

Integrating Natural Disaster Risk into the Financial System

Private Workshop Summary

Geneva, Switzerland 16 June 2014

Overview

On 16 June, a private meeting on integrating natural disaster risks and resilience into the frameworks of the financial system was held at the World Economic Forum in Geneva. This meeting brought together a multistakeholder group of leading industry and government practitioners, prominent academics and experts to discuss how a new alliance of public-private collaboration could help integrate natural disaster risk into the financial system and to define a clear roadmap for a significant announcement by the United Nations (UN) Climate Summit in September.

On an operational level, this initiative will focus on galvanizing support for the metrics, and conducting solid and robust analysis to demonstrate the materiality of disaster risks. It will include pilots and stress tests to help clarify the potential impact of this regulatory change – in terms of cost of capital, financial resilience or saved lives, etc. Pilots could be applied not only to companies or investment houses, but also to the public sector, at the city, national or even regional levels.

Participants in the meeting included executives from the banking, securities, accounting and insurance sectors as well as representatives from multilateral development banks, rating agencies, reporting groups and international organizations.

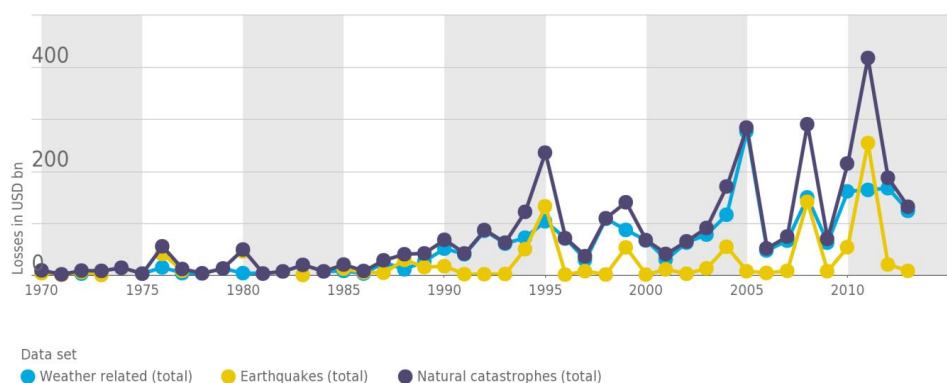
This summary highlights the key elements that emerged from the discussions. It identifies core work streams to better organize the delivery of the initiative and suggests some near-term next steps for the group. Members of the alliance are invited to comment and indicate their interest in any of the work streams.

Background

Over recent decades, as the figure below illustrates, the scale of economic losses caused by natural disasters has risen significantly compared to the longer-term average. Despite this growing challenge, the reflection of natural disaster risk in the regulation of capital and the protocols of accounting has been inadequate, with little movement to address the problem emanating from governments and regulators.

Economic Loss Caused by Natural Disasters, 1970-2013

Total losses



Data set

● Weather related (total) ● Earthquakes (total) ● Natural catastrophes (total)

Source: sigma world insurance database

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Consequently, the prospect of structural and comprehensive improvements in disaster risk reduction (DRR) and climate resilience across the public and private sectors currently remains a distant goal. Meanwhile, as natural disaster hazards such as extreme weather related events are forecast to increase, the associated human and financial costs will likely mount.

In May 2014, following an invitation from the UN Secretary-General's Office and coordinated by the United Nations International Strategy for Disaster Reduction (UNISDR), representatives of 12 leading public and private institutions came together at the Abu Dhabi Ascent, a two-day gathering held to promote action on climate change issues, to discuss the potential for public-private collaboration on assessing the feasibility of incorporating natural disaster risks and climate resilience into the frameworks of the financial system.

The discussions in Abu Dhabi suggested an appetite for forming the proposed "Alliance". The participants considered the time to be ripe for hardwiring resilience into a range of global discussions on different fronts, including:

- The 23 September 2014 UN Climate Summit in New York, which offers an unparalleled rallying point for representatives from financial regulators and accounting bodies, together with investors and insurers, to announce the launch of the proposed Alliance, setting out its intention to incorporate disaster risks within securities, banking and accounting protocols, together with a roadmap for action between 2015 and 2020
- The 3rd World Conference on Disaster Risk Reduction in March 2015 in Sendai, Japan, which provides a significant opportunity to link the work of the Alliance to the Hyogo Framework extension
- Explicit reference to natural disaster risk and finance in the post-2015 framework for DRR and its implementation arrangements, which will provide a strong link between climate change, extreme weather events and the financial system in the run up to and during the Paris COP21 at the end of 2015
- The post-2015 development agenda, which also provides an opening for linking DRR with the financial system

Such an Alliance can also provide a supporting frame within which to contextualize and further develop a number of emerging public-private activities on national or regional natural DRR and resilience (such as the Africa catastrophe insurance pool Africa Risk Capacity, the Philippines Climate Adaptation and Resiliency Fund, and the Caribbean Catastrophe Risk Insurance Facility) and non-insurance DRR and resilience interventions.

Against this backdrop, the World Economic Forum engaged with the champions of this initiative and convened a private meeting on its premises in Geneva on 16 June to help shape the concept from an idea to an action agenda.

Key Points

Rowan Douglas, Chief Executive Officer, Capital Science and Policy Practice, Willis Group (author of the concept paper that led to the initiative), its co-leaders and main champions, and members of the regulatory community outlined how frameworks for reform can be informed by the experience of the global reinsurance sector and its regulation, over the last quarter of a century, as it struggled and succeeded in achieving far greater macro-prudential resilience to growing natural hazard risks. The main ingredients of this transformation were regulatory reform – smarter, informed capital and a scientific, data and analytical revolution.

Much of this knowledge, infrastructure and expertise could be applied proportionally and efficiently to strengthen the resilience of the wider financial system, and by extension related assets and communities, against disaster risks. By protecting capital, maintaining economic stability and promoting financial inclusion, the financial system can create the conditions to save millions of lives, livelihoods and associated property in the decades ahead. In this way, financial regulation enables the basic rights to life, livelihood, shelter and

subsistence to communities threatened by natural disasters, optimizes resilience and increases human well-being.

One challenge involves explicitly connecting measures to reduce exposure to disaster losses (e.g. risk pooling and transfer) with more specific incentives for resilient investments, through a financing mechanism, for example. The World Bank is one institution exploring how to manage disasters-related finance – both *ex ante* and *ex post* – within one coherent, overarching strategy. Delivering this strategy, however, is not only a complex technical exercise, it also requires stronger collaboration between multiple actors across the entire value chain. While a significant number of initiatives have emerged in response to these challenges (including RISE, African Risk Capacity and the Philippines Resilience Fund), insufficient conversations are taking place across the various initiatives to focus on systemic, transformational shifts.

While attractive in principle, other, potentially unforeseeable, challenges associated with this push for regulatory change could exist. Corporates could for example argue that disaster risks are not sufficiently material for them to undergo this exercise, although this would be difficult to assert without at least some basic assessment or filter of corporate disaster risk exposure. Others may be reluctant to report on yet another requirement, although this approach may reduce the need for certain existing demands. Additionally, metrics for risks arising from natural and climate disasters are not yet a part of the lexicon of capital markets and could take some time to become a customary element of market operations. Even the small share of investment in green or clean options (around 3-4% of total investment) does not address disaster risk issues. The rating agencies, such as Standard & Poor's, could provide a powerful lever to help shift mainstream capital to more resilient investments.

Lessons from the insurance sector suggest that the 1-in-200-year resilience benchmark for contracts was a transformative mechanism, first applied in several key jurisdictions before it became a *de facto* global standard by convention and via the operation of risk sharing. Also of note is that this resilience requirement came in response to the dislocation of the market in the early 1990s, before the insurance sector had determined how it could be met, and before the sector had established models for its implantation and an approach for its implementation.

Building on this lesson, the current initiative (tentatively named the 1/100 Initiative) proposes the reporting of the results of a threefold stress test that would elucidate the disaster risks companies face here and now:

- 1-in-100-year annual probable maximum loss (PML) from natural hazard risk as a solvency stress test
- 1-in-20-year annual PML as a stress test for annual earnings
- Annual Average Loss (AAL) and a standardized metric for corporate exposure to natural disaster risk

These stress tests offer three major attractions:

- They are derived from the three key metrics with the most significant impact in the reinsurance market, including the insurance of companies and other public, private and domestic assets within their portfolios.
- The focus is not on the distant future but on current assets on the balance sheet and the resilience of those assets to current levels of risk. (Companies could of course choose to undertake “what if” scenarios that look at the future of their assets and operations but that is not an element of the capital regulation and accounting amendments explored within this initiative.)
- By focusing on extremes, albeit relatively modest ones, the metrics will highlight risk dependencies and interactions across and beyond organizations and identify conditions that may become more frequent or closer to the norm in future decades.

The group recognizes the importance of engaging government champions during the early stages of the initiative. These will include not only, for example, officials from disaster prone low-income countries but also disaster-prone middle income nations with high growth rates, as well as richer countries that are not immune to growing disaster risks. For donor governments and agencies currently supporting DRR efforts, this type of initiative could be attractive as part of their “value-for-money” drive.

Discussions also centred around the extent to which the demands from smart capital and regulatory reforms in the reinsurance sector were enabled by a scientific revolution which over time developed methodologies, data standards, analytical frameworks, modelling systems and reference outputs that underpinned these market improvements. Improvements in these models were matched by a growing sophistication and maturity in their use as decision support tools, rather than an arbiter of the final answer.

Meanwhile, a range of open catastrophe risk modelling platforms and standards are emerging that will open up the market for a much wider range of public science and commercial providers of data and expertise to enter the operational supply chain. This creates the conditions for the scientific community's more systematic involvement in this initiative to not only help strengthen the analytic base but also support the much-needed stress tests and pilots. Financial support from funders of scientific research, such as the Belmont Forum, could help accelerate this undertaking. To strengthen the robustness of the proposition from the scientific groups, the commercial analytical and risk modelling companies will be asked to identify the most impactful areas of research in the real world context.

Participants also emphasized the need to present the initiative in a manner that would be seen as a natural evolution of the current frameworks, complementing and building on the voluntary and regulatory processes currently in place, including the work of the Enhanced Reporting Task Force.

Work Streams

The discussion identified interrelated work streams for this initiative:

1. **Incentives for investors, securities, banking and insurance** – This could involve, first, triggering a signal of interest from financial regulators (for example from the Financial Stability Board) in the mobilization of some form of informal public-private activity to help assess natural disaster risk for investors and the securities and banking sector, applying the metrics listed above. Second, and in response to this signal from financial regulators, an informal task force (analogous to the Enhanced Reporting Task Force) could be convened under the auspices of this initiative to undertake such an assessment, report back its findings and make specific recommendations. The task force could include representatives from the insurance sector, asset managers and institutional investors, among others.

As an initial step, a small team from within the Alliance will prepare a brief strategy that identifies potentially interested institutions and suggests who in the group will approach them, and that identifies upcoming opportunities for outreach (such as key events). This small team will also prepare and circulate to the rest of the group a brief note outlining the concept of the task force for purposes of outreach. The note should help potential partners understand what will be expected of them in joining the task force, including indicating some likely active ties anticipated through March 2015.

2. **Incentives for national and sub-national governments** – This could involve the creation of a Country Group of representatives from developed countries interested in the resiliency agenda, both domestically and internationally (such as Japan, New Zealand, the United States, the United Kingdom, among others). Also to be included are fast-growing, disaster-prone middle-income countries (such as China, Nigeria, a Latin American country, the Philippines) as well as low-income countries with significant disaster risks, together with sub-sovereign entities such as cities, states or provinces drawn from within this group – which would explore how best to adapt and apply these natural disaster risk assessment metrics to assess their own risk resilience potentially linked to the post-2015 framework for DRR.

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3. **Reporting and disclosure** – This could involve creating a Leader Group of Companies representing different sectors and global value chains to explore how best to adapt and apply these natural disaster risk assessment metrics to assess their own risk resilience, potentially linked to the work of existing corporate reporting and disclosure programmes, such as the Carbon Disclosure Project (and the related Carbon Disclosure Standards Board), the Prince of Wales Accounting for Sustainability Initiative and the Disaster Risk-Sensitive Investments (R!SE) initiative.

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4. **Science, modelling and communications** – This could involve creating a programme of action-oriented research involving the Future Earth programme (a ten-year global environmental research effort linked to the International Council for Science, ICSU) and leading natural disaster risk modellers working with finance and industry, with the view to developing approaches to help analysts combine such natural disaster risk assessment metrics with the latest environmental risk information, and to develop open source data architectures and easily communicated information as a result. Future Earth could follow up by recommending two or three new global research programmes related to the initiative to the Belmont Forum.

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In addition, reflecting the high degree of interconnectedness of these issues and the stakeholders working on them, it was also agreed that these work streams would take cross-cutting approaches to:

- Define the materiality of the issue and the potential impact of the Alliance
- Conduct impactful pilot investigations and their related stress tests of the metrics
- Identify the champions to represent the work at the UN Secretary-General’s Climate Summit and beyond, and to lead the various work streams

To deliver this initiative, especially in the run-up to the UN Climate Summit, a core leadership group will be established: it will have biweekly calls to assess progress against key milestones and to provide input and insight to the working groups. The core leadership group will comprise the co-leads as well as representatives from each of the work streams. The World Economic Forum reaffirms its intention to support ongoing coordination and collaboration.

| <i>Dates</i> | <i>Key Milestones</i> |
|--------------------------|--|
| <i>25 June 2014</i> | Informal “launch” at an International Insurance Society meeting in London |
| <i>1-4 July 2014</i> | Further testing at the World Bank Understanding Risk event in London |
| <i>End August 2014</i> | Core leadership group meeting at the Rockefeller Centre in Bellagio, Italy |
| <i>23 September 2014</i> | Gathering of regulators and stakeholders at the UN Secretary-General’s Climate Summit to declare the intention of exploring options to integrate climate risks into the financial system |
| <i>December 2014</i> | Opportunities in Lima, Peru, at COP 20 as a result of the World Economic Forum’s MoU with the Peruvian government |
| <i>2014-2015</i> | Conversations and preparatory committee meetings for Hyogo Framework Renewal in March 2015 (Sendai, Japan) |

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|---------------------|--|
| <i>January 2015</i> | World Economic Forum Annual Meeting 2015 in Davos-Klosters |
| <i>Q1 2015</i> | Adoption of disaster risk in the appropriate forums within the financial regulation and accounting communities with the goal that by 2020 companies can start reporting against relevant metrics |

List of Participants

Geneva, Switzerland 16 June 2014

Frans Berkhout, Interim Director, Future Earth, International Council for Science, France

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Robert J. Samors, Senior External Relations Manager, Group on Earth Observations, Switzerland

Paul Simpson, Chief Executive Officer, Carbon Disclosure Project, United Kingdom

Sebastian von Dahlen, Economic Counsellor, International Association of Insurance Supervisors (IAIS), Switzerland

Dickie Whitaker, Project Director, OASIS Loss Modelling Framework, United Kingdom

Scott Williams, Sustainability Adviser, PwC, Switzerland

From the World Economic Forum

Richard Samans, Managing Director and Member of the Managing Board

Dominic Waughray, Senior Director, Head of Environmental Initiatives

Bernice Lee, Director, Head of Climate Change and Resource Security Initiatives

Joining by teleconference

Eduardo Ferreira, Senior Financial Specialist, Climate Policy and Finance, World Bank, Washington DC

Thomas Kerr, Principal Climate Policy Officer, International Finance Corporation (IFC), Washington DC

Ivo Menzinger, Managing Director and Head, Asia Pacific Global Partnerships, Swiss Re, Singapore