

Chapter 1

Introduction

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This chapter addresses five tasks. It explains briefly how climate change is relevant to the insurance industry's task of managing risk in its various functions. It then places the study in its context briefly, in terms of other research on the topic of climate change and insurance. It outlines the research process followed by the authors, and then sketches out the structure of the whole report. Finally it thanks those who have helped the authors to produce this work.

1.1 Terms of reference

The study aims to address the strategic issues arising from climate change that face the insurance industry from the perspective of UK-based insurance practitioners, including those in the London Market. The study builds on the previous studies of climate change by the Chartered Insurance Institute (CII) in 1994 and 2001, incorporating subsequent advances in science, relevant literature and the experience of insurance markets.

The work emphasises the process of managing risk in the context of climate change, across the spectrum of the CII faculties, but extending into other important aspects such as environmental policy and asset management that may not fall within the faculty framework.

The authors explore issues that are still uncertain, or scenarios which may develop in coming decades, and lay out the alternatives and implications, not merely reflect the current market practice, or regulatory status.

The output is an externally-reviewed main report and a short Executive Summary, with an invited presentation in London in early 2009. The process will provide a basis for information on climate change, in terms of reliable reference material, case studies, and examples of best practice, that can be delivered to the wider CII membership through regional workshops, training material, or other appropriate formats, and will also enable the CII to engage with other organisations and professional bodies on the issue of climate change.

1.2 The insurance industry and climate change

The insurance industry is exposed to climate change from extreme events which will cause more claims, and affect some assets, and on the investment side, from changes in the cost of carbon that will affect the economics of entire industries and assets like real estate.

With its core of international insurers and the London Market, the UK has always been interested in global issues like climate change. The UK Government included insurance as one of the key sectors in its first study on the impacts of climate change in 1991, and again in the follow-up study in 1996. The Association of British Insurers (ABI) has carried out a sustained programme of research on climatic hazards and climate change, with a particular focus on flood risk. Among UK companies, General Accident (now part of Aviva Group), played a strong role in raising the profile of climate change as a risk by supporting the work of the CII, the ABI, the Intergovernmental Panel on Climate Change (IPCC) and the United Nations Environment Programme Finance Initiative (UNEPFI).

On the international scene, the two major reinsurers, Munich Re and Swiss Re of course, have produced many valuable reports and commentaries on the subject. The IPCC included full chapters on insurance and finance in its Second and Third Assessment Reports (1995 and 2001). Since the mid-nineties, UNEPFI has convened a number of concerned insurers and banks to lobby for effective policies on climate change, in terms of adaptation to the impacts, and mitigation of the cause, emissions of greenhouse gases (GHGs).

Numerous other companies and associations have contributed to the debate about climate change and the role of the insurance industry. However, the Chartered Insurance Institute was the first professional-member association to investigate and publish work on climate change, with a first report in 1994, and a second in 2001. It is to its credit that it did so at a time when sceptics still commanded much attention among the media, in industry, and particularly in the USA. What is different about the CII's work is that it is collaborative, and aimed at the practitioner. As the negotiations to draft a successor agreement to the Kyoto Protocol reach a new level of intensity, it is certain that this work will be even more relevant than previous studies.

1.3 General approach

The CII formulated the terms of reference in consultation with the study chairman. The authors were recruited from the CII membership, as individual volunteers with an interest in the subject of climate change. In a few cases additional authors were invited to join the study to cover areas where expertise was lacking, particularly in the area of climate change science. The writers met just three times, to frame the shape of the study, agree responsibilities, and review progress. Much of the research was conducted using the internet, supplemented by interviews with experts, and literature from a number of sources, including the CII library and internal corporate resources. To ensure objectivity and balance, independent reviewers were asked to comment on the penultimate drafts of nearly every chapter. (For scheduling reasons this was not possible for Chapters 2 and 4, but Chapter 4 was essentially drafted from two different angles, and then merged. Chapter 3 was exempted as it was drafted by a number of acknowledged climate science experts, and Chapter 1 and the Executive Summary were reviewed by the CII.)

The authors considered organising the study along the lines of the CII Faculty structure, but it was felt that climate change was an issue that cut across boundaries, and needed to be handled in two ways: some general cross-cutting chapters, and a larger number of market-specific chapters. The authors also felt it was important to cover the issue of Asset Management, which does not fall within the faculties, but is a vital topic for the insurance industry. In view of the large size of the study, it was regrettably decided not to include chapters on Motor Insurance, MAT (Marine, Aviation, Transport), the water industry, and a number of more specialist areas. We hope that others may be inspired by this study to investigate how climate change might affect them.

1.4 Structure of the report

The report consists of eighteen chapters, available in electronic media, with a short Executive Summary providing the key messages. Chapter 1 puts the study in context, and provides a guide to the flow of the other chapters.

Chapter 2 outlines what major changes have happened in the insurance and business world since the previous report in early 2001, such as the rapid growth of China as an economic power. The chapter also reviews the attitudes of CII members to climate change as revealed in the three surveys which have been conducted at the same time as the three studies on climate change. Chapter 3 summarises the masses of scientific information that is available on climate change, particularly aspects of interest to insurers, and looks at issues concerning the reliability and usefulness of climate projections.

The next three chapters are concerned with innovations in insurance techniques, and insurability. Chapter 4 examines the topic of catastrophe modelling, and how insurers can take account of climate change in this important area. Chapter 5 then considers how climate change could undermine insurability in the foreseeable future, and what insurers can do to reduce that possibility, in conjunction with other stakeholders. Chapter 6 covers the subject of indexed insurance products like catastrophe bonds and weather derivatives, which have great potential in markets that deal with climatic hazards.

The next eight chapters discuss particular non-life insurance segments or lines of business and how they are affected by climate change. Chapter 7 covers Personal Lines Property, with a particular focus on flood. Chapter 8 deals with SME (Small to Medium Enterprise) Property, and Chapter 9 deals with Industrial Property Risks. The issue of Liability is examined in Chapter 10 from two aspects, firstly where there is a direct connection between the claimant and the insured, and secondly where the claimant is seeking to recover damages from an entity that is responsible for greenhouse gases. Chapter 11 discusses the links between the Construction industry and climate change, and the related insurance risks, including the potential for localised climate change or 3C (construction climate change). Chapter 12 investigates the Energy Insurance market, which on its conventional side is greatly exposed to climatic hazards in the hurricane belt, but which is now facing entirely new challenges with the growth of clean energy such as renewables. Chapter 13 examines insurance for Farming and Forestry. This sector has several links with climate change: firstly, it is very weather-dependent, secondly it is a big source of greenhouse gases, and thirdly it can contribute to renewable energy. In addition, since many people in developing countries work in the agricultural and forestry sector, making insurance available to them could help to adapt to climate change more effectively. Chapter 14 considers insurance risks in the area of Tourism and Leisure, which are now major markets, and are of course heavily weather-dependent.

Chapter 15 turns to the area of Life and Health Insurance, Pensions and Personal Savings, which has been rather ignored in discussions of climate change and insurance. Large-scale asset management is the subject of Chapter 16. Institutional investors like life insurers and pension funds have considerable stakes in equities and real estate, and both of those asset classes are strongly linked to climate change, in terms of being exposed to extreme weather, and also being sources of GHG emissions. Chapter 17 considers the carbon markets which have sprung up to deal with emissions trading, and what insurance products might be required to handle risks for the participants. Finally Chapter 18 discusses the broader issue of sustainability. In a carbon-constrained world, attitudes to consumption will need to change, and this will be reflected in the way the insurance industry operates, in its products, claims-handing, and internal systems.

1.5 Acknowledgements

The authors wish to acknowledge the support of the Chartered Insurance Institute during the course of this study, particularly in organising meetings and the enormous task of preparing the material for publication. The contribution of Axa in funding the launch of the report was most welcome. We also thank the members of CII who completed the climate change section of the 2007 membership survey and thus provided a continuing picture of how the profession is responding to climate change.

We are grateful to those we approached who spared the time to answer questions and provide literature and advice. In respect of the final content, we are indebted to the reviewers who undertook to read the drafts and provide helpful suggestions on improving the study. In the end, responsibility for any errors and omissions rests with the authors, in particular the chairman who reviewed and edited every chapter.

Biography

Dr Andrew Dlugolecki

Andrew spent his salaried career with General Accident (now part of Aviva Group), starting in 1973 as a statistical analyst. Early projects included the effect of weather on motor and property claims. There followed a variety of interesting jobs at senior level, including managing the UK branches, and then emerging countries. A merger in 2000 led to a change in corporate direction, and departure for him.

When scientists started to investigate the economic implications of climate change in 1988, they asked various industry associations to identify experts to work with them. The British Insurance Association nominated Andrew, and he continued this “sideline” even as he worked in other areas, and then as a second career after he left Aviva.

Andrew’s work on climate change covers three major aspects. Firstly, advice to politicians: he has been the chief author on insurance and financial services in major studies of climate change commissioned by the UK government, the EU, and of course the Intergovernmental Panel on Climate Change.

Secondly, in education, he has chaired three major studies of climate change by the UK Chartered Insurance Institute (1994, 2001 and 2009). He prepared and mentored modules of an e-learning training package on climate change and finance for financial institution executives, under the auspices of UNEP Finance Initiative (UNEPFI). He often gives talks and writes articles.

Thirdly, he continues to be active with business clients. He has been an advisor to the Carbon Disclosure Project and the UNEP Finance Initiative since 2000.

Andrew’s qualifications include degrees in pure and applied mathematics, and a doctorate in applied economics. Among his affiliations he is a Fellow of Chartered Insurance Institute, and a visiting Fellow at Norwich University’s Climate Research Unit. When IPCC received the Nobel Peace Prize in 2007, Andrew was one of those cited who had “contributed substantially” to their work.