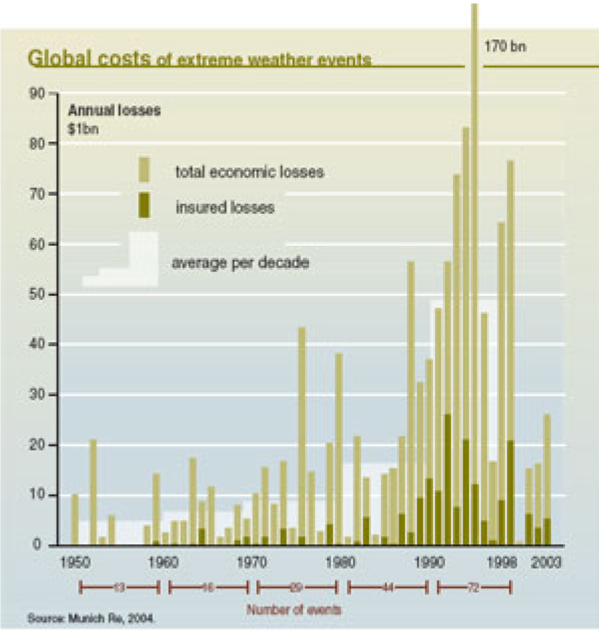

Financing the risk from natural disaster

by Anselm Smolka

The loss data on great natural disasters in the last decades show a dramatic increase in catastrophe losses. A decade comparison since 1960 is shown in the table below. The reasons for this development are manifold and encompass the increase in world population and the simultaneous concentration of people and values in large conurbations, the development of highly exposed regions and the high vulnerability of modern societies and technologies, and fi nally changes in the natural environment like global warming and the related regional effects. As the underlying factors for the observed loss trend remain unchanged, a further increase in losses from natural disasters is inevitable.

Coping with these future loss burdens Coping with these future loss burdens represents a formidable challenge which represents a formidable challenge which requires the cooperation of all parties requires the cooperation of all parties involved – potentially affected private involved – potentially affected private persons and industries, the financial persons and industries, the financial sector and the state in public-private sector and the state in public-private partnerships. Turning to the role to be partnerships. Turning to the role to be played by insurance within the context played by insurance within the context of natural disaster management, we can of natural disaster management, we can distinguish between the insured persons distinguish between the insured persons or entities; primary insurers; reinsurers; or entities; primary insurers; reinsurers; capital markets and banks; governments capital markets and banks; governments and public authorities.

Each of these parties has its own tasks and responsibilities in managing the risk arising from natural disasters. Beyond the pure fi nancing of losses, which is a reaction after the event, much more effort than hitherto has to be invested in a proactive strategy, i.e. in reducing and preventing future losses. Such a strategy is not only a matter of fi nancial resources, but also a result of good and foresighted planning and of coordination at all levels, from private households and industrial companies to public institutions and authorities. As far as risk fi nancing is concerned, reinsurers are usually the main risk carriers in the fi eld of natural disaster losses, because they can achieve a worldwide balance of risk over time and regions. In recent years attempts have been made to supplement the capacity provided by traditional reinsurance by tapping into the resources of the capital market. The main function of the capital market is to secure capacity for top-rank losses by what is called alternative risk transfer, or ART instruments like Cat bonds. It is worth mentioning that the large majority of ART programs have so far been placed for highly developed countries. The complexity of the programmes, investor attitudes and also the usually high price seem to require mature insurance markets. The successful placement of an unrated (!) Cat bond for the Taiwan Residential Earthquake Insurance Pool, however, may be seen as a sign of hope for increasing business opportunities in this fi eld.

The main task of the state lies in the fi eld of risk management and risk reduction by: designing and enforcing land use and building regulations; securing the serviceability of critical facilities and infrastructure; developing emergency plans which precisely defi ne the responsibilities and the coordination of the authorities involved; and granting tax exemption for catastrophe reserves of private insurers.

What can be done by insurance to promote proactive loss prevention and reduction? Competition and a short-term financial perspective in the insurance sector do not create a favorable environment for actively promoting prevention and mitigation measures, as the time scale for a possible positive outcome tends to be long. However, there are promising developments like the community classifi - cation scheme of the insurance-sponsored Institute of Home and Business Safety (IHBS) in the US where communities are classifi ed according to code compliance. This classifi cation is refl ected in the insurance conditions. Generally, taking risk mitigation measures can and should be rewarded by more attractive insurance conditions like discounts on rates or lower deductibles. Vice-versa, the insureds' participation in losses, in the form of deductibles and/or coinsurance, serves as a powerful incentive for taking mitigation measures. Linking the availability of disaster protection, be it state or private bank loans, or insurance payments, to the observance of building regulations can provide an effi cient mechanism for code enforcement and thus forms a key element of proactive risk management.

The foregoing discussion has identi- fi ed several levers for mitigating losses from natural disasters. The components are there, the challenge is to knit them together into a secure and tight network of risk reduction measures. At present, there are various holes in this network. Filling one of the most important gaps – the lack of insurance penetration – is the intention behind the creation of disaster insurance pools. Typically, only 10% or less of disaster losses are covered by insurance in the less developed world. The Turkish Catastrophe Insurance Pool (TCIP) can be considered as a model case which has already served as a catalyst for the establishment of similar pools in Taiwan and very recently in Algeria, or for the conception of pool solutions in several other countries. Essential elements of the TCIP are:

- mandatory scheme
- no post-disaster loans to affected parties without insurance
- 2% deductible
- coverage up to $35,000 loss limit
- rating scheme graded according to hazard zone and risk type
- complete risk transfer to global reinsurance market in the starting phase

The scheme covers dwellings and small commercial risks, whereas larger commercial and industrial risks and highvalue residential buildings are covered by the private market.

None of the above is within the reach of a large part of the world’s population, namely the poor. Beyond the regulatory context mentioned above the state is often expected to serve as a reinsurer of last resort for very rare, extraordinary losses on the one hand and uninsurable risks like dwellings of the poor on the other hand. Whereas the fi rst role will continue to apply in the future, this is not necessarily true for the second one. Microinsurance schemes, which fi rst started in life insurance, now fi nd counterparts in property insurance. Markets in Southeast Asia seem to be particularly innovative and adventurous in this fi eld, and companies like ASA in Bangladesh or BRI in Indonesia already have more than 2m customers insured under microinsurance schemes, which may illustrate the potential of this new avenue to produce better protection for the poor.

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