

The Zurich Report

Climate Change and the Insurance Industry – no silver-bullet solution

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Executive Summary

- Climate change is one of the most serious threats facing the insurance industry today. Whatever the debate about climate change, there is little doubt the world is already seeing an increase in the frequency and severity of extreme weather-related events. Regulatory responses are growing and the accompanying complex social changes are emerging.
 - Climate change hazards are present, escalating and increasing losses, but many insurers are slow or not responding to the scale of risk or potential opportunities. The industry has heavily invested in sophisticated modelling in predicting possible extreme weather-related events. However, with the uncertainty surrounding climate change, some critics say the industry may be continuing to drive forward into a perfect storm of escalating or shifting hazards with its vision fixed on the rear-view mirror. But where there is risk, there is opportunity – opportunity to manage risk and invest in risk mitigation, as well as help the community adapt to the impacts of climate change.
 - Insurance is the world's largest industry, with markets (exposures) garnering premiums that represent 7.7 per cent of global GDP.¹ Risk is the business of insurance. As such, the global insurance industry can play a central role in increasing its own and society's resilience to climate change risks. But a vast amount of preparation still remains to be done by the industry, particularly if it is going to fulfill its role as society's primary risk-bearing institution. The insurance industry needs to work with its stakeholders (including government bodies) to assess the risk and provide clear price signals in respect to climate-related risk.
- Otherwise, the public and private sectors may face the prospect of unaffordable insurance; insurers face the possibility of onerous regulatory response; and the wider industry faces a race to the bottom if insurers respond to increasing weather-related losses by withdrawing from the very markets that most urgently require their risk management services.
- Much of the insurance industry faces the delicate balancing act of trying to achieve long-term sustainable investment in climate change and – at the same time – respond to short-term sharemarket pressure. The socio-political issues are challenging. Specifically, all steps necessary to ready structures to withstand greater frequency and severity of storms, to restructure water management mechanisms in response to increasing frequency and severity of drought, and to convert to low carbon or renewable energy resources cost money. In some cases, the costs are substantial. The emergence of new costs always results in questions of “Who should pay?” and “How much?”.
 - In the short-term, cost and profit performance pressures may mean that long-term climate change strategies risk becoming too hard. The private sector must work in partnership with government(s). While the private sector cannot take the place of governments, it can certainly work to facilitate the achievement of public policy goals that are properly structured, simultaneously meeting the needs of its shareholders and stakeholders.
 - Insurers have a matchless but largely untapped opportunity to provide critical risk management services to help society adapt to and mitigate climate change and, at the same time, climate-ready their industry.

¹Based on 2006 figures (Swiss Re 2007).

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- There are an enormous number of opportunities and some insurers are exploring them. For example, Zurich Australia has recently announced it will automatically provide flood cover for its commercial customers. Globally, Zurich is providing political risk insurance for carbon credit projects, reflecting the global group's launch earlier this year of its global climate initiative, which focuses on the myriad risks associated with climate change. In certain countries, Zurich is able to offer 'green rebuild' extensions to property policies, which can provide replacement of damaged materials following a triggering event with energy efficient appliances and environmentally sustainable building materials. These are just a number of examples of how Zurich is actively meeting the climate change challenges on behalf of its customers.
- To foster a deeper dialogue on these issues, Zurich Australia and its advisers, Climate Risk, have developed and published a framework that allows insurers and stakeholders to navigate these complex risks. It also provides the means or 'levers' to minimise and adapt to these risks in order to secure both a prosperous insurance sector in the face of climate change and to encourage the insurance industry to use its core risk experience to assist stakeholders to adapt to climate change. Called the Climate Risk Diamond, this framework captures: hazards, vulnerability, exposure, opportunities and capacity. The framework demonstrates that insurers can be proactive about managing the risks of climate change.
- The Climate Risk Diamond identifies five 'levers' for insurers to respond to climate change. They are:
 - to reduce the hazard (e.g. by reducing the emissions that cause climate change)
 - to reduce their vulnerability (e.g. by helping customers avoid potential losses)
 - to optimise their exposure (e.g. by entering markets that may need new insurance cover)
 - to recognise new opportunities (e.g. servicing new low-emission industries)
 - to develop capacity to manage new risks and deliver opportunities (e.g. by training staff and creating new products).
- As society's risk managers, insurers are paid \$US4 trillion a year² to provide a buffer against losses due to risks. The industry is now presented with what appears to be one of the biggest emerging risks to the future global economy: climate change. While large uncertainties remain, an already large body of climate science indicates that many of these risks are identifiable and locked-in. Furthermore, insurers' lengthy history of risk mitigation and remediation suggests unavoidable climate change hazards could be proactively and profitably managed, while creating significant public good and accruing considerable reputation gains for the industry.

²This figure includes both life as well as non-life premiums (2007).

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Introduction

While the non-scientific debate continues to rage about whether climate change is mankind-induced or a natural phenomenon, there is no doubt countries, governments, companies, not-for-profit organisations and society in general are acting upon the premise that climate change is a reality.

There is also little doubt that climate change is one of the most serious and complex risks confronting the insurance industry, with a confluence of climate change hazards and risks poised to increase insurers' losses, erode their markets and even test their regulatory compliance.

It is also very clear that relatively few insurers have made much progress in either climate-readying their business lines or educating their distributors or customers about the climate-related risks and adaptation options. Ironically, it is also clear that insurers are uniquely placed to facilitate society-wide risk management and adaptation to climate change impacts and greenhouse gas emission constraints. Converting these opportunities into real products and services will be critical for the long-term prosperity of general insurers.

In addition, reputational benefits can be reaped by insurers from action. Equally, reputational loss is possible if insurers fail to meet society's expectation for adequate and timely responses.

The recent release of the Garnaut Report in Australia and the actions that the Federal Government is planning are a clear indication that – on their own – the climate change regulatory demands will have a direct impact on the local general insurance industry.

This *Zurich Report* white paper is based on a climate change report *From Risk to Advantage, General Insurers as Key Agents for Climate Change Adaptation*, which Zurich Financial Services Australia (Zurich Australia) commissioned from the highly regarded climate change consulting organisation, Climate Risk. The global report looked at the impact of climate change on the general insurance industry, the issues it faces and what the industry is doing about it. The *Zurich Report* identifies the gaps between insurers' considerable potential to address the risks posed by climate change and the shortfall of concrete action on the ground.

While the *Zurich Report* looks at the issues and the reaction – if any – of the industry, its focus is on how the insurance industry can play a central role in increasing its own – and society's – resilience to climate change risks. In addition, as awareness of climate change in society grows, new opportunities emerge. Consumers are more prepared to pay for products that address climate change hazards, and these changing attitudes are materialising in the form of demand for new or modified insurance products.

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While climate change represents a serious threat to the insurance industry, only a relatively small number of insurers are proactively responding to the issue. Yet the climate change hazards and vulnerabilities are escalating. A signal of climate change is measurable in normalised global annual economic losses from weather-related catastrophes, which have been increasing at around two per cent per year since 1970.³ A level of physical climate change hazards is locked in and increasing; regulatory responses are growing; and the associated complex social changes and feedbacks are under way.

Exacerbating the problem is intensifying urban and non-urban development in zones of escalating climate and weather hazards - development that's often built to standards that fail to account for climate change. In addition, government actions taken in some high-risk countries to respond to insurance availability or affordability concerns have actually distorted the market further, creating disincentives for insurers to place their capital at risk in these environments. In other words, insurers have assessed the risk using their vast experience, and the insurers have sent appropriate price signals reflective of such risk assessment. Unfortunately, those price signals are often higher than the government, regulator or stakeholders expect and the immediate response is often rejection and a mad search for some, really any other, seemingly cheaper answer. If no cheaper answer is available, regulators sometimes attempt to force or direct a lower price signal through regulation. Insurer responses too often then take the form of flight from the affected market, which in risk management terms is the equivalent of closing the barn door after the horse has bolted. This carries its own risks, in particular loss of market share.

There is no silver-bullet solution; rather management of this issue requires an ongoing and dynamic approach.

As society's shock absorber for risk, the insurance industry's continued profitability is vital to underpin the health of the global economy in the face of climate change. It is crucial for the industry that government and other stakeholders understand what insurers can and cannot do about climate change in the short and longer term, and they establish an ongoing dialogue to develop solutions.

As society's risk managers, insurers are paid \$US4 trillion a year to provide a buffer against losses due to hazards. The industry is now presented with what appears to be possibly the biggest risk to the future global economy. However, managing risk is what insurers do; climate change hazards could be proactively and profitably managed, helping society adapt to climate change while accruing considerable reputation gains for the industry. The current thrust of insurers' response to climate change appears to be somewhat more focused on new markets and their associated benefit in reducing the severity of long-term climate change impacts through greenhouse gas emissions mitigation. While these are decidedly worthwhile efforts, this thrust should be balanced with the need to address adaptation to the unavoidable physical impacts that have been locked-in by existing emissions. The problem that cannot be avoided is that insurers' existing markets, which represent their core business, remain vulnerable to escalating losses given the shortfall of concrete action to address primary climate change hazards (e.g. sea-level rise, drought, cyclones and other weather-related phenomena).

³We note, however, that resolving the various sources of increasing weather-related loss to establish a climate change signal is challenging and remains somewhat controversial.

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A vast amount of preparation remains to be done if insurers are to fulfil their intrinsic role as leaders of society's response to climate change. If this is not accomplished, the public and private sectors face the prospect of unaffordable insurance; insurers face the possibility of onerous regulatory response; and the wider industry faces a race to the bottom if insurers respond to weather-related losses by withdrawing from the very markets that most urgently require their risk management services.

It is true that some in the industry, most notably a number of reinsurers, have taken the climate change issue very seriously. However, the scale of response, which sees only a fraction of insurers responding, is still a long way from meeting the enormity of the challenge. This will remain the case until insurers fulfil their natural leadership role in the political debate on how society can both mitigate and adapt to climate change.

There are solutions. Globally, the Zurich Financial Services Group (Zurich Group) seeks to continue to use its core skill of risk assessment and management to assist stakeholders to adapt to climate change – through development of responsive climate-risk-related products, services and communications. Specifically, Zurich Australia has taken steps to enter difficult climate-affected insurance markets and seeks to do more. Further, Zurich Australia and Climate Risk have developed a framework that allows insurers and stakeholders to navigate the complex risks, and they clearly identify the means or 'levers' to minimise and adapt to these risks in order to secure a prosperous insurance sector in the face of climate change. Called the Climate Risk Diamond, this framework captures: hazards, vulnerability, exposure, opportunities and capacity (see figure). The framework demonstrates that insurers can be proactive about managing the risks of climate change, instead of appearing to be a 'deer in the headlights', seemingly overwhelmed by the enormity of the issue.

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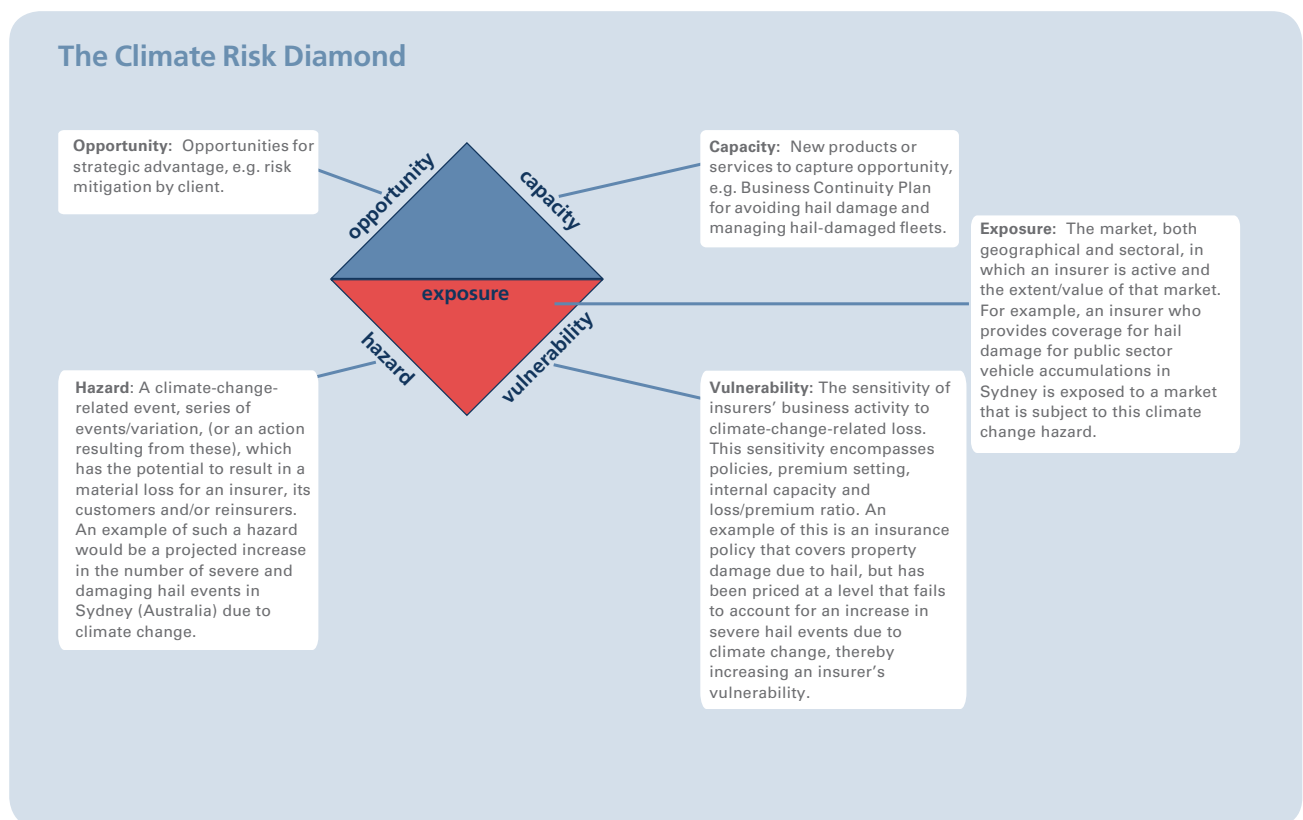
The Five Levers

The Climate Risk Diamond builds on the original Triangle of Risk developed by Professor David Crichton, a world-renowned insurance risk analyst. It elaborates on how hazards, vulnerability and exposure converge to create risk. The Climate Risk Diamond goes further and includes an 'advantage triangle', comprising exposure, opportunity and capacity. Using the Climate Risk Diamond, we have examined insurers' ability to not only manage risk, but also develop opportunities to increase profitability, grow their business and secure reputational gains in the face of climate change.

The Climate Risk Diamond provides five 'levers' for insurers to respond to climate change. They are:

- to reduce the hazard
- to reduce their vulnerability
- to optimise their exposure
- to recognise new opportunities
- to develop capacity to manage new risks and deliver opportunities.

This *Zurich Report* examines each of the levers.



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Lever 1 – Reduce climate change hazards

As the world's primary shock absorber of risk, the general insurance sector is confronting escalating climate change hazards. Many primary (direct physical) climate change hazards are unavoidable and may arrive sooner or be more severe than climate models suggest. Most general insurance business lines will be affected.

Insurers also face the challenge of secondary (regulatory) hazards from anticipated standards to deal with the primary hazards, as well as mounting pressure regulation for energy efficiency, renewable energy and other new technologies, as well as other measures that will deliver greenhouse gas emissions cuts to address the risk of long-term dangerous climate change.

Insurers will further face numerous 'tertiary' hazards arising from society's auto-adaptive responses to climate change, including changes in behaviour, demography, infrastructure and property values. These changes are both challenging and often unpredictable for insurers. These societal responses could translate into an increase in financial burdens for customers, prompting some to forego insurance or to underinsure.

Although insurers have no immediate control over primary climate change hazards in the short or medium term, they can facilitate mitigative measures designed to make structures more disaster resilient by sending price signals and providing information. Insurers can also help facilitate the reduction of greenhouse gas emissions that cause climate change (e.g. rewarding customers who 'go green') by finding commonality between the public good (reduction of risk related to climate change) and private good (reduction of climate-related risk to insured private property and other private risks).

These mitigation efforts could help avert a level of climate and weather hazards in the longer term that could otherwise be uninsurable in decades to come. However, many decades of climate change impact are already 'locked in' and unavoidable in the short to medium term – so an adaptation response is essential.

Insurers can also reduce the risk of regulatory hazards by engaging in policy development at all levels of government.

Finally, insurers can tackle tertiary hazards by resolving and planning for the complex changes arising from society's response to climate change and perhaps guiding those changes.

Lever 2 – Reduce climate change vulnerability

A major vulnerability for insurers is what many consider the industry's rear-view approach to climate and weather risk assessment. Under climate change, past risks are a poor guide to future risks. In addition, insurers face the difficulty of pricing cover to adequately reflect increasing weather-related losses, which, according to the Climate Change Working Group of the UNEP Financial Initiative, could grow to as much as \$US1 trillion in a single year by 2040. Regulatory changes and societal responses are also creating direct and indirect vulnerabilities: shareholder actions; burgeoning climate litigation; and entirely new markets for which insurers lack experience and data.

Insurers are likely to use traditional financial risk management techniques to address vulnerability to weather-related losses by raising premiums and deductibles, lowering limits and implementing broader coverage restrictions, as well as purchasing reinsurance.

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However, insurers face the delicate juggling act of balancing upward price pressure against insurance affordability, as well as regulatory and competitive pressures to keep prices low. Some insurers are looking at climate-responsive insurance products that encourage customers to prepare for weather and climate-related risk, but there is the likelihood that some insurers may simply tighten terms and raise prices. However, insurers who seek to implement proactive measures to reduce vulnerability to physical climate change hazards (e.g. creating disaster resilience), as well as the need to respond to regulatory and social impacts, will need to increase their services capabilities and capacity (see capacity below).

This could lead to a very important challenge to industry unity depending on how it addresses this vulnerability. Through their industry bodies, insurers should be actively consulting with governments and regulators to assist in factoring climate change into public policies. It is especially critical that public policy does not mask relative risk signals sent by the insurance industry in its efforts to promote new technologies. Insurers are experts at risk, and price signals sent by insurers relative to the new technologies should provide information to stakeholders as one of many inputs for informing their decisions.

Lever 3 – Optimise exposures

Insurance is the world's largest industry, with markets (exposures) garnering premiums that represent 7.7 per cent of global GDP. However, climate change hazards are already transforming insurers' exposures, creating entirely new markets and threatening to erode others. Exposure can be examined from both a geographical and sectoral perspective. Globally, insurers' markets are already prone to escalating extreme weather events, such as flooding, droughts and windstorms.

They also increasingly face higher insured losses due to intensifying urban development in high-risk areas, such as coastal zones around the world. There are also at-risk sectors, including agriculture, forestry, energy-intensive manufacturing industries and the wider energy sector.

An obvious – and traditional – response is simply not to insure at-risk sectors or zones, such as coastal regions where insurance availability is already decreasing. However, this strategy has numerous disadvantages, not least being that it absents private insurers from markets and income. It also creates reputational hazards for insurers.

Ill-advised government action can also create disincentives for insurers to handle such exposures. For example, increased regulatory exposure created by the adoption of new market-distorting government programs for coastal windstorm coverage in the United States has forced some insurers to withdraw or curtail their coverage. Many market-distorting public policies have the effect of causing inter-generational transfer of costs, in addition to a mere spreading of risk. The industry and society need to work together to find the mechanisms and approaches that maximise insurers' capabilities to optimise their exposures against these risks

These challenges present opportunity for insurers to take the lead and look at strategies that not only help them to sustain their exposure but even to expand their markets, despite increasing climate change risks. Insurers can look for products that serve to reduce their exposures, via physical risk reduction and loss prevention. In addition, entering new markets (see below) can provide insurers with new income streams.

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Lever 4 – Identify new opportunities

As the world's largest industry, with unparalleled access to business and consumers, insurers have a matchless but largely untapped opportunity to provide critical risk management services to help society adapt to and mitigate climate change and, at the same time, climate-ready their industry.

Yet some in the insurance industry have been slow in taking a leadership role, seemingly reluctant to look at climate change as an opportunity – rather than a risk. Undoubtedly, escalating climate change hazards threaten the insurance industry, but this challenge also throws up opportunities for the industry to do what it does best: provide communities with appropriate risk management solutions.

This *Zurich Report* has deliberately devoted much of the white paper to examining how the general insurance industry can help protect its clients against climate change and – to put it bluntly – how to capitalise on the challenge.

Opportunities to improve risk resolution and pricing

As stated already, insurers face a considerable challenge to resolve possible actuarial uncertainty around escalating primary climate change hazards, such as flooding and extreme events. However, identification of hazards is a traditional core strength of insurers, and those best able to identify and track these hazards and improve their actuarial analysis have an opportunity to price risk more accurately.

Insurers also have an opportunity to use their expertise in weather, applicable technology and climate to engage in climate research and promote the use of science-based methods and modelling. This will not only improve insurers' resilience, but could also inform public policy discussions, assist the wider society to become more climate-ready and provide accurate price signals to discourage investment in highly vulnerable zones. Insurers who develop this expertise may also choose to take the opportunity to sell these services to others within and outside their sector.

Opportunity to improve disaster management

Given the expected rise in the frequency of weather-related natural disasters, prudent insurers will need to plan for more robust response systems to disasters to ensure they are able to manage the increase in claims and help victims' needs.

Insurers need to look beyond the traditional 'handing over a cheque' to claimants and instead look to helping communities rebuild their lives. Planning for these scenarios would help insurers avoid the escalation of material and labour costs that follow on from constrained supplies after disasters. It could further help address the excessive stress levels amongst insurers' employees and other human resource impacts, such as increased resignations, which may result from high workplace demands during such crisis situations.

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Opportunity to help society adapt

Much has been written recently about the importance of community resilience. The Insurance Council of Australia has recently highlighted in its paper, *Improving Community Resilience to Extreme Weather Events that* communities that develop a high level of resilience are better able to withstand a crisis event and have an enhanced ability to recover from the residual impacts. On the other hand, communities with poor resilience are unable to effectively absorb the impacts of extreme events and, therefore, they are prone to suffering greater physical, financial and societal damage. These communities take longer to recover and often are permanently weakened.

While there is general agreement about the importance of community resilience, the challenges of achieving this are significant. We believe that the insurance industry, with its risk management skills and expertise, should see itself as a key player in strengthening community resilience. This not only stands to benefit the broader society in which insurers operate, but will provide the industry with many product and service growth opportunities, as well as reputational benefits.

Insurers who work with their customers (often through brokers) to increase their resilience to primary climate change hazards (such as floods or extreme weather) are likely to see reductions to property damage and insured losses, while sustaining and even enhancing premium income.

For example, Zurich Australia is piloting a Climate-Ready program – in conjunction with trained brokers - for small and medium-size enterprise (SME) clients to help them prepare for potential climate change hazards.

Insurers may do this by encouraging loss-reducing behaviours or by using the opportunity of rebuilding after a claim or a catastrophe to ensure a property is more adequately protected. The growing number of green building developments also presents opportunities to transform a hazard (e.g. a building vulnerable to extreme weather) into an opportunity (climate-hazard-proofed building, which is also energy efficient and energy independent).

Insurers who proactively assist in physical risk reduction are likely to be more profitable than those who simply reactively pay claims. Insurers are uniquely positioned to assess the risks and advantages of such actions particularly in regard to flood risk.

Opportunity to provide risk management services

Yet another important new market opportunity for insurers, as experts on risk, is to provide climate-risk management services. In addition to insurers, brokers who function as risk advisers to corporations may be very well placed to seize this opportunity.

Opportunity to provide coverage for primary hazards

Insurers have an important opportunity to help society adapt to climate and weather hazards. They may choose to increase their exposure to markets or lines where primary climate change hazards – such as flood, wind or hail – are increasing. Such opportunities may increase as insurers become better able to understand climate and weather-related risks.

For example, flood liability is not mandatory in Australia, and this risk is poorly quantified due to the current unavailability of detailed three-dimensional flood mapping.

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Many people mistakenly believe their homes and businesses are covered for floods. Repeatedly, media reports – sometimes with political comment included – point the finger at insurers for ‘not paying up’ on floods, often in small communities. Many insurers quietly do ‘pay up’ even though flood is not covered in the policy.

Under climate change, the incidence of flood is expected to increase. As a strong supporter of recent efforts by the insurance industry to highlight the need for flood cover, Zurich Australia has gone one step further.

Zurich Australia is taking a leadership role on the flood cover issue in recognition of the benefits of taking a proactive stance towards managing emergent climate risk and seizing the related opportunities. As of September 2008, Zurich Australia, in a first of its kind, will provide flood cover automatically for its commercial customers.

“Zurich has decided to move ahead of the industry and provide flood cover for our commercial clients. This is in part as a catalyst for the rest of the industry, as well as acting on our belief that it is the industry’s role to address this current and contentious gap in the insurance market.” (Zurich Australia’s submission in April 2008 to the Garnaut Commission.)

More opportunities for other insurers to cover this risk will be created as new and more detailed flood risk mapping information becomes available in Australia.

Opportunities from secondary hazards

Opportunities may arise out of new and evolving regulations and policies to address greenhouse gas emissions and the related technologies/ systems they are driving.

Insurers have a long history of promoting motor, fire and consumer product safety. Building on this experience, insurers could play a vital role in bringing new technologies to the market that would help meet regulatory requirements to cut greenhouse gas emissions.

There are important opportunities for insurers who can capitalise on these regulations.

(a) Opportunities in clean energy technology

Insurers and their clients have the opportunity to spur the development of low-carbon technologies through new policies and products. Insurers can facilitate the entry of investors into these new low-carbon markets by creating insurance products that take on some of the perceived risk, helping overcome this barrier to capital raising.

The level of opportunity for insurers with the new technologies being harnessed in response to climate change varies. It ranges from the fairly well established and insurable (wind power installations) to the unproven (carbon capture and sequestration for coal power plants).

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(b) Energy efficiency opportunities

Energy efficiency is a large-scale and cost-effective way to reduce energy use and significantly lower greenhouse gas emissions. Globally, the expected tightening regulatory environment for greenhouse gas emissions in many countries will provide incentives to reduce the use of cheap but greenhouse-intensive coal power. In many countries, cost-effective energy efficiency opportunities will be the first to be seized as they constitute 'low-hanging fruit'.

The energy services industry, which implements these efficiency gains, is already a multi-billion dollar global sector. It consists mainly of private companies that provide customers with efficiency or load-reduction services for a fee, sometimes in conjunction with third-party financing paid back through energy savings.

However, these energy services companies face important risks, such as uncertainty or potential disputes over attaining projected energy savings. Yet these risks translate into opportunities for insurers. Research notes that financial methods to manage risk in this sector are relatively underdeveloped, and that energy services companies often lack appropriate insurance coverage. By providing such cover, insurers will also have an opportunity to transfer and spread risk over a wider pool of projects, thereby reducing the barriers to smaller energy services firms that cannot self-insure for this risk.

(c) Renewable energy opportunities

According to a 2006 survey of insurance availability for renewable energy technologies by Marsh, 'Onshore wind, energy from waste, offshore wind and small scale hydro are perceived by respondents to offer the greatest future business opportunities for (re) insurers.' Marsh's survey reveals that insurers rank onshore wind as the renewable energy technology with greatest future business potential. Meanwhile, wave and tidal energy were the least favoured, reflecting the fact that they are highly prototypical and not yet at a stage of development that warrants consideration from insurers.

Renewable energy, in conjunction with energy efficiency, also provides opportunities to address the growing insurance risks associated with electricity reliability. This can reduce the impact of power outages, which result in significant business interruption and property damage. Renewable energy can play a role in backup power for the provision of emergency shelters, water purification, fuel pumps and safety lighting.

Renewable energy also presents risks related to access to – and ownership of – resources. These risks present opportunity for governments, regulators and insurers to work together to improve the certainty of renewable resource access and ownership to facilitate maximum deployment of such low-carbon technologies.

Marsh finds that although the prototypical nature of the renewable energy industry causes unease amongst underwriters, all insurers interviewed saw insurance for this sector as a commercial business opportunity.

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The increasing commercialisation of these technologies, along with greater provisioning of manufacturer warranties and guarantees, may be helping to reduce the perceived vulnerabilities associated with this sector. The growth of insurance products for such projects would, in turn, create the opportunity for more companies and investors to participate in renewable energy development.

(d) Carbon market opportunities for insurers

The advent of the carbon trading market has given rise to products and projects, which in turn may be insurable. These present a new opportunity, and a growing number of insurers are moving into these business areas.

The global carbon-trading market is rapidly growing. However, one obstacle for such emissions-reduction projects – the possible non-delivery of carbon emission credits due to factors such as project insolvency – is translating into an opportunity by insurers, through products such as credit-delivery insurance policies. Insurers are already offering a range of new products that allow participants in the carbon trading market to better manage risks and barriers. For example, Zurich's Emerging Markets Unit has announced it is providing political risk insurance for carbon credit projects.

The separate, but related, market of voluntary carbon offset schemes, which allow companies or individuals to offset their emissions on a voluntary basis, is also rapidly growing and provides opportunities for insurers. The lack of an acceptable standard for this industry could present an opportunity for insurers, who gain full disclosure of the risks entailed, to respond to the likely need for increased Directors & Officers coverage in this area.

Another potential niche associated with carbon markets relates to the forestry sector; trees act as 'sinks' for carbon because they absorb carbon dioxide as they grow – a form of carbon offset. The sector represents a considerable opportunity for insurers. The requirement of long-term stability of forest carbon sinks over intergenerational periods provides an excellent entry point for insurers to provide the security that a seller of such products cannot provide, but buyers must demand.

Opportunities for insurers in the built environment

Some insurers already see building codes and planning regulation as an important opportunity to reduce climate change hazards, and they are calling for stricter controls. New regulation that promotes adoption of efficiency standards and renewable energy technologies may also increase the capital value of buildings, creating new assets to insure and providing insurers with an opportunity to increase their market value.

'Green' buildings, which have their own power sources (e.g. solar or wind power) or possibly even on-site power storage, can also provide an opportunity to reduce the costs of business interruption and business loss during grid-power outages.

Governments around the world – and now Australia – are encouraging the use of lower-emission vehicles, and the green vehicle market is growing quickly.

Entering the growing market for green vehicles and other types of 'eco-insurance' creates an opportunity for insurance providers to distinguish their products from competitors without relying on price and it could give them a competitive edge in the motor market.

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As experts in climate and weather-related risk, as well as internationally significant investors, insurers also have a unique opportunity to help shape climate change policy at all levels of government. Globally, Zurich has already moved to offer green re-build insurance products and hybrid vehicle discounts in some countries and the insurer is actively seeking opportunity to do the same in other parts of the world.

Lever 5 – Build new capacity

It is one thing to identify an opportunity and quite another to have the capacity to seize it. As the advantage triangle implies, for insurers to realise an advantage they must: have exposure to the relevant market; see the opportunity within that market; and use their capacity to tap that opportunity.

Capturing new opportunities, reducing hazards and vulnerability, and optimising exposures will require insurers to increase their capacity.

- However, much of the insurance industry faces the delicate balancing act of trying to achieve long-term sustainable investment in climate change and – at the same time – respond to short-term sharemarket pressure. The socio-political issues are challenging. Specifically, all steps necessary to ready structures to withstand greater frequency and severity of storms, to restructure water management mechanisms in response to increasing frequency and severity of drought, and to convert to low carbon or renewable energy resources cost money. In some cases, the costs are substantial. Emergence of new costs always result in questions of “Who should pay?” and “How much?”.
- How is it in this environment that insurers should look to increase capacity? Zurich believes careful and consistent focus must be addressed to the climate change issue, and the insurer is taking such actions today through risk assessment, responsive product development and involvement with stakeholders and governments.
- In the short-term cost and profit performance pressures may mean that long-term climate change strategies risk becoming too hard. Governments and regulators, the private sector (including insurance), the public sector (including shareholders) and other stakeholders each have differing needs and demands that must be balanced in the face of climate change. Achieving this balance is no easy task. The private sector cannot protect the public good of climate change alone and must work in partnership with governments.
- Despite the opportunities noted earlier, research finds that only about a third of insurers are offering innovative products and services that address climate change.
- In the United States, Japan and Germany, Zurich offers a discount on motor premiums for insureds with hybrid vehicles. In certain countries, Zurich is able to offer ‘green rebuild’ extensions to property policies that can provide replacement of damaged materials following a triggering event with energy efficient appliances and environmentally sustainable building materials. In certain countries, Zurich can also provide property policy extensions that extend coverage to owned and operated renewable energy sources on property, including business interruption extensions.

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Zurich currently provides a full suite of property and casualty coverage for all types of renewable and alternative energy construction projects and ongoing operations, including wind, onshore and offshore, solar, geothermal, biogas and hydropower. Zurich is actively exploring and drafting coverages for: wave/tide power projects and operations; carbon capture and sequestration projects and operations; and other new low-carbon and disaster-resilient technologies and activities.

- Insurers in this minority provide some indication of what is possible. Realising they can no longer rely on backward-looking models to assess risks and price their products, some insurers are taking the first steps to incorporate forward-looking models used by climate scientists and tying these to insurance loss models to estimate future levels of risk and loss. However, the overall goal of pricing for climate change hazards, so crucial to sustaining insurer profitability and aligning customer behaviour with risk, remains largely unmet.

Some insurers are also using their traditional physical risk management expertise to help 'climate proof' their current markets through physical loss prevention. Others are encouraging policyholders to rebuild after catastrophes with more robust structures. Products, such as these, are essential to help society adapt to climate change. However, they remain rare despite concrete demonstrations of their feasibility by proactive insurers.

Pioneering insurance companies are also creating products to tap fast-expanding new markets: adapting traditional project-based insurance for renewable energy developments; novel weather derivatives for solar and wind power projects (to transfer the risk of underproduction due to unexpectedly low levels of sun or wind); and innovative carbon credit delivery-related insurance. Some insurers are also adapting their risk management expertise to provide consulting services on climate risk, such as carbon regulatory risk.

Some insurers are also beginning to dedicate specific staff resources to climate change. The Zurich Group has launched a global Climate Initiative and has established an internal Climate Office embedded within its core business and strategy structure. Axa has created a 'Climate Core Group' task force within its Group Risk Management division, and the company has appointed a full-time Climate Change Director. Others, including Swiss Re, are embedding climate change into their strategies as an issue of top importance.

A few insurers are already building their capacity to realise opportunities in the fast-growing carbon market. These firms are going beyond obvious steps, such as purchasing offsets to cover their own emissions, and are instead creating innovative products and in some cases whole new areas of business.

Despite this activity, Zurich Australia believes the current capacity of the global insurance industry to deal with climate risk is low, with only a small minority of insurers having taken concrete action to address climate change related risk.

The Zurich Report

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The insurance industry is highly diverse and, consequently, its response to climate change varies across nations and regions. Some European insurers have taken earlier and more aggressive action than US firms, probably reflective of deep divisions in the US about whether climate change exists. Even within Europe, different responses to capacity building may be evident. For example, in the UK, which has a private insurance market for weather risks, insurers have focused their efforts on climate change adaptation for some time. This is not the case in France, where the state, as an insurer of last resort, offers an unlimited guarantee for coverage.

If the industry does not significantly increase its capacity in respect to climate change risk, the public and private sectors face the prospect of unaffordable insurance; insurers face the possibility of onerous regulatory responses; and the wider industry faces a race to the bottom if insurers respond to weather-related losses by withdrawing from the very markets that most urgently require their risk management services. It is true that some in the industry, most notably a number of reinsurers, have taken the climate change issue very seriously.

However, the scale of response, which sees only a fraction of insurers responding, is still a long way from meeting the enormity of the challenge. This is of concern given that climate change impacts may be more severe and arrive sooner than projected. This will remain the case until insurers fulfil their natural leadership role in the political debate on how society can both mitigate and adapt to climate change. Through this white paper and other actions, Zurich Australia, along with the global Zurich Group, looks forward to an expanded and thoughtful dialogue with governments and other stakeholders. In the meantime, the insurer will continue to use its skills to assist clients and the broader community to adapt to climate change.

Important information

The information contained in this material is general information only and future trends are conjecture only. It is given in good faith and has been derived from sources believed to be accurate as at this date. However, it should not be considered as a comprehensive statement on, or study of, any matter and should not be relied on as such.

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