



Climate Change & the Financial Sector: An Agenda for Action

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Executive Summary

1. Climate change is real

Climates have always been changing. But this time there is one big difference: the changes are principally man-made. The issue has become urgent because the pace of change is accelerating. This report identifies actions for key stakeholders: Allianz Group, its clients, co-financiers and policymakers.

Europe is not only warming 40 percent faster than the world as a whole, but has already sustained severe damage from climate change. Storms in 1999 and floods in 2002 each cost 13 billion euros, while a heat wave in 2003 cost 10 billion euros. Although no precise estimate of all future costs can be made, a European Commission paper puts the future cost of all the potential cumulative global damage at 74 trillion euros at today's value if effective action is not taken.

Climate change will have a multitude of effects on human society and on nature if we fail to take clear actions to slow it down. While milder winters may seem an attractive proposition for Europeans, it is a prospect that deceives. Climate change will lead to increased heat stress, a rise in insect-borne diseases, and increases in rates of skin cancer and food poisoning. Globally, climate change already results in about 160,000 deaths a year, and this is likely to rise sharply because of increasing shortages of food and water.

The extraordinary heat wave in 2003 caused 27,000 deaths in Europe and disrupted agriculture, inland shipping, and electricity production. Huge swathes of forests covering a total of 5 percent of Portugal's surface area were destroyed in a loss put at one billion euros.

By the end of this century such a summer could be routine. Mediterranean agriculture might be in a state of collapse. Everywhere in Europe rainfall will be more intense. The number of major floods in Europe has already risen from one per year to 15 in recent decades. In the UK, the annual cost of flooding this century will rise to as much as 30 billion euros. Businesses are increasingly reporting reduced profitability because of unusual weather. Many European Union holiday destinations will suffer – in a region where travel and tourism generate about 4 percent of GDP.

2. Climate change policies are changing the economics

Governments are starting to introduce policies to tackle the causes and combat the effects of greenhouse gas emissions (GHG), and these policies will alter the economics of entire industries. They will affect company share prices, both positively and negatively. Examples from industry show that proactive strategies tackling CO₂ emissions reap economic benefits. And climate change might not be the only reason for taking such steps. Other benefits of climate change policy might include reducing dependence on energy imports, achieving more reliable energy price levels, ensuring clean air, and creating jobs. The growth of carbon markets associated with emissions entitlements offers revenue opportunities for developing countries and more efficient companies, and will need a range of services from the financial sector. International emissions trading could be worth between 50 and 800 billion euros in 2025.

Climate change policies will have an effect on a number of industry sectors. The most sensitive sectors are either energy-intensive, such as cement, aviation, metals or energy industries such as oil and gas, coal, power utilities; or provide energy-consuming products such as automobiles.

The driving force behind much of the current carbon market activity is the EU Emission Trading Scheme (ETS). Some of the early warnings of huge effects in certain sectors seem unlikely now, but the current market price has climbed to over 20 euros per tonne of CO₂ (May 30) which is not negligible.

There has been a steady flow of research reports looking into the issue of carbon constraints on corporate earnings since 2002. They demonstrate that there are clear differences in the present value of corporate earnings, across a range of possible future climate policy scenarios. This means that managements and investors cannot assume that there will be time to react to policy when it is approaching implementation.

A WWF study found that certain electricity companies could face costs of as much as 9 per-

cent of gross earnings, though costs may be passed on, while low-cost producers can extract larger margins. A Dresdner Kleinwort Wasserstein (DrKW) study concluded that 8 out of 18 cement companies were overvalued by up to 13 percent.

3. Financial sector's need for consistent, long-term policy frameworks

To combat the negative effects of climate change consensus exists that the global average temperature should not increase by more than 2 degrees Celsius and rather stay below this threshold. This will imply a cut in annual GHG emissions of 60 to 80 percent by 2050 globally, from the current level of almost 7 billion tonnes of carbon to under 2.5 billion. In line with these targets, individual EU member states have already announced national greenhouse gas reduction goals that support a path of deep and consistent reductions. For example, France proposes a 75 percent reduction by 2050, the UK a 60 percent cut by 2050, and Germany is considering a 40 percent cut by 2020. However, specific actions are rarely defined beyond a horizon of 2012, the conclusion of the first Kyoto commitment period.

Early action is needed to provide greater certainty for business, long-term investment and technological change. Inconsistent policies or no policies at all simply deter investment. Among the inconsistencies: the EU subsidized fossil fuels by 24 billion euros in 2004 compared to 5.3 billion euros for renewable energy sources; and international transport fuel is tax-exempt. The best strategy would involve a mix of actions on energy efficiency, including conservation measures, renewable energy and switching to low CO₂ fuel and gases. Perhaps half of the potential growth in emissions could be saved by greater energy efficiency.

4. New risks and new demands for financial services companies

The financial services industry needs to adapt its internal processes and policies and its products and services to meet the challenges its clients face as well as to safeguard its own viability. To enable financial services companies to play a responsible role in mitigating climate change they require a reliable, transparent and international co-ordinated policy framework as well as long term, appropriated CO₂-reduction goals. That gives certainty for investment decisions and provides business opportunities for clients.

In order to adapt their own operations to the new challenge, financial services companies should include climate change risk in their internal governance procedures, in line with the existing financial corporate risk identification, controlling and reporting structures and best practice in reporting requirements.

INSURANCE

Climate change and climate policy affect insurers through the risks they accept from clients. Since climate experts predict changes in the intensity and distribution of extreme weather events (especially water-related and storms), and because of the resultant risk of catastrophic property claims, insurers are likely to regard climate change as a threat rather than an opportunity. The high number of tropical storms worldwide pushed insured weather losses in 2004 to a record 32 billion euros. While the incidence of tropical storms is not conclusively linked to climate change, their increased frequency is part of a pattern of higher activity.

Projections for the UK from the Association of British Insurers suggest that by 2050 the annual cost of weather claims will double to 3.3 billion euros, while an extreme year might cost 20 billion euros. In Germany the total exposure to flood damage in one event might be 15 billion euros. Climate change is increasing the potential for property damage at a rate of between 2 and 4 percent a year. Because insurance pricing relies on

historical data, this could lead to an underpricing of weather risks by as much as 30 percent due to the time lag between the historic data that is used to set prices, and the future period in which claims will occur. In Allianz's global industrial insurance business for example, around 35 to 40 percent of insured losses are already due to natural catastrophes – mainly floods and storms – so this could materially affect the overall profitability of insurers. Other effects are expected to include claims for loss of sales, heat stress among clients or staff, damage to vehicles, travel delays, and pollution from floods.

But climate change will also bring more demand for conventional risk transfer and open opportunities in new areas such as emission reduction projects.

Insurers' Agenda for Action:

- Gather information on future climate risks and thereby better predict and underwrite climate-associated risks.
- Control their exposure to natural catastrophes and other climate-related risks by developing adequate risk assessment tools such as flood zoning and establishing expertise for natural catastrophes.
- Upgrade risk assessment methodologies such as identifying potential new liabilities from carbon emission or using environmental due diligence screening of a company.
- Develop risk management expertise regarding low carbon technologies jointly with industrial clients to develop new products supportive of low carbon technology.

BANKING

Banks play an important role in climate-related financing and investment, credit risk management, and the development of new climate risk hedging products. On the downside, they face credit risks because policies to cut emissions can create costs for carbon intensive sectors and companies. Price volatility in carbon markets (CO₂, oil, gas, coal) and climate-related commodities leads to uncertainty in financial projections. For

example, the price of CO₂ varied between 5 and 20 euros per tonne in the two years to June 2005. But climate change also creates opportunities. According to the World Energy Council, the renewable energy market could be worth 1.4 trillion euros by 2020. The global carbon market in 2010 could be worth up to 200 billion euros, estimates Point Carbon. Exploiting the Kyoto Mechanisms could enhance project returns by up to 15 percentage points e.g. in methane reduction projects. Weather derivatives offer potential to banks: the total notional value of this market rose to 3.5 billion euros in 2003/04. Emission trading creates new relationships between corporates: cross-border, cross-commodity, cross-product, and that in an increasingly international context. Significant new investments will be required internationally in high value added technologies for both large and small scale aspects for each project. A key challenge here is to marry long-term investment horizons with short-term regulatory change.

Banks' Agenda for Action:

Banks taking leadership on climate change issues will therefore need to

- Review and optimize their own carbon risk management and (further) develop assessment tools applied to carbon risks and carbon risk reduction strategies (e.g. by using carbon related economic analysis for sectors or companies and/or by developing climate change related risk matrixes).
- Define clear risk requirements for clients regarding carbon risk reduction and market strategies (e.g. by discussing rating requirements with clients).
- Foster the development of carbon risk hedging products e.g. derivatives.
- Facilitate finance for public programmes that foster the introduction of low carbon technologies.

ASSET MANAGEMENT

Climate change is one of the most financially significant environmental issues facing investors today. It distinguishes itself in the fact that it has implications for a number of sectors that are exposed to policy-driven strategies to mitigate climate change. Therefore, understanding to what extent and how climate change will impact or enhance the value of investments is crucial if shareholder value is to remain protected. Although there is increasing evidence to suggest that climate change considerations are starting to permeate into investor thinking, it is an issue that as yet still lacks incorporation into mainstream investment considerations. Barriers exist in the lack of understanding of the implications and uncertainty around climate change policy and regulation which remain complex.

Furthermore, the availability of comparable and consistent data on companies' emissions levels, as well as tools to assess risks and opportunities remain limited. Looking at the asset management chain of responsibility – institutional investors, consultants, fund managers, financial analysts and companies – each face different challenges. But what is clear is that each one of them can take specific action, primarily to develop understanding and respective tools regarding the financial implications of climate change.

Specifically, fund managers and financial analysts should:

- Evaluate their client portfolios for climate change risks and opportunities in order to be able to respond to changes in climate change policy and legislation.
- Engage with company management to understand how climate change is impacting their business and what strategies they are employing to minimize its risks or maximize opportunities from it; educate clients about the benefits and processes being used to incorporate extra-financial issues in the management of their assets.
- Request and reward external research providers e.g. brokers to produce consistent, quality, long-

term research, which incorporates extra-financial issues such as climate change and integrate such issues into their mainstream analysis and investment decisions also by utilizing the help of their in-house or external SRI expertise.

5. Financing low-carbon energy

The solution to climate change is essentially to convert the world's economies to low-carbon technologies, through both alternative energies and more efficient energy conversion. Low-carbon energies can be a contribution to the mitigation of GHG emissions and a business opportunity for project developers and investors.

The future outlook for the low-carbon energy market is promising. According to the International Energy Agency investment in cleaner energy at present is USD 20 billion a year, mainly to solar and wind power, expected to grow to USD 100 billion globally within 10 years. Investment in renewables and clean energy technology rose 150 percent between the years 2000 to 2004, across a wide range of applications (efficiency, windpower, fuel cells, etc.).

The growing market opens increasing opportunities for financial services providers.

However, renewable energy technologies, given their innovative character, often face a number of additional barriers compared to other projects, e.g. technical problems or higher upfront costs. Therefore it is necessary to develop specific expertise and financial involvement in low-carbon energies and to diversify the risks of such energy projects.

6. Addressing climate change is crucial for the financial sector

Climate change will increase costs for the financial sector if no action is taken. Banks and investors in particular need a clear regulatory framework on climate policy which they can adapt and base their investment and lending decisions on, while insurers face the prospect of heavy losses.

Integrated financial organisations need to be aware that climate change could result in a compounding of risk across the entire business spectrum, diluting some of the benefits of diversification. For example, an insurer is exposed to property losses from extreme events, but so too is a property investor, and also a banker providing services to the property management sector. Furthermore, if the insurer seeks to reduce his risk by withdrawing cover, other stakeholders (investors, bankers etc.) are left with greater, uninsured risks.

Therefore, integrated financial organizations need to develop pro-active strategies to manage the increasing risks due to climate change.

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