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Climate Change and the Financial Services Industry

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Introduction

Climate change is the greatest challenge facing business and political leaders - so declared the World Economic Forum at Davos in February 2000. Yet since then, there has been little evidence of practical concern; it is already clear that the modest emission reduction targets agreed in Kyoto in 1997 will not be met. There is therefore a policy vacuum, waiting for a new initiative, and the insurance industry can and should play an important part in creating this drive because it has a high stake in climate change.

Climate change is not just a problem for the developing nations. A recent EU report (ACACIA, published 1/11/00) predicted serious problems for southern and eastern Europe, linked to water shortages, with an increasing divide between rich and poor, town and country, and primary and services sectors. Nor are the rich immune - a recent report from the UK's Chartered Insurance Institute revealed that many of the country's most famous golf courses are threatened by coastal erosion.

The Stakes for the Industry

The financial services industry will be affected by climate change on three fronts: property insurance, resource consumption, and asset management.

Property Insurance

This is the most obvious impact area. Insured losses from weather catastrophes have increased by a factor of 14 between the 60's and the 90's.Yet even in the developed world, 2/3 of the economic damage is not insured, and this falls to around 5% in Asia and Africa. The balance of the costs are borne by the state, or the victims themselves, creating major societal problems. Analysis soon to be published in the IPCC Third assessment report on Climate Change shows that to date changing weather patterns have played a subordinate role in this trend; the main factors are socio-economic: population growth, development of high-hazard locations, and the vulnerable nature of modern materials. This is confirmed by the rapid growth in "geohazard" and technological losses. However the picture is clouded by the dominance of US losses (themselves dominated by hurricane losses) in the global total. This apparently conceals different trends in other areas. Munich Re reports that the economic cost of all types of natural disasters is rising at about 12% per year, while global GDP is rising at a long-term rate of around 3%.If The rate of increase in losses is itself increasing from decade to decade, but even at 12% pa, if these trends continue then the curves cross over around the year 2065 i.e. the world's wealth would be totally consumed by the cost of natural disasters. Clearly such a "Limits to growth" projection is naive; mankind is an adaptive species and might be expected to alter his behaviour. However there is no room for complacency. There have been several examples where previous civilisations have crashed by over-exploiting their natural resource base.

To reinforce this note of caution, insurers are well aware that the link between weather and property damage is very sensitive-just a 10% increase in wind speed can increase damage by 150%. Such behaviour is rooted in the laws of physics: the relationships between meteorological parameters and their effects generally follow "power" curves. For example the effect of wind speed is in proportion to its third power, and in practice even to the fifth power in urban areas, while the force of hailstones is related to the fourth power of their diameter. In addition, scientists have discovered that in its natural state, the climate has "flipped" very rapidly from one state to another in the past. In that case we can expect property damage to escalate rapidly beyond the expected trend line, as new areas are affected, with new intensities, and more "targets".

Resource Conservation

Although financial services are not energy-intensive like extractive or manufacturing industry, individual companies are now so large and rely so heavily on IT, that they can consume as much electricity as a town of 50,000 people. Add to this office supplies, transportation, and finally their large holdings of real-estate for investment, and it is clear that the sector does have a significant environmental impact which deserves more attention. Unless it sets a good example, the industry can hardly expect others to take its views on the issue seriously. The recent study by the Chartered Insurance Institute found that only 7 out of 25 top UK insurers had made significant progress in this area.

Asset Management (Investment)

The core business of the financial sector is the management of funds. The sums involved are enormous (the top 25 UK insurers control funds of $2tr alone). Often these funds are held in trust for decades so that the climate clearly will change during their trusteeship. Climate change will affect this area directly through the impact of weather and sea level on projects and invested assets, and indirectly, because government mitigation policies will alter the economics of entire regions and industries. Regions at risk may have to be abandoned with large scale relocation of populations. At the same time, there will be a systematic drive to channel resources into research, development, and exploitation of renewable energy resources.

New Response

A problem on this scale demands a new level of response from the industry. Insurers have gained great skill in understanding natural hazards and developing practical techniques to handle their economic effects. Often they are not applied because circumstances are not conducive to a purely commercial insurance system-the risks may be too large or the economic base may be too small for instance. By collaborating with other stakeholders, it may be possible for insurers to provide services in a hybrid system, with benefits for planning and post-event recovery. Of course, financial systems need to be integrated with local cultures - a good example is Grameen Bank in Bangladesh, which has given communities the framework to control their own development. However this is still vulnerable to the impact of a regional natural disaster, so linking microfinance initiatives to commercial insurance and reinsurance would help to ensure that the local economy can recover speedily after a catastrophe. To date this avenue has not been explored thoroughly. Innovation will be needed to develop new sources of funds to finance the growing scale of risks, complementing the traditional pool of commercial insurance and reinsurance reserves. Also a broader range of risk -transfer products is needed to cater not just for "events" but also significant deviations from the norm of weather behaviour over a season. There is already considerable experimentation in these areas with products like catastrophe bonds, and weather derivatives, but so far their commercial impact has been relatively small.

Proactive Mitigation (Contract and Convergence)

The Kyoto Protocol, aiming at a 5% cut in emissions below 1990 levels, is only a preliminary step to deal with Climate Change, but already there are serious problems in ratifying it, and almost certainly it will not be accomplished by the due date, because of the delay in initiating it. In the meantime, damage will continue to escalate. A far more fundamental approach is required, involving developed and developing nations together. Climate modellers indicate that unless emissions are cut by 60%, then temperatures will rise to dangerous levels. One proposal which sets out to tackle this issue at its roots is "Contraction and Convergence" developed by the Global Commons Institute, a small British NGO. This simple yet

powerful concept has all nations agreeing to an equal per capita allowance of emissions globally, with a progressive reduction in the total amount of emissions down to a safe level. To facilitate implementation, initially countries would be able to trade emission permits. However the key is to replace carbon-heavy fuels with renewable alternative energies as well as more efficient technologies quickly. To implement Contraction and Convergence or a similar scheme will require great political vision, and enormous efforts in research and development, followed by rapid upscaling into mainstream production. This will alter the economics of entire regions and industries, and produce significant shifts in the balance of economic power. There are obvious implications for the rate of return on long-term investments. Given that such action is imperative, and will have major repercussions for the financial services sector, then the industry should take an active part in preparing the framework and in its implementation.

A Programme for Action on Climate Change

- The industry should unite around a single focal point such as the UNEP Financial Services Roundtable, to lobby at international level for an early strategic framework to deal with climate change (e.g. Contraction and Convergence). At present the insurance initiative is primarily recruited from Northern Europe and Japan, and so it must become more international to underpin its credibility. UNEP also needs to give more emphasis to these business initiatives in policy formulation and communication.
- Research and development needs to be stepped up to identify whether and how financial tools can be provided to deal with the many climate-related risks which have been ignored by the sector. There are several centres where this can be undertaken, including The Geneva Association itself, the World Bank, UNEP, and indeed commercial organisations.
- Where conventional hazards are concerned, the industry should work more closely with other stakeholders to deliver its services more efficiently to as wide a base as possible. This is best tackled at community and national level, but there may be merit in harmonising approaches in the EU more closely. UNCTAD considered this to be a relevant factor for economic well-being and carried out some comparative studies, which confirmed the wide variation in practices.
- Finally, the industry must become more attentive to its own resource consumption, particularly in real-estate, in order to play its own part in reducing emissions quickly. UNEP provides a good forum for debate, and there are some excellent examples of best practice , including the FORGE initiative in the UK.

Implications for Economic Research

The foregoing analysis has identified several key areas for economic research related to climate change:

- attribution of loss trends and their projection into the future,
- extension of the insurance mechanism in parallel with microfinance,
- development of new risk -management techniques to handle future weather variability,
- promotion of new technologies in an efficient way, where normal replacement rules may not be appropriate,

However economists should be wary. The economic analysis in Working Group III of IPCC's Second Assessment Report on climate change faced considerable hostility and was rejected because of its rather naive approach to placing a cost on climate change-particularly due to the issue of equity between developing and developed nations, where money is not a good equaliser, and also in respect of uncertainty (e.g. the treatment of situations where there may be a small chance of irreversible global catastrophe), non-monetary services, and intergenerational equity.

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