly in smaller insolvencies (or in periods when insolvencies are few and isolated), a resolution plan may involve the transfer of the in-force obligations of the failed insurer to a healthy insurer. The new carrier agrees to assume these liabilities (in what is commonly known as an assumption reinsurance transaction) in exchange for a transfer of assets from the estate of the failed insurer plus the Guaranty Associations (GAs)' payment of an amount that satisfies the obligations of GAs to their resident consumers.

In an assumption reinsurance transaction, the GAs usually bear the costs of protecting consumers at the time the transaction closes; in other words, the GAs pay at the front end all of the costs they will ever bear for protecting consumers in such a resolution plan.

### Enhancement plans in extended run-offs:

Alternatively, GAs may participate in a resolution plan in which they supply funds to enhance the assets of the insolvent estate and apply those funds as needed over time (years or even decades) to pay insurance and annuity obligations as the insolvent insurer's obligations come due over an extended run-off period.

By participating in such an enhancement plan rather than an assumption reinsurance transaction, GAs can defer having to fund their obligations to consumers until the time when those obligations actually mature. Enhancement plans have been used in a number of insolvency cases, particularly when the size of the case or concerns about maximizing the financial capacity of the guaranty system appeared to justify such a strategy.

In either case (an assumption reinsurance agreement or enhancement plan), GA funds are combined with available assets from the estate to finance the costs of protecting consumers.

<sup>42</sup> <http://www.ncigf.org/>. A non-profit, member-funded association which provides national assistance and support to the property and casualty guaranty funds located in each of the 50 states and the District of Columbia.

## A.4 The actual need for assessments

Two other aspects of life insurer insolvencies are important in this connection. First, most life insurer insolvencies involve only small shortfalls of assets versus liabilities. The shortfalls are seldom more than 15 per cent in larger cases, and are more typically in the range of 5 per cent to 10 per cent. Second, under the insurance receivership statutes of all states, when estate assets are distributed, policyholders have an absolute priority over the lower-ranking claims of general creditors and subordinated creditors.

These two facts, combined with GAs' ability to utilise enhancement plans to spread their obligations over a multi-year run-off, permit GAs to respond to peak years of insolvency activity (historically concentrated in a couple of bad years within a much longer cycle of relative calm) by spreading their resolution costs over a much longer period. In effect, GAs are able to defer their need for financing to match the maturity of payment obligations on covered insurance and annuity contracts.

### **GAs protect consumers, not failed insurers**

The core responsibility of GAs is to protect consumers whose insurers have failed, not the insurers. Stated differently, GAs were not created to bail out financially troubled insurance companies, but rather to ensure that individual consumers receive a base level of financial protection during their insurers' insolvency resolution process.

## A.5. Guaranty system financing and capacity considerations

The guaranty system relies upon a combination of financing sources and resolution techniques to deliver protection for consumers. A clear picture of the financial capacity of the system requires an understanding of those sources and resolution techniques.

### **Estate assets provide significant resolution plan financing**

Life insurer resolution plans employ the insolvent insurer's remaining assets as the first level of financing used to protect all insurance consumers pro rata both for consumer benefits covered by GAs and for insurance benefits that GAs do not cover (e.g. policy or annuity benefits in excess of GA caps).

Additionally, as noted above, U.S. insurance receivership laws give policyholders and GAs an absolute priority over all other claims against an insolvent insurer's assets (aside from receivership administrative costs). This priority (requiring policyholder and GA claims to be paid first, and in full, before any payment of general creditors' or subordinated claims) boosts the financial resources available for the resolution plan. Moreover, the conservative nature of life insurance investing, strong regulation, and rating agency pressure usually make the shortfall of assets to liabilities relatively small for failed life insurers particularly for larger, diversified insurers. Except in the cases of a few small life companies where management looted the insurers' assets, shortfalls in excess of 25 per cent of policy liabilities are almost unheard of; shortfalls in the range of 5 per cent to 10 per cent are more typical.

GAs have statutory authority to borrow money against the pledge of future assessment. To date that provision has rarely been used.

### **Post-insolvency funding**

Unlike the FDIC, the insurance guaranty mechanism does not involve a pre-funded war chest available in advance of a particular insolvency. Rather, the funding structure may be described as a post-insolvency funding system, in which assessments are collected only when they are needed to help pay the costs of insurance benefits coming due to consumers. The advantage of this approach is that capital is not removed from the industry prior to the need for such capital, and consumers are not required to pay in advance (through higher premiums) for funds that may never be needed to protect other consumers in an insolvency.

### **GA assessment funding from member companies**

The most significant source of GA funding is through assessments that GAs collect from the insurance industry. Each GA is authorised to assess and collect, from insurance companies writing covered lines of business in the state (the GA's member insurers), the amount needed to satisfy the GA's obligations to policyholders. Member insurers are obliged to pay those assessments, which are levied in proportion to their market shares, as a condition to maintaining their authority to write

business in the state. There are caps on the amount that can be assessed against any company in a given year. For life and health insurers, the cap is typically 2 per cent of a company's gross premium in the assessed line of business and for P&C insurers, the cap is typically 1 or 2 per cent of net written premium. In most states, an assessment can be deferred or abated if it would compromise the financial strength of the company being assessed.

For that reason, collection of GA assessments has never been a problem for the guaranty system.



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## The Geneva Association

### The Geneva Association:

- ***provides a platform for insurance CEOs:***

The Geneva Association acts as a forum for its members, providing a worldwide unique platform for the top insurance CEOs. It organises the framework for its members to exchange ideas and discuss key strategic issues, especially at the General Assembly where once per year more than 50 top insurance CEOs gather.

- ***conducts research:***

The Geneva Association investigates the growing importance of worldwide insurance activities in all sectors of the economy. It tries to identify fundamental trends and strategic issues where insurance plays a substantial role or which influence the insurance sector. In parallel, The Geneva Association develops and encourages various initiatives concerning the evolution- in economic and cultural terms-of risk management and the notion of uncertainty in the modern economy.

- ***organises expert networks:***

The Geneva Association organises global networks for experts in various fields linked to insurance: finance, regulation, risk management, pension provision, health, etc. It also manages several extra-company networks of specialists from its members' companies: chief financial officers, chief risk officers, chief investment officers, chief communication officers, the Amsterdam Circle of Chief Economists (ACCE), as well as the Liability Regimes Planning Board with leading underwriters and claims-handlers and the *PROGRES*. *Net* initiative for chief regulation officers and top regulatory experts in insurance.

- ***maintains dialogue with international institutions:***

The Geneva Association uses its special risk and insurance expertise and in-depth knowledge to raise subjects of relevance to the insurance sector in global forums. The Geneva Association is the leading interface of the insurance industry with relevant international institutions and advocates the role of insurance and its relevance to the modern economy.

- ***publishes leading insurance journals, newsletters, books and monographs:***

- **journals:** *The Geneva Papers on Risk and Insurance Issues and Practice* (4 issues per year) and *The Geneva Risk and Insurance Review* (2 issues per year);
- **special reports:** Geneva Association reports tackles issues of strategic importance to the insurance industry that warrant special attention and particular analysis;
- **The Geneva Association newsletters**, usually published twice a year, on Insurance and Finance, Risk Management, PROGRES (regulation and supervision), Insurance Economics, Four Pillars (life insurance, pension and retirement), Health and Ageing, General Information and World Fire Statistics;
- **working paper series (Etudes & Dossiers):** conference proceedings, special reports, etc;
- **books and monographs.**

- ***organises conferences and seminars:***

Throughout the year, The Geneva Association organises or supports about 20 conferences and seminars on topics which are of high relevance to the insurance industry, gathering experts from all sectors and backgrounds to combine their knowledge. The events are topics- and issues-oriented and aim at developing new knowledge and insights as well as providing platforms for expert opinion interchange.

■ *stimulates and sponsors research in insurance and risk management:*

The Geneva Association has several ways of stimulating and sponsoring research work in risk management and insurance-related fields through the availability of research grants, scholarships, prizes and support for publishing.

The Geneva Association membership is limited to a maximum of 90 persons, the CEOs of the most prominent insurance companies in the world. It is a non-profit organisation based in Geneva, Switzerland.

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## Publications of The Geneva Association

*For a complete list of our publications and how to get them,  
consult our website at [www.genevaassociation.org](http://www.genevaassociation.org)*

### The Geneva Reports—Risk and Insurance Research

- No. 4: [\*September 11—Ten Years On: Lasting impact on the world or risk and insurance\*](#), edited by Patrick M. Liedtke and Kai-Uwe Schanz
- No. 3: [\*Anatomy of the credit crisis—An insurance reader from The Geneva Association\*](#), edited by Patrick M. Liedtke
- No. 2: [\*The insurance industry and climate change—Contribution to the global debate\*](#), by The Geneva Association, July 2009
- No. 1: [\*Regulation and intervention in the insurance industry—fundamental issues\*](#), by E. Baltensperger, P. Buomberger, A.A. Iuppa, B. Keller and A. Wicki, February 2008

### Newsletters (also available as e-newsletters)

- **Insurance and Finance** deals with research activities in the fields of finance where they are relevant to the insurance and risk management sector.
  - [\*Special Issue on G-20 London Summit\*](#), April 2009
- **Insurance and Finance special contributions:**
  - [\*\*SC12\*\* \*Insurance Companies' Highly Controlled Use of Derivatives Has Also Resulted in Protection from the Rogue Trader Problem\*](#), by NAIC, January 2012
  - [\*\*SC11\*\* \*The Costs of the Financial Crisis for Insurance Policyholders\*](#), by Daniel Haefeli and Dr Kai-Uwe Schanz, May 2011
  - [\*\*SC10\*\* \*Variable Annuities with Guarantees and Use of Hedging\*](#), by The Geneva Association Financial Stability in Insurance Working Group, March 2011
  - [\*\*SC9\*\* \*The Global Financial Crisis and the Insurance Industry—Frequently Asked Questions\*](#), by Patrick M. Liedtke, Kai-Uwe Schanz, March 2010
  - [\*\*SC8\*\* \*Parallax: Striving for a More Resilient International Financial Architecture\*](#), by Patrick M. Liedtke, November 2009
  - [\*\*SC7\*\* \*The Geneva Association Letter to the Finance Ministers and Central Bank Governors of the G-20\*](#), The Geneva Association, 5 November 2009
  - [\*\*SC6\*\* \*Everything you wanted to know about the crisis ...but were afraid to ask\*](#), by Denis Kessler, October 2009
  - [\*\*SC5\*\* \*G20 Falls Short on Insurance\*](#), by Patrick M. Liedtke, published in the *Financial Times*, 7 April 2009
  - [\*\*SC4\*\* \*Insurance Comments to the G-20 London Summit Leaders' Statement of 2 April 2009\*](#), by Patrick M. Liedtke, 6 April 2009
  - [\*\*SC3\*\* \*Lessons from the Credit Crisis: An Investment Practitioner's Point of View\*](#), by Guido Fürer and Jérôme Haegeli, 20 February 2009
  - [\*\*SC2\*\* \*The Credit Crisis and the Insurance Industry—10 Frequently Asked Questions\*](#), by Patrick M. Liedtke, November 2008
  - [\*\*SC1\*\* \*Credit Crisis and Insurance—A Comment on the Role of the Industry\*](#), by Patrick M. Liedtke, November 2008
- **PROGRES** contributes to the exchange of information on studies and initiatives aimed at better understanding the challenges in the fields of insurance regulation, supervision as well as other legal aspects.

- **Risk Management** summarises The Geneva Association's initiatives in the field of risk management and is open to contributions from any institution or company wishing to exchange information.
- **Insurance Economics** which serves as an information and liaison bulletin to promote contacts between economists at universities and in insurance and financial services companies with an interest in risk and insurance economics.
- **Four Pillars** provides information on research and publications in the field of social security, insurance, savings and employment.
- **Health and Ageing** brings together facts and figures linked to health issues for people aged 50-80 and productive ageing, to try to find solutions for the future financing of health.
- **World Fire Statistics.**
- **General Information.**

## **Journals**

*(published by Palgrave Macmillan for The Geneva Association)*

- **The Geneva Papers on Risk and Insurance—Issues and Practice.** This prestigious journal, published quarterly, leads its field, publishing papers which both improve the scientific knowledge of the insurance industry and stimulate constructive dialogue between the industry and its economic and social partners.
- **The Geneva Risk and Insurance Review** is an international journal published in annual volumes of two issues. Its purpose is to support and encourage research in the economics of risk, uncertainty, insurance and related institutions by providing a forum for the scholarly exchange of findings and opinions.

## **Working Papers “Etudes et Dossiers”**

These working documents present intermediary or final results of conference proceedings, special reports and research done by The Geneva Association and its partners. Among the last issues:

- *8th Geneva Association Health and Ageing Conference—Insurance and Dementia*, No. 382, November 2011
- *3rd Climate Risk and Insurance (CR+I) Seminar*, No. 381, November 2011
- *38th Seminar of the European Group of Risk and Insurance Economists*, No. 380, October 2011
- *M.O.R.E. 25 Seminar*, No. 379, September 2011
- *16th International Conference on Space Activities Development—Risk Management & Insurance Aspects*, No. 378, September 2011
- *13th Meeting of ACCE & 7.5th International Liability Regimes Conference*, No. 377, August 2011
- *9th ART OF CROS*, No. 376, August 2011
- *27th PROGRES International Seminar*, No. 375, July 2011
- *11th CEO Insurance Summit in Asia*, No. 374, July 2011
- *14th Joint Seminar of the European Association of Law and Economics and The Geneva Association “Law and Economics of Natural Hazards Management in a Changing Climate”*, No. 373, June 2011
- *1st Climate Change Summit for Asia’s Insurance Industry*, No. 372, May 2011
- *7th Insurance and Finance Seminar of The Geneva Association and Presentations on The Geneva Association’s Financial Stability in Insurance Initiative*, No. 371, April 2011
- *6th Chief Risk Officer Assembly, A vision for risk management in the “new normal”*, No. 370, March 2011
- *World Risk and Insurance Economics Congress*, No. 369, March 2011
- *7th Geneva Association Health & Ageing Conference, U.S. and French Long-Term Care Insurance Markets Development*, No. 368, January 2011
- *7th International Liability Regimes Conference of The Geneva Association and 12th Meeting on The Geneva Association’s Amsterdam Circle of Chief Economists*, No. 367, January 2011

Company failures are at the heart of the systemic risk discussions and are occupying the minds of many regulators, supervisors and policymakers the world over. Much of the discussion is centred around banking and the most recent experience during the financial crisis. Experts realise how much damage failures in banking often create and how quickly they can generate a systemic threat and consequently an immediate need for substantial and very expensive government interventions. The picture in insurance is much less clear to many of those experts. And while historically no insurance failure ever created a systemic financial crisis, the issue of recovery and resolution in insurance demands special attention and careful analysis: How do these processes work specifically in insurance and how do they relate to the systemic risk discussions and possible new financial services regulation?

Building on the first three reports of The Geneva Association on financial stability, this report examines the existing features of recovery and resolution mechanisms in insurance and their relation to ongoing international supervisory and regulatory discussions on systemic risks. It also proposes recommendations for possible measures to increase the existing resilience of financial systems.

For more information on the wider financial stability work of The Geneva Association, please visit our website, [www.genevaassociation.org](http://www.genevaassociation.org).