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Disaster Risk Reduction—How and What Can Private Insurance Contribute

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A great offshore earthquake hit Portugal and north-western Africa on All Saints' Day 1755. The earthquake and subsequent fires and tsunami almost totally destroyed Lisbon and took a large toll of lives. The king's prime minister, Sebastião de Melo, the later Marquês de Pombal, immediately embarked on rebuilding the city, apparently having said, "What now? We bury the dead and heal the living." He adhered to Enlightenment ideals, pushing reforms on commerce, taxes and education. In the same way, new building codes and zoning laws for the reconstruction of Lisbon were issued, based on scientific experiments to make buildings more earthquake resistant and on the local experience of the Great Earthquake. His major insight that, not the earthquake or any other natural peril is the catastrophe, but how and where people build their houses, still drives our thinking on how the impact of disasters can be reduced.

Modern insurance is characterised ideally by three traits:

- an enlightened, rational approach to risk,
- corporations offering defined services in regulated free markets,
- true, fair and realistic accounting.

The enlightened, rational approach to risk comprises, first of all, the awareness that only the exposure to the vagaries of nature or human activity can be managed. Zoning laws and building codes can dramatically change exposure to flood, storm, earthquake or fire. "Electric light is the most efficient policeman" [Louis D. Brandeis]. Precaution has a cost, but there might be a huge saving compared with the avoided cost of human suffering and damage to property. Insurance works in no other way than by internalising otherwise external costs. By guiding human behaviour and enforcing precaution, insurance can mitigate the impact of feared events. This can be called the" invisible hand" of insurance.[1]

Corporations as insurers were first founded after the Great Fire of London. These companies made possible the development of special skills, knowledge and expertise. Three decisive strengths of the insurance community should be highlighted: the ability and independence to assess risk, including judgements as to the limits of insurability; the capacity to create insurance products to internalise external costs, e.g. of dreaded events; and, most importantly of all, having the right incentive to impose provisions and measures to manage risk exposures that can render dreaded events more unlikely.

The insurers' business model has proven to be sustainable, largely because insurers know how to quantify risk and to set up appropriate technical provisions.

This is no different than knowing how to account for risk. In the same way that modern double-entry accounting in late-medieval Italy drove the development of trade and vice versa, adequate, sometimes termed "true, fair and realistic" accounting, is key to insurance.

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[1] Würmli, H.P. (2011). Guest editorial: the invisible hand of Insurance. *Geneva Association Information Newsletter on Risk Management No. 49.*

Insurance risk management has learned to deal with two pertinent issues: the agency dilemma and the importance of right incentives, these not being insurance issues per se. Both emerge when human cooperation to accomplish tasks takes place in a division-of-labour-based society. The agency dilemma, or principal–agent problem as it is also called, arises when others than those that set the goals carry out the activities to reach them. It arises at the macro as well as the micro level. How can the principal trust the agent to carry out the tasks appropriately? Solutions often have been found by setting incentives and installing controlling institutions, somehow balancing inclusion and coercion. The principal–agent–controller set-up can be identified in many places: in constitutional democracies, it is the split between the legislative, executive and judiciary powers; in governments, the principle might be applied via laws regulating a special activity which is supervised by a state agency; within a company, it might be the board level issuing policies, and the executive level running the operations which are controlled by internal audit, compliance and risk controlling.

The successor of the current Hyogo Framework for Action, informally called HFA2, can build on strong principles and standards already set. They are close or identical to what is summarised above. Strengthening the role of public–private partnerships clearly could play an important part. If this is done properly, governments could gain better access to the broad risk management knowledge and experience of the insurance industry: risk assessment and pricing, design and management of insurance schemes, design and definition of constraining clauses and necessary precautionary measures, as well as management of claims when disaster strikes. This all requires strong institutional frameworks that regulate the rights and duties of insurers and insureds. The importance of legal certainty cannot be underestimated. But all good intentions will be vain if the right incentives are missing or disincentives are set. Each party involved needs the right incentives: the government, the insurers and insured citizens and enterprises.

The Geneva Association's report entitled *Insurers' Contributions to Disaster Reduction—a Series of Case Studies*[2] gives a valuable analysis of cases, some of which worked well, others not. It turned out that well-meant measures and incentives had an effect opposite to what was intended, which is sometimes easily discernible, sometimes not at all. Learning from real-life examples and improving on the design of public–private partnerships will be a worthwhile and gratifying task the insurance industry is ready and eager to undertake.

[2] Orie, M. and Stahel, W.R. (eds). (2013) *Insurers' contributions to disaster reduction—a series of case studies*, The Geneva Reports No. 7. Geneva: The Geneva Association.