

Investor leadership on climate change

An analysis of the investment community's role on climate change, and snapshot of recent investor activity.



CARING FOR CLIMATE SERIES



An investor initiative in partnership
with UNEP Finance Initiative and
the UN Global Compact



UNEP Finance Initiative
Innovative financing for sustainability

About the United Nations Global Compact

Launched in 2000, the United Nations Global Compact is a both a policy platform and a practical framework for companies that are committed to sustainability and responsible business practices. As a multi-stakeholder leadership initiative, it seeks to align business operations and strategies with ten universally accepted principles in the areas of human rights, labour, environment and anti-corruption and to catalyze actions in support of broader UN goals. It is the world's largest voluntary corporate citizenship initiative, with over 6,500 signatories based in more than 130 countries. Visit www.unglobalcompact.org.

About the Principles for Responsible Investment

The Principles for Responsible Investment (PRI) provide a framework for helping investors build environmental, social and governance considerations into the investment process, thereby achieving better long-term returns and more sustainable markets. The initiative was convened by UNEP FI and the UN Global Compact, and launched in 2006 by former UN Secretary-General Kofi Annan. The six Principles of the PRI Initiative were developed by, and for, institutional asset owners such as large pension funds and fund managers.

The initiative now has over 500 signatories made up of financial institutions from over 32 countries. It is delighted to contribute to the Caring for Climate series with this report.

The Principles themselves, a full list of signatories and more information can be found at www.unpri.org

About the United Nations Environment Programme Finance Initiative

UNEP FI is a unique public-private partnership between UNEP and the global financial sector. UNEP FI works with banks, insurers and investment firms, and a range of partner organisations, to develop and promote link-ages between sustainability and financial performance. Through its comprehensive work programme encom-passing research, training, events and regional activities, UNEP FI carries out its mission to identify, promote and realise the adoption of best environmental and sustainability practice at all levels of financial institution operations. More information: www.unepfi.org

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Contents

Foreword	5
Preface from Chair of the PRI	6
Introduction	8
1. Beyond business as usual	10
An investment opportunity	10
The long-term investment case	10
The problem with business as usual	10
A leadership role for investors	11
2. Allocating capital to low-carbon opportunities	12
Responding to the financial crisis	12
Governments as investors	13
Developing new asset classes	14
What more could investors be doing?	14
3. Building climate into investment processes	16
The need for leadership from the top of the value chain	16
Pressing for disclosure	19
Improving research	19
What more could investors be doing?	22
4. Shareholder leadership	24
Shareholder governance power	24
Further influence	25
Energy efficiency measures	27
What more could investors be doing?	29
5. Investor engagement with public policy	30
Engagement with international policy	30
Engagement with regional and national policy	32
Institution building	33
What more could investors be doing?	34
6. Conclusions	36
Methodology and bibliography	37



Foreword

Caring for Climate (C4C) was introduced by United Nations Secretary-General Ban Ki-moon in July 2007. The Secretary-General challenged Global Compact participants to exercise leadership on climate issues by:

- making climate change a leadership issue for strategy and operations;
- setting emission reduction targets and exploring low-carbon technologies;
- supporting public policy efforts aimed at achieving low carbon economies;
- sharing experiences and publicly disclosing progress made on an annual basis.

Less than two years on, Caring for Climate has emerged as the world's largest and most diversified business engagement platform on climate, with more than 350 corporate signatories in over 60 countries.

Less than seven months before the crucial UN Climate Change Conference in Copenhagen, we are releasing several new research studies and reports, the Caring for Climate Series, to offer a range of perspectives on the role of business and investors in tackling climate change. It is our hope that the findings of the C4C Series will inspire more businesses to make climate change a priority issue, so that policy makers will feel more confident that business is ready to be part of the solution.

The good news is that businesses from all regions and sectors have already started their journey towards energy efficiency, innovation and GHG emission reductions. Indeed, in many instances businesses have embraced climate action as an opportunity to drive efficiency and to gain competitive advantages, even where Governments have not yet taken action.

Caring for Climate participants recognize that climate change is not only an environmental issue. Around the world, businesses are beginning to feel the economic impacts as well. Consequently, some have made the connection between mitigation and adaptation, putting in place long-term measures to address not only emissions, but also food and water concerns and related natural resource issues. In fact, this drive towards energy efficiency and carbon reductions, combined with a proactive management of systemic climate risks, is defining a new level of environmental stewardship. Long-term investors, asset managers and analysts are also beginning to integrate these considerations into investment analysis and decision-making.

The bad news is that, despite encouraging and inspiring leadership, the number of businesses that are actively addressing climate change is far too small. Too many are still sitting on the fence waiting for others to act first.

What is needed now is Government leadership to produce a clear incentive structure that favors good performance and a global deal on climate change that creates certainty. Governments should be confident that change is possible. If Caring for Climate is any indication, business and investors certainly have the capacity and understand the compelling case for taking action. We therefore hope that the C4C Series will give policy makers and negotiators the confidence and inspiration to bring the Copenhagen Climate Conference to a successful conclusion.

Georg Kell
Executive Director
United Nations Global Compact

Claude Fussler
Programme Director
Caring for Climate
United Nations Global Compact

Preface

For many institutional investors, including many large pension funds and asset managers, climate change is rapidly becoming as relevant a factor in an investment decision as more traditional financial elements such as liquidity or competition.

As this report shows, there are a number of powerful drivers underpinning this change, and its extent is not restricted to purely long-term investors. Across the world, asset owners, investment managers, researchers and other participants in the global investment community are increasingly aware they must take climate change into account as part of a holistic approach to fiduciary duty. This report explores how investors are putting that awareness into practice in their daily business.

While much is being done, the clear message of this report is that more efforts are needed. Despite the tough economic conditions, investors urgently need to act on climate change if they are to protect their investments over the long term and capitalize on the opportunities created.

There are four clear challenges for investors:

- To increase capital flows into projects that help mitigate and adapt to climate change;
- To improve the way investment processes incorporate climate change;
- To use their influence as shareholders to improve the carbon performance of the companies in which they invest;
- To engage with public policy frameworks to ensure they catalyse the transition to a low-carbon economy.

In short, investors must, to borrow Warren Buffett’s memorable phrase, “build the ark” and ensure that mainstream capital markets produce a sustained and successful response to climate change.

Donald MacDonald
Chair of the Principles for Responsible Investment Initiative and Trustee, BT Pension Scheme

Glossary

- **ACSI** Australian Council of Superannuation Investors
- **BINGOs** Business and Industry NGOs
- **CDM** Clean Development Mechanism
- **CDP** Carbon Disclosure Project
- **CMIA** Carbon Markets & Investors Association
- **COP** Conference of Parties to the UNFCCC
- **EAI** Enhanced Analytics Initiative
- **ESG** Environmental, social and governance
- **EU ETS** EU Emissions Trading Scheme
- **GHG** Greenhouse gases
- **IEA** International Energy Agency
- **IFSA** Investment and Financial Services Association
- **IGCC** Investor Group on Climate Change
- **IIGCC** Institutional Investors Group on Climate Change
- **INCR** Investor Network on Climate Risk
- **IPCC** Intergovernmental Panel on Climate Change
- **JI** Joint Implementation
- **ppm** Parts per million atmospheric concentration of CO2 equivalent
- **PRI** Principles for Responsible Investment
- **UNEP FI** United Nations Environment Programme Finance Initiative
- **UNFCCC** United Nations Framework Convention on Climate Change

Introduction

Climate change is a major source of opportunity and risk for investors. The International Energy Agency (IEA) estimates that around US\$10 trillion must be invested by 2030 in low-carbon technologies if we are to achieve the 450ppm CO2 stabilization level accepted as moderately safe.* That is only one estimate, (many other such estimates can be found in other parts of the Caring for Climate series of reports), but it is clear the amount of capital needed to achieve a low-carbon economy is colossal, and many argue the lion’s share must come from private funding sources**.

The good news is that even such large sums of money are within the long-term capacity of the financial sector, as long as the appropriate public policy incentives are in place. Indeed, the transition to a low-carbon economy will be a huge opportunity for investors.

On the other hand, climate change presents risks to investors. In the short term, carbon pricing will change the cost structure for many companies and the relative competitiveness of carbon-intensive business sectors. Over the long term, if unchecked, the changing climate could do severe damage to the economy, undermining the ability of pension funds and other long-term investors to finance their liabilities.

A growing number of large institutional investors accept these realities and are acting on them. The widespread adoption of the UN-backed Principles for Responsible Investment reflects the perception that climate change and other ESG issues must be addressed by investors.

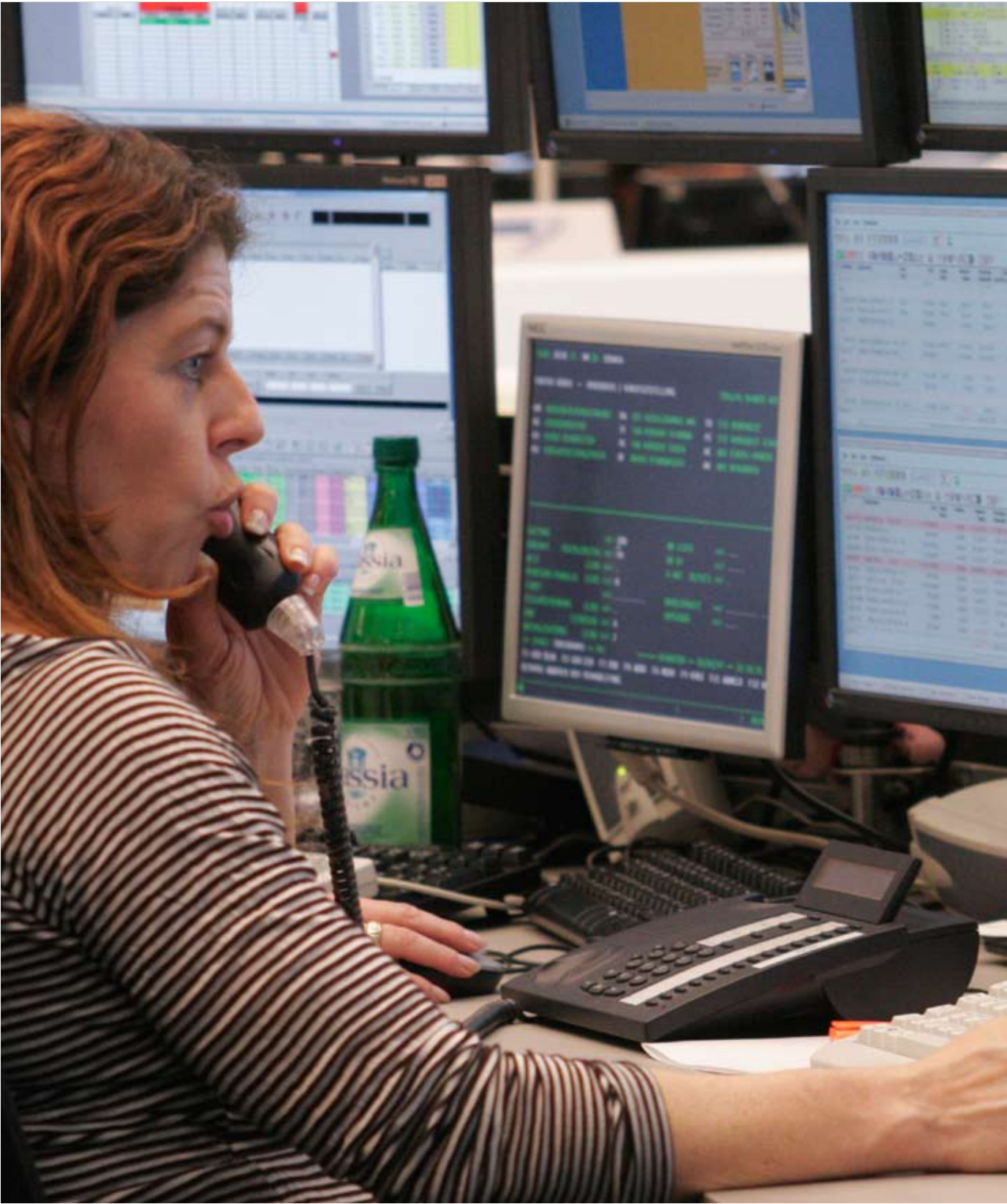
It is becoming increasingly clear that the world will be effective at mitigating and adapting to climate change only if the invest-

ment community is actively engaged in the process. As this report argues, this is not just a matter of business as usual; leadership is needed within the investment community.

The first chapter of this report looks at the ESG movement in the context of climate change and explores the reasons behind it. The following chapters set out distinct leadership roles for investors arising from the climate challenge.

This report aims to take a snapshot of some of the activities already going on in these areas and highlight best practice where possible. It should be read in conjunction with its sister publications that make up the Caring for Climate series, published by the United Nations Global Compact.

* International Energy Agency 2008 World Energy Outlook.
** UNFCCC (2008), Investment and Financial Flows to Address Climate Change, Geneva, Switzerland.



1. Beyond business as usual

An investment opportunity

As climate change has steadily risen up the public agenda in recent years, so has the call for investors to provide capital in the service of climate change mitigation and adaptation. Providing capital comes naturally to investors — it is their vocation — and as long as the risk-adjusted returns are available, investors will be ready to provide capital for this purpose. This has certainly been the case over recent years. In 2007 alone, an estimated US\$204 billion of finance was made available for investment in renewable energy projects of various kinds.*

There is now a huge array of low-carbon investment opportunities. These include: renewable energy technologies that use solar, wind, tidal, wave or geothermal power; microgeneration and smart grids; carbon-efficient buildings; low-carbon transport technologies and systems; and sustainable forestry and land use changes. Successfully exploiting these varied opportunities requires a range of different investment approaches, from venture capital and private equity to infrastructure finance and property investment, as well as the large-scale investment activity taking place in the listed bond and equity markets.

Such a diverse field of opportunity cannot be fully captured by this short report. Our focus is on equity investment, though we also provide case studies illustrating many of these other areas. Other aspects are covered in more detail by other reports in the Caring for Climate series.

The long-term investment case

For long-term investors such as pension funds, climate change is a major source of systemic risk that could undermine their ability to meet their liabilities. For these investors, the fiduciary case for action on climate change is compelling.

Pension funds have to meet liabilities far into the future. A 20-year-old employee enrolled in a defined benefit pension scheme is likely to be receiving pension payments in 60 years time. Over these time horizons, climate change has significant potential to affect the global economy. The Stern Review, probably the most influential report on the

long-term economic implications of climate change to date, concludes that some of the scenarios included in the UN’s third Intergovernmental Report on Climate Change have the potential to trigger a depression-level economic collapse, wiping 20% permanently from global GDP by 2100.** The fourth IPCC report concludes that outcomes could be even worse than previously thought.*** While these conclusions could be seen as highlighting pessimistic scenarios within a range of possibilities, they are widely considered a fair indication of the scale of potential risks facing long-term investors.

These risks are systemic. In other words, they will have impacts across the entire economy. This will make them difficult to hedge or avoid. As we have recently been reminded, depression-type economic events affect all asset classes, including supposedly safe havens and diversification plays.

While there are some sectors of the economy that might benefit from catastrophic climate change, most would not. Pension funds, particularly large pension funds, are universal investors****, and they are so large that they tend to have long-term investment exposure to the whole economy. This makes it difficult for them to avoid systemic risks of the kind that unmitigated climate change will impose on them. As a result, prudent pension funds have good reason to pursue cost-effective strategies to support climate change mitigation and adaptation. Arguably, this may even be part of their fiduciary duty.*****

The problem with business as usual

Investors might be tempted to think they need not make any special efforts on climate change. That they can simply wait for policy-makers to create incentives for investment in low-carbon opportunities and then exploit them by repricing risks and reallocating capital accordingly. However, there are a number of problems with this business-as-usual approach:

- It assumes policy-makers will deliver the appropriate carbon pricing regimes. However, given the array of geopolitical and sectoral interests involved, that is not a foregone conclusion. Investors do not

simply need a carbon price — they need a price that is sufficiently high and sustained to justify the kind of large scale low-carbon investments required. Policy-makers need active support from the international investment community to increase the chances of achieving the necessary frameworks.

- It assumes capital markets will be efficient at pricing risk and allocating capital. The recent financial crisis indicates that capital markets are not always efficient at pricing complex risks. There are many uncertainties around fundamental climate science, likely pathways of technological development, and the trajectory of international climate policy. All this makes climate risk pricing very complex. Investors need to take responsibility if they are to ensure capital markets respond efficiently to carbon prices and other policy instruments.
- It will need to deliver new structures in a brief timeframe. Successful climate change mitigation will require the private sector to create new institutions and support new structures, such as the Clean Development Mechanism (CDM). In some cases, these must grow from small start-ups to global giants in a very short time. As well as professional and independent central government regulation, this will require exceptional leadership and focus from investors.
- It forgets that equity investors are not merely providers of capital — they are shareholders and therefore owners of companies. As we explore in detail in chapter 4, they have a unique position of leverage over the entities that, in one way or another, are accountable for most of our carbon emissions.

A leadership role for investors

If investors want to play a role in mitigating climate change risk — for their clients, their beneficiaries and for society — it is clear from the case studies and findings in this report that they must go beyond their business-as-usual roles. Doing so will be necessary if they are to fulfil their fiduciary duty over the long-term.

Leading investors are focusing on four broad areas beyond business-as-usual:

- Increased allocation of assets to climate change mitigation and adaptation projects (explored in chapter 2).
- Leadership in building climate change into investment processes and pricing climate risk (explored in chapter 3).
- Shareholder leadership of corporate climate change activity (explored in chapter 4).
- Leadership in the climate change policy process and institution building (explored in chapter 5).

Some of the actions described here will not deliver immediate outperformance for investment portfolios. The returns they deliver tend to be long-term and dispersed. Nevertheless, they are critical to the ability of pension funds and other long-term investors to meet their liabilities.

* See chart on p.12
** Nicholas Stern, The Economics of Climate Change: the Stern Review, 2007
*** International Panel on Climate Change, Fourth Assessment Report 2007
**** Hawley, J. & Williams, A. The Rise of Fiduciary Capitalism: How Institutional Investors Can Make Corporate America More Democratic.2000
***** See, for example, arguments in Freshfields 2005 and Mackenzie 2006

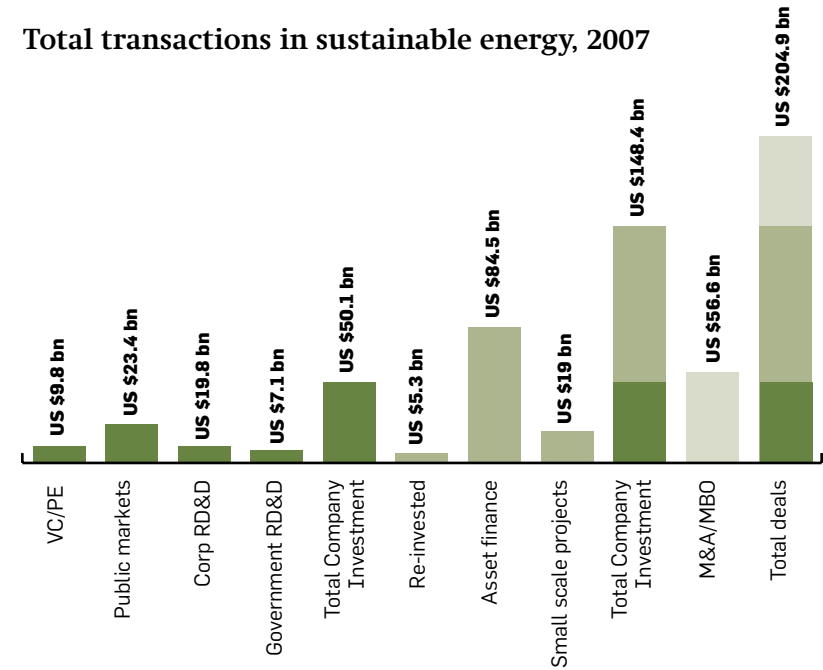
2. Allocating capital to low-carbon opportunities

The flow of new investment into areas such as clean tech and renewable energy infrastructure projects is vital to meeting the challenge of climate change. Perhaps the most obvious role for investors is to put new money into projects that both help prevent climate change and exploit attractive growth opportunities.

The IEA estimates that around US\$45 trillion will be needed to develop and deploy new, clean technologies between now and 2050.* Many billions of dollars are already flowing into this low-carbon industrial revolution. In 2007, an estimated US\$204 billion was made available for investment in renewable energy projects (see chart).

Pension funds play an important role in providing this capital. The green fund (detailed in the box below), set up by the largest public pension fund in the US, is a good example.

* IEA Energy Technology Perspectives 2008



(Source: New Energy Finance)
** note: Grossed-up values based on disclosed deals. Adjusted for reinvestment. Geared re-investment assumes a 1 year lag between VC/PE/Public Markets funds raised and re-investment in projects. Figures marked * are based on industry estimates from various sources.
New Energy Finance, Global Trends in Sustainable Energy Investment 2008

To an extent, this kind of investment can be seen as a business-as-usual investment as it allocates capital into projects with market returns. Low-carbon technologies, particularly when supported with carbon pricing or subsidies, can deliver the kind of risk-adjusted returns that make them attractive to investors. As a result, investors might think that no special leadership is required of them. However, many investors are yet to explore these opportunities. As with any other new asset class, pioneers are needed to beat a path for others to follow.

Responding to the financial crisis

It is too early to assess the full effects of the 2008/09 financial crisis on capital allocations to climate change mitigation and adaptation, but it is already clear that it will have major consequences. In particular, the crisis is reducing the availability of capital for low-carbon investment projects, and enhancing

CalPERS: INVESTING IN CLEAN TECHNOLOGY PRODUCTS.

CalPERS is the largest public pension fund in the US. Through its AIM program, it has committed US\$1.1 billion to building a best of breed, diversified portfolio of clean technology-focused investments.

The fund has made investments in areas such as alternative and renewable energy, water technologies, advanced materials, and air purification technologies.

This allocation of capital has helped support the creation of a number of innovative products that are helping tackle climate change. For example, through its partner NGEN venture capital, CalPERS has holdings in Konarka technologies, the creator of Power Plastic®. This is an inexpensive, lightweight and flexible substance that can be embedded in devices and buildings and converts light to energy.

the role of governments in this market.

The crisis in the banking sector also means that credit for asset finance projects such as wind farms is much more restricted. A decline in funding for some kinds of renewables projects is evident in data for 2008. (see chart, right)

Ordinarily, a temporary reversal of this kind might be considered disruptive but perhaps not of long-term concern. However, in order to successfully mitigate the risks of climate change, a trajectory of very rapid growth in investment in low-carbon energy supply is required – reaching US\$500 billion a year by 2020.* Without this growth in investment, it is extremely unlikely that the necessary GHG stabilization levels will be achieved. We cannot afford a fall in levels of investment in this sector.

The current financial crisis, therefore, makes investor leadership even more vital than before. If the banking sector is unable to provide capital, other sources of capital need to step forward.

New kinds of credit finance instruments such as climate bonds may provide a vehicle for this (see box on p.15). There also appears to be an appetite among institutional investors for stepping up their investment in renewables, in spite of the global recession. A recent survey conducted by DB Climate Change Advisors and New Energy Finance of 100 institutional managers and asset owners, together representing more than US\$1 trillion of invested assets, found that 49% expect to increase their exposure to the renewables sector, with most of the rest maintaining current exposure.

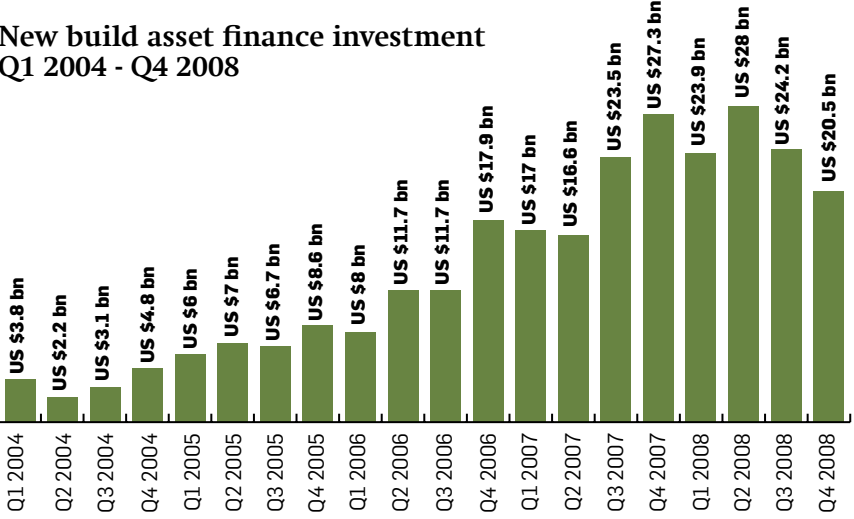
Governments as investors

The other major implication of the financial crisis for climate change investment relates to the role of governments. One aspect of this is the emphasis given to low-carbon investments in government stimulus packages. For example, around 10% of the US stimulus package unveiled by President Obama in March 2009 is being allocated to low-carbon investment, including US\$33 billion to “green the country’s electricity supply”.

The increased prevalence of public money in the markets has also provided an incentive for governments and investors to interact on a much greater scale. Investors can provide

* New Energy Finance, Global Futures 2009.

New build asset finance investment Q1 2004 - Q4 2008



Source: New Energy Finance
Note: Includes asset finance of new build large scale renewable energy projects (does not cover acquisitions and refinancing). Grossed-up and buffered values are based on disclosed deals

PENSION FUND COLLABORATION TO INVEST IN CLIMATE CHANGE MITIGATION

In October 2007, ABP and Pensioenfonds Zorg en Welzijn became cornerstone investors in the Ampère Equity Fund, committing themselves to invest up to €0.5 billion in the development, construction and operation of sustainable energy projects.

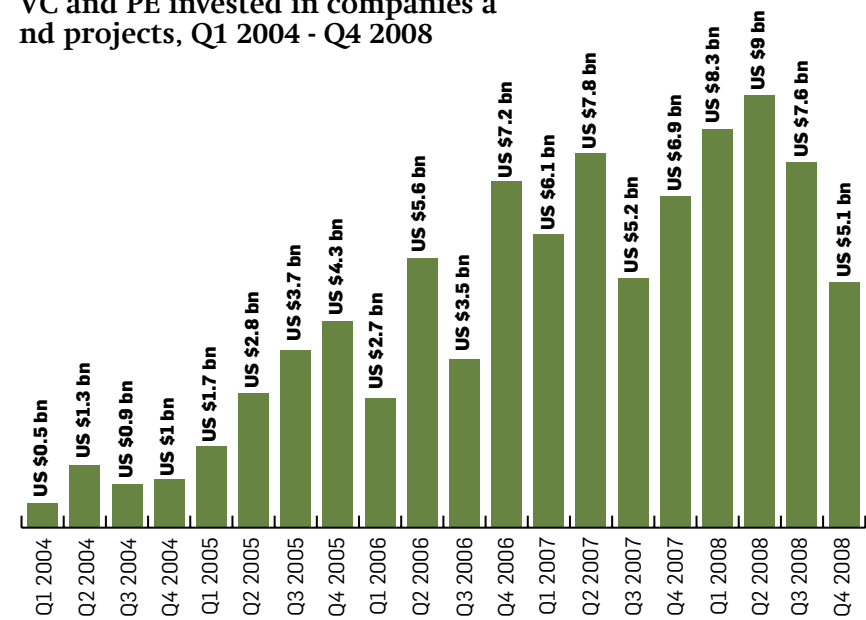
Evelop, the sustainable project developer of Econcern, will realize most of the projects, which include wind parks on land and at sea and biomass power stations in various Western European countries. The first project financed by the Ampère Fund was the Koegorspolder wind farm. With a capacity of 44 megawatts, this is the largest operational onshore wind farm in the Netherlands.

All projects financed by the fund are expected to generate both a long-term predictable cash flow and an attractive yield on investment. In comparison with conventional power stations, these sustainable power stations reduce CO2 emissions by 1,500,000 per year.

The Ampère Equity Fund was developed out of the need for a suitable source of finance for the existing Evelop project portfolio. Evelop has worked with ABP and Pensioenfonds Zorg en Welzijn for more than a year to create a custom-made financial and legal construction for the fund. The investment criteria are set out in a mandate. If a project meets the conditions, the fund will invest in it in the form of taking an equity stock.

The independent management of the Ampère Fund has been delegated to Triodos Bank because of its longstanding expertise in sustainable energy financing.

VC and PE invested in companies and projects, Q1 2004 - Q4 2008



(Source: New Energy Finance)
Note: Includes total invested by VC and PE players in the clean energy and clean technology industry (in projects as well as companies). Grossed-up and buffered values are based on disclosed deals.

ATP: INVESTING US\$800 MILLION IN CLEAN TECH, RENEWABLES AND FORESTRY

The Danish public sector pension fund ATP is one of Europe's biggest pension funds, with US\$64 billion in assets. It recently announced US\$400 million of investment in a global renewable energy fund run by Hudson Clean Energy Partners. The fund will focus on solar, wind, hydro, biofuels and biomass in Europe and the US. ATP has made clear that this decision is based on expectations of good risk-adjusted invested returns. But as ATP's Chief Executive Officer Lars Rohde has said, the investment will also "give us direct access to brand-new knowledge about climate-related technologies – unique knowledge that will be useful in our future investments."

Alongside this large renewables investment, ATP is also channelling an additional US\$400 million into a programme of sustainable forestry purchases. The fund's first investment was a purchase of 38,000 hectares of forest in New York State. The fund will only hold directly-owned forests that are certified by the Forest Stewardship Council. This will mean that the fund will focus investment in forests in developed economies for the time being. As with its clean tech investments, ATP believes that forestry is a promising asset class offering relatively high returns and diversification opportunities.*

* www.responsible-investor.com

leverage to projects co-financed by governments, or governments and investors can share risks in investment projects.

Governments also have an important role to play in deploying Public Finance Mechanisms (PFMs) which enable much greater investment activity by the private sector. Experience with a number of different models of PFMs shows that a small amount of public funding can leverage much larger amounts of private sector investment, with leverage ratios ranging from 3 to 15:1.** PFMs include government credit lines and loan guarantees for project financing and R&D grants for early-stage technology development. The leverage offered by PFM instruments will be particularly important in the downturn.

Developing new asset classes

Another opportunity for leadership arises with regard to unconventional asset classes such as sustainable forestry, energy-efficient property portfolios and CDM projects. The support of early adopters helps these new areas grow in capacity and scale. Again there are some pension funds that are pioneering investments in these areas (see box).

What more could investors be doing?

If the global climate policy process is successful, we can expect rapid growth in incentives for investment in low-carbon solutions. If carbon prices rise to the US\$180/tCO2e that the IEA estimates will be required by 2030 to achieve a safe 450ppm stabilization level,*** low-carbon investment opportunities will clearly become attractive to investors.

In advance of this, it makes sense for investors to prepare themselves for exploiting these opportunities. There may be particular rewards for those who develop knowledge of these new asset classes and investment opportunities at this early stage. In practice, this means that asset owners should seek to make pilot investments in new asset areas in order to gather experience and intelligence about the technological, physical and regulatory risks involved. This also means that, if a new wave of national and global climate policy instruments come into force, investors will be able to scale up their investments ahead of the pack confidently and safely.

Confidence and safety are important. If

climate policy negotiations proceed more slowly than anticipated, or if (as with the EU ETS) there are problems with policy design, or if currently promising renewables technologies fail in the marketplace, then investors may not see the returns they were hoping for. For fiduciary investors such as pension funds, investment in low-carbon opportunities must be accompanied by a proper evaluation of these risks. Leadership in investing in new low-carbon initiatives must therefore be tempered with appropriate caution.

** UNEP/SEFI (2008) Public finance mechanisms to mobilise investment in climate change mitigation
*** IEA (2008) World Energy Outlook

CLIMATE BONDS

The idea of a climate bond is an extension of the green bond concept. Green bonds are issued by a government or corporate entity in order to raise the finance for an environmental project. The issuing entity guarantees to repay the bond over a certain period of time, plus either a fixed or variable rate of return.

Climate bonds would be issued by governments to raise finance for investments in emission reduction or climate change adaptation. They could be guaranteed by developed country governments to minimize the risk for investors and maximize their capacity to raise climate finance. They could be repaid out of general taxation, overseas development assistance, proceeds from auctioning emission allowances in cap-and-trade schemes, returns on investment of some of the bond proceeds in low-carbon technologies, the sale of carbon credits under a post-2012 climate change agreement, or a combination of these.

The Executive Secretary of the UNFCCC, Yvo de Boer, has expressed support for the idea of climate bonds.



3. Building climate into investment processes

The recent financial crisis has thrown a spotlight on how investors make decisions. Risk management processes, research and reporting have all been widely discussed in the public arena. This chapter explores how climate change is being built into day-to-day business by organisations throughout the investment chain.

As we have seen, in order to mitigate climate change, it is vital that investors allocate large amounts of capital to low-carbon technologies rapidly and efficiently – US\$10 trillion by 2030, US\$45 trillion by 2050, on IEA estimates. This requires them to price the comparative risks and returns of investment opportunities accurately, and respond quickly to changes in public policies, scientific understanding, and technological advances. To the extent that investors fail to do this, capital will be misallocated, with the effect that climate policy will be blunted, and companies will receive unhelpful signals* about where to focus their activities.

It is possible that the capital markets are not as ready as they might be to price climate change risks efficiently. Part of the problem is that the risks associated with climate change are complicated and subject to uncertainty of three main kinds:

- Scientific uncertainty. How fast will the climate change? Where will the most severe effects be felt?
- Technological uncertainty. Which technologies will emerge as the most cost-effective at reducing emissions?
- Policy uncertainty. What shape will climate policy eventually take? How effective will it be?

The need for leadership from the top of the value chain

The burden of reducing the three areas of uncertainty described above does not lie primarily with investors, but with scientists, high tech entrepreneurs, and policy-makers respectively. However, investors have a role to play in ensuring they themselves are well briefed on the implications of the latest climate science, technology and policy, and that they can analyse those investment implications effectively. This is mainly a challenge

ABP AND APG: AN ASSET OWNER EMPOWERING ITS MANAGER TO ACT

APG Asset Management is a wholly owned subsidiary of the Dutch education and government pension fund ABP. Established in March 2008, APG currently has €173 billion (1 March 2009) under management.

ABP first started considering ESG issues such as climate change in the late 1990s. During that time, the pension fund began research initiatives exploring the potential impacts of sustainability issues on its investment portfolio. At the end of 2006, a formal commitment was made in the organization's three-year Strategic Investment Plan to integrate ESG factors as widely as possible across the whole portfolio.

By identifying ESG issues as a high priority, ABP has sent a clear message to its asset manager to act accordingly. APG Asset Management does a considerable amount of work on climate change within its investment portfolio. Climate-related risks and opportunities are considered in all relevant investment decisions, across all asset classes of the ABP portfolio.

Investments that APG has made in climate change solutions include carbon trading in the EU Emissions Trading Scheme, Clean Development Mechanism projects, a €250 million clean tech private equity mandate, a €250 million dedicated renewable energy infrastructure fund, landfill gas projects in the US, ethanol production in Thailand and energy efficiency in China.

APG's Responsible Investment Policy is in alignment with the PRI. As a PRI signatory, APG has benefited from collaborating with a network of peers, sharing resources and having greater market influence.



for financial analysts, as well as sell-side brokerages and the buy-side asset management houses that employ them. But it is also a challenge for the investment value chain as a whole.

The investment industry can be seen as a value chain, with asset owners (such as pension funds, insurance companies, mutual fund companies and sovereign wealth funds) sitting at the top, and with investment consultants, asset managers, stock brokers and other intermediaries spread throughout the chain. Ultimately, it is asset owners who determine how their capital is allocated and their asset managers and service providers respond accordingly. It is asset owners, therefore, that hold a particular responsibility to act on this issue. They need to make sure their agents (investment consultants and asset managers) can and are taking the necessary steps to incorporate climate change risks into the investment process — and if not, to consider taking their business elsewhere.

Of course, responsibility for investment action on climate change does not lie with asset owners alone. Many owners outsource day-to-day investment management to asset management companies. In these cases, it is these companies that must decide how to take account of climate change risks in their investment decision-making. Many asset managers, in turn, outsource much of the basic financial analysis to the sell-side research houses associated with the stock broking operations of investment banks. Asset managers should, in turn, ensure the research houses they use have the necessary capabilities to analyse climate risks.

There are various ways that asset owners can and are incentivising managers and other agents to undertake the often costly additional research on climate change risks. These include:

- Assess the capability of an asset manager to analyse climate change risks during the manager selection process.
- Give asset managers a longer-term mandate with a clear request to evaluate and incorporate climate change risks in investment decision making.
- Evaluate asset manager performance in this area as part of the annual cycle of asset manager reviews.

FONDS DE RESERVE: THE DEVELOPMENT OF A COMPREHENSIVE APPROACH TO ENVIRONMENTAL ISSUES

Since its first investments in 2003, the integration of ESG issues has been at the core of this French pension reserve fund's investment strategy. At the investment mandates level, FRR requires its investment managers to integrate environment criteria when managing the portfolio. At a more global level, the fund's responsible investment strategy states that: "environmental concerns and, in particular, the impact of global warming on the world economy and its various sectors, poses numerous questions that a long-term investor cannot afford to ignore when determining its global investment strategy".

FRR's approach to environmental issues is conceived as a comprehensive and integrated approach. When fully implemented, it will not only consist of specialised green investments, but it will be fully embedded into the overall investment strategy.

The fund has recently explored the option of integrating environmental issues into long-term strategic asset allocation. It would do this by building macroeconomic scenarios corresponding to long-term climate scenarios, including the possible impacts of climate change on risks and returns of main asset classes. It is also analysing environmental asset classes such as carbon and timberland as part of a long-term diversified portfolio in the context of global warming. Investment in clean technologies, low-carbon funds and engagement with companies on environmental themes will also be investigated in the future as part of this comprehensive approach to environmental issues.

FRR also measured the carbon footprint of its portfolio in order to better understand the environmental impacts of its manager's investment decisions.

- Work with managers to ensure that the broker commission associated with their share trades is allocated in a way that rewards high-quality stock broker research in this area.

If the investment industry value chain does not lay the foundations now for analysing the consequences of climate change, the chances of capital misallocation will be all the higher in the years to come.

Pressing for disclosure

In addition to sending signals down the investment value chain, there are a number of practical steps investors can take to improve their ability to price climate change risk. The basis for any sound investment decision is good information. Many financial analysts, when assessing companies, will now look at data such as the level of carbon emissions produced by that entity. However, the market often fails to provide the necessary data on these potentially material environmental issues.

Therefore, investors have an important role to play in using their influence to ask companies to disclose across a wide range of ESG issues, including on climate performance. This is an undertaking consistent with Principle 3 of the PRI and there are many examples of PRI signatories acting with their peers to encourage better climate change disclosure from companies and other entities in which they invest. Two outstanding examples include the Carbon Disclosure Project and Global Climate Disclosure Framework for Electric Utilities, detailed in the box on p.21.

Improving research

Once investors have the appropriate information from companies and other entities, they need to ensure this information is analysed effectively. The engine rooms for financial analysis, at least in the equity markets, are the investment analyst divisions of the major brokerages. This sell-side research is provided to buy-side asset managers in order to attract brokerage commission. Many asset managers allocate commission to their brokers explicitly on the basis of such research. In order to ensure that sell-side analysts produce high-quality research on climate change risks and opportunities, it is important that asset managers recognize and reward good research in this process.

DEUTSCHE ASSET MANAGEMENT: BUILDING CLIMATE CHANGE INTO ITS INVESTMENT PROCESSES AND ASSET ALLOCATION.

In response to the challenge of climate change, Deutsche Asset Management is researching a variety of investment strategies including renewable energy, energy storage, the smart power grid, water and agriculture. Its research has shown that climate change investment strategies suit most asset classes, from infrastructure investment and public equities to private equity and venture capital.

In public markets, Deutsche Asset Management tracks an investment universe of 1,400+ listed companies. These companies are screened on the basis of revenues generated from divisions that are primarily dedicated to mitigation of, and adaptation to, climate change. In private markets, Deutsche Asset Management screens innovative new companies for opportunities to invest in emerging climate-friendly technologies.

Deutsche Bank is also working with organisations to develop methodologies to analyze carbon footprints and carbon betas of portfolio companies. It will be stepping up its efforts in screening for climate change risk and reward opportunities, both in individual strategies and across their platform.

A number of companies, many of them PRI signatories, have been established to provide specialist research in this area and to strive to assess climate change information even when there is a reluctance to disclose on the company's behalf.

* If managers think that investments in reducing carbon emissions will not be rewarded by the capital markets, they will face a disincentive to make them.



TWO INVESTOR INITIATIVES ON CARBON DISCLOSURE

GLOBAL CLIMATE DISCLOSURE FRAMEWORK FOR ELECTRIC UTILITIES

In 2007, the Institutional Investors Group on Climate Change (IIGCC) in Europe, Ceres in the US, which manages the Investor Network on Climate Risk (INCR), and the Investor Group on Climate Change (IGCC) Australia/New Zealand, collaborated with sell-side and industry experts on a series of sector-based climate disclosure guidelines.

The frameworks, which have currently been produced for the electric utilities and auto sectors, contain guidelines for effective corporate disclosure of GHG emissions, and provide a format to present both quantitative and qualitative issues in a clear and consistent way.

For investors, these guidelines make it easier to assess and compare the investment risks and opportunities posed by climate change and climate policy to individual companies. For companies, the frameworks provide them with a better understanding of how they are positioned in their sector, and where new opportunities and risks may exist.

The disclosure frameworks encourage companies to disclose this information using their existing communication channels, including GRI reporting, Carbon Disclosure Project responses, financial reports, sustainability reports, analyst briefings, and mandatory reports to securities regulators such as the US Securities and Exchange Commission.

CARBON DISCLOSURE PROJECT

The Carbon Disclosure Project (CDP) began in 2000 as an investor-backed initiative to encourage companies to disclose information on carbon emissions and business risks. Its mission is to collect and distribute high quality information that motivates investors, corporations and governments to take action to prevent dangerous climate change.

CDP now has the backing of 475 institutional investors with combined assets of over US\$55 trillion. Each year, CDP writes to the largest listed companies around the world to gain information on company GHG emissions data, and the business risks and opportunities presented by climate change. In 2009, CDP wrote to over 3,700 companies on behalf of investors.

In 2008, 1,500 companies filed data, making the CDP website the largest database of corporate greenhouse gas (GHG) emissions data in the world. The site also includes information on companies' perceptions of climate risks and opportunities and details of the actions they are taking to address these.

The large-scale, collective backing of so many financial investors, openly asking for this information, has meant corporations have increased their focus on the issue. In addition, CDP is now working with large purchasing organisations to send the CDP questions to their suppliers, further enhancing the relevance and importance of the CDP process for corporations.

The data is collected annually and published online for open viewing.

The CDP also now requests that companies submit five year projections for their GHG emissions. These new measures will help make investment decisions and company comparisons easier.

By partnering with some of its supporting organisations, the CDP has also started encouraging electricity companies to base their reporting on the Global Climate Disclosure Framework for Electric Utilities developed by the IIGCC.

THE ENHANCED ANALYTICS INITIATIVE AND PRI ENHANCED RESEARCH PORTAL: A SHOP WINDOW FOR HIGH QUALITY INVESTMENT RESEARCH ON CLIMATE CHANGE.

The Enhanced Analytics Initiative (EAI) was established in 2004 as a collaborative project between asset owners and asset managers to encourage better investment research on long-term and extra-financial issues, including climate change. The investors behind the EAI felt that climate change posed a number of key concerns that were not being adequately addressed by sell-side researchers. EAI members agreed to allocate 5% of their broking commissions or research budgets to those research houses that produced stronger analyses of these issues.

This commitment created substantial incentives for brokers. In the last four years, well over 25% of all major research reports undertaken related to climate change. They have involved leading firms such as Citigroup, JP Morgan, Goldman Sachs and Merrill Lynch, as well as many smaller institutions.

In October 2008, the EAI joined with the PRI to internationalize the call for better investment research and promote enhanced analysis beyond the markets engaged through the EAI. In mid-2009, the PRI Enhanced Research Portal is being launched to provide a platform for the broader dissemination of high-quality ESG research, from both the sell-side and ESG research providers.

What more could investors be doing?

Individual investment institutions have made great strides in recent years in building climate risks and opportunities into investment processes. Markets now appear to be pricing in some aspects of climate risk, which is a sign this work is having tangible results.

However, there is much more to be done. The predicted scale of the economic impacts of climate change and efforts to mitigate it

and adapt to it are not yet well reflected by the markets. One of the central reasons for this is uncertainty, due in part to the lack of a firm, long-term public policy framework of climate change mitigation. As discussed in chapter 5, investors can play a role in reducing some of this uncertainty through communicating to policy-makers with a loud, clear and united voice that a stable and effective long-term policy regime is urgently needed.

Another problem is the lack of accurate and comparable data from companies. While initiatives such as the CDP have done an impressive job of driving voluntary reporting by companies, the quality and comparability of this data is often inadequate. Investors

MERRILL LYNCH BROKER REPORT: FINANCIAL ANALYSIS AROUND CLIMATE CHANGE IMPLICATIONS

In 2007, the Merrill Lynch European Equity research team produced a report on the opportunities and risks presented by climate change, and an assessment of companies' efforts to reduce their climate impact.

The Merrill Lynch report makes the case that business action towards mitigating climate change is an essential long-term strategy and outlines the key environmental risks associated with unmitigated climate change. These include reduced agriculture yield in tropical regions, areas of increased water scarcity, massive species extinction, and a greater spread of disease.

The report describes what the likely government policy responses to climate change mitigation may look like in specific regions of the world and identifies which sectors of the economy will be most highly exposed. It identifies stock-specific risks and opportunities and looks at a variety of sectors. Crucially, it highlights the tangible benefits of being proactive in this area. These include lower cost pressures from new global regulations, reduced demand-side pressure from engaged consumers, and capitalising early on new market opportunities.

have good reason to continue to engage with companies on disclosure, but also where appropriate to call for mandatory reporting requirements for carbon emissions and related information, backed by robust accounting and auditing standards. Several governments are beginning to move in this direction, and the World Economic Forum, Ceres, CDP and others have joined together to establish the Climate Disclosure Standards Board to develop thinking on reporting standards.

The current financial crisis has also led to the reduction in some sell-side ESG analysis teams. There is therefore a need for investors to proactively encourage analysts to under-

take investment research on climate change, using platforms such as the PRI Enhanced Research Portal, and ensure their incentive structures are rewarding this research.

In the longer term, it is important that the next generation of financial analysts are trained on climate change risk. Work to embed climate change risk analysis in the syllabus of the Chartered Financial Analyst qualification and similar training programmes might be a valuable starting point for this.

CONCRETE PROGRESS: INVESTOR COLLABORATION IN THE PROPERTY ASSET CLASS

The construction and occupation of buildings use nearly 40% of the world's energy and are responsible for a similar level of global CO2 emissions. The fourth Intergovernmental Panel on Climate Change (IPCC) assessment report identifies buildings as having the highest GHG mitigation potential among all economic sectors reviewed. In addition, the IPCC notes that the spatial structure of the built environment has a significant impact on energy requirements from urban transport. The transport sector as a whole uses more than 20% of the world's energy.

In response, the Property Working Group (PWG) of the United Nations Environment Programme Finance Initiative (UNEP FI) brought together leading institutional property investors to advance responsible property investment (RPI) thinking and practice globally.

UNEP FI is a partnership between the UN Environment Programme and the global financial sector. Thus, the PWG

is strategically positioned to contribute to international climate change policy, as UNEP is actively engaged in the policy-making processes of the UN Framework Convention on Climate Change.

The PWG promotes and encourages RPI by showing how such activity can protect or enhance financial returns throughout the lifecycle of buildings, while simultaneously reducing negative environmental and social impacts. Through its research, the PWG clearly demonstrates how RPI principles can be applied to property assets, portfolios and financing. It also articulates how the six principles of the PRI can be implemented in an asset class other than equities. However, it is important to note that property investing has marked differences from equity investing, such as the nature of asset, the investor-asset relationship, the nature of returns, liquidity and investable stock. This can lead to the sector adopting different approaches to responsible investment.

Tangible examples of RPI strategies that address climate change include energy conservation, green power gen-

eration and purchasing, energy efficient design, conservation retrofitting, green building and sustainable wood certification, transportation demand management, transit-oriented development, solid waste management and recycling, tree planting and preservation, and urban regeneration.

By giving access to knowledge and expertise, best practice and capacity-building tools, the PWG is uniquely positioned as a global centre of excellence for responsible property investing. It is an example of investor leadership in an asset class that has tremendous scope to combat climate change.

For example: The French PWG member Caisse des Dépôts has invested US\$140 million in an office property project that aims to outperform usual green certifications and anticipate future regulations. Energy requirements will be 50% lower than the current regulation stipulates. The project shows how different parts of the supply chain can be brought together by investors create buildings with outstanding energy performance. The results of the project could have significant implications for brokers and future occupiers.

4. Shareholder leadership

Investors are not merely providers of capital. As shareholders, equity investors are also owners of companies. This gives them significant power, influence and responsibilities.

Shareholder leadership is relevant because the companies that shareholders own are, collectively, the world’s largest source of greenhouse gas emissions. Companies in the electric power, cement, steel, chemicals, mining, energy, air travel, and shipping sectors account for over half of global emissions.

Many companies also market products that produce emissions when used by their customers (such as cars, washing machines and air conditioners). Their choices about energy efficiency in product design have significant second-order impacts on global emissions. Similarly, companies’ decisions about product specification and choice of suppliers, influences carbon emissions upstream in the supply chain.

There will be no solution to climate change without leadership from companies. Successful climate change mitigation depends on their ability to innovate and invest in new technologies, to design and provide low-carbon products and services, and to remove carbon from their supply chains. Collabora-

tions such as the UN Global Compact have an important role in helping improve company performance in this area.

Companies, like pension funds, are fiduciary institutions with duties to their beneficiaries: the shareholders. They cannot easily take actions that they know to be to the material detriment of their shareholders. While in line with their own fiduciary duties, shareholders can reasonably demand that companies do all they can to measure and reduce emissions. This includes asking them to:

- Disclose information about their carbon emissions and associated risks and strategies.
- Adopt effective strategies to respond to likely climate risks.
- Exploit opportunities to reduce operational costs through energy efficiency.
- Ensure that they do not illegitimately intervene in the political process to block sensible climate change policies.

The following sections explain the practical basis for these activities and illustrate them with case studies.

Shareholder governance power

The role of shareholders in the ownership and governance of companies is reflected in company law around the world. The specific powers and responsibilities of shareholders vary from country to country. In some markets more power is given to other stakeholders; in others, less. But shareholders can have a significant role everywhere. Company law is commonly founded on the principle that they should play this role actively and diligently.

Shareholder power is perhaps most visible in shareholders’ right to vote on and propose resolutions at meetings of the company. But voting is just the tip of the iceberg. Large institutional shareholders have extensive formal and informal power to influence the behaviour of their managers. There is considerable potential for this power to be used to drive carbon efficiency across the economy.

Shareholder activism on environmental issues has been taking place since the early 1970s. In Europe, a small number of large investors have teams of ESG specialists that

engage with hundreds of companies a year on various issues, using a variety of informal and typically non-confrontational methods to encourage improvements. Investors such as those signed up to the PRI can between them point to hundreds of examples where companies appear to have contributed to a significant change in their requests for improvements to the management of social and environmental risks.

In the US, where shareholder activism tends to be carried out primarily via proxy resolution, over 360 resolutions are filed each year on a wide range of issues. Of these, 20%

now relate to climate change, nearly half of which appear to contribute to significant change in company behaviour.*

At first glance, this shareholder resolution activity may appear ineffective because investors rarely achieve majority votes at shareholder meetings (though investors are getting ever closer to this goal). However, shareholder resolutions can be very effective despite falling short of a majority. The act of filing a resolution provides a platform for discussion between the company and concerned shareholders, and companies will go to some length to avoid these issues going to a vote. Many shareholder resolutions are withdrawn as a result of companies agreeing to take steps to respond to shareholder concerns during discussion.

Further influence

It is not just through voting and shareholder governance that investors can help improve the behaviour of listed companies. Large institutional investors often own a substantial proportion of the shares in listed companies. Their investment decisions can have a significant impact on company share prices.

This soft influence also has important implications, especially in business sectors where climate change raises genuinely strategic challenges for business. Here, shareholders have leverage to demand an effective strategic response, and can plausibly threaten to reduce their shareholding in the company if it fails to produce a credible strategy.

Investors do not have to follow through on this threat in order to influence companies. What matters is that companies believe the absence of an effective climate change strategy is likely to adversely affect shareholders’ perceptions of the company’s prospects, and therefore may be detrimental to share prices. It is not a case of investors making aggressive demands and backing them with crude threats (although, in extreme cases, this may happen). It is a more subtle matter of perceptions and expectations.

Investor power in this area is strong in the cases where climate change poses material risks for the company over the short and medium term. Their power wanes when the risks are non-material (risks that are too small

UN GLOBAL COMPACT: ELEVATING ENVIRONMENTAL STEWARDSHIP BY COMPANIES

The UN Global Compact’s Caring for Climate platform and CEO Water Mandate Initiative provide companies with frameworks to help them develop, implement and disclose water sustainability policies and practices. Caring for Climate has been endorsed by more than 300 companies, while the CEO Water Mandate has grown to 50 endorsers.

Each uses a disclosure framework tied to the UN Global Compact’s Communications on Progress policy.

Investors can use initiatives such as these in their engagement with companies. For example, in late 2008, a group of PRI investors wrote to the CEOs of 100 companies in high-impact water sectors urging them to endorse the CEO Water Mandate. The investors underscored the importance of comprehensive corporate water-management policies in managing both risks and opportunities.

FORD MOTOR COMPANY: CLIMATE RESPONSE TO THE 2008 PROXY SEASON

Ford Motor Company joined with institutional investors in April 2008 to announce a detailed plan for the company to reduce GHG emissions by at least 30% by 2020. In doing so, Ford became the first US car manufacturer to lay out such a clearly defined goal for GHG emission cuts and meet the Corporate Average Fuel Economy Standards (CAFE) for 2020, recently passed by the US Congress.

Shareholders in Ford, such as PRI signatory the Connecticut State Treasurer’s office, had filed proxy resolutions with the company regarding action on climate change. However, as a result of this positive announcement by Ford, the shareholders withdrew their resolutions.

The GHG emission target goal and detailed plan announced in 2008 was reported to have taken the company three years of planning and assessment to finalize. As such, consistent shareholder resolutions over the last several years are likely to have played a significant role in generating a response from the company. The details released in the fleet reduction plan were essential to improving investor confidence in the company by reducing its exposure to legislative risk. The plan demonstrated that Ford Motor was preparing itself to meet stricter CAFE standards and avoid the potential of incurring heavy fines.

* Social Investment Forum 2007 Report on Socially Responsible Investing Trends in the United States http://www.socialinvest.org/pdf/SRI_Trends_ExecSummary_2007.pdf



to be considered by financial analysts), and when the risks are so long-term that they are ignored by analysts for discounting reasons.** This means that shareholders will not be able to use their power as investment decision-makers to influence all companies or to address all aspects of climate change.

In practice there are various ways investors can seek to deploy their influence as investment decision-makers. Different techniques can have different responses.

- The most straightforward technique is for investors to raise the question of climate change strategy in routine meetings or communications with company executives or investor relations professionals. Agenda time at such meetings is a precious commodity — climate change is not the only issue investors will want to discuss with the company CEO. But if time can be made for this discussion, it can make a big impression. The better prepared investors are for such meetings the better. A vague question about climate change risk is likely to give rise to a vague answer. However, if investors are prepared with specific and financially-relevant questions about plausible climate change risks facing the company, the company will have a strong motive to ensure it has good answers.
- Many institutional investors also write letters to CEOs asking about climate change strategy. This is likely to be most effective when the content of the letter is relevant to the risks faced by the company concerned.

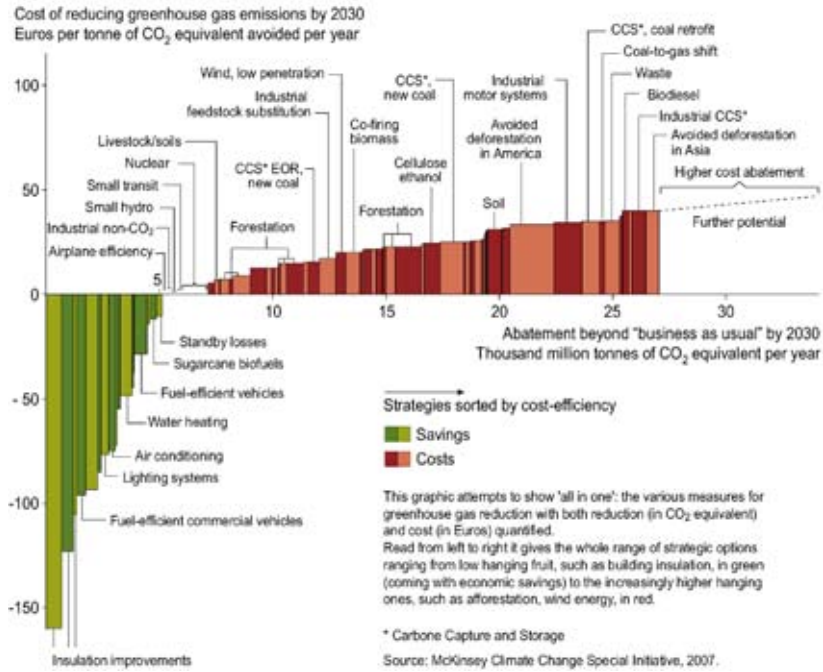
Investors are more likely to have influence when they engage companies on a collaborative basis. Using forums such as the PRI Clearinghouse or the INCR, investors can join forces around climate change issues and have a bigger impact.

Energy efficiency measures

One particular area in which shareholders have a large influence on companies is around energy efficiency measures. In its 450ppm scenario, the IEA projects that around half of carbon emissions avoided by 2030 should come from energy efficiency.*** This is a massive challenge, partly because

** It is worth mentioning that materiality and time horizons are relative to the practices of financial analysts, which are themselves not necessarily optimal, as discussed in the previous chapter
*** IEA World Energy Outlook 2008.

Strategic options for climate change mitigation
Global cost curve for greenhouse gas abatement measures



McKinsey (supplied from UNEP/GRID-Arendal Maps and Graphics Library. 2009. UNEP/GRID-Arendal)

ASTRA INVESTAMENTOS: HOW
SHAREHOLDERS CAN REACH PARTS
OF A COMPANY OTHERS CANNOT
REACH

Astra Investamentos in Brazil states, “as investors, we regularly arrange meetings with the Operations Director, Facilities Manager or other working-level employees of a company to help them fill in the questionnaires of disclosure initiatives such as the CDP, and through this, consider improved energy efficiencies. Often the CEO of a company is not best placed to consider these detailed issues, which is why Astra targets the people in a company who are in charge of transportation, warehouses, environmental licenses and so on. This in turn makes the company more efficient and so it can produce better returns for our clients over the longer term”.

it is dispersed across thousands of companies (unlike in the case of decarbonising the power sector, for example). As the Stern Review**** pointed out, there is evidence that companies do not exploit all profitable opportunities to improve their energy efficiency and minimize carbon emissions.

This is reflected in typical global carbon emissions abatement cost curves, which forecast that as much as 20% of projected business-as-usual carbon emissions could be prevented with a positive investment return. Energy inefficiency costs shareholders money, as well as contributing needlessly to climate change.

But if profitable energy efficiency opportunities exist, why do profit-seeking companies not exploit them? There seems to be a variety of barriers. Investments in energy efficiency tend to be fragmented across lots of small improvement projects. Facilities managers who can deliver energy efficiency often do not have access to sufficient capital expenditure budgets necessary to implement their projects. And energy efficiency is rarely seen as a strategic issue, so it receives little attention from senior managers.***** As a result, energy efficiency projects are not implemented, even when they offer a competitive return on investment.

Shareholders are well placed to help companies overcome these barriers. If institutional shareholders challenge senior company managers to explain their approach to energy efficiency and encourage them to deliver improvements, they will help ensure that these projects are given the necessary priority.

Given the importance of energy efficiency in delivering climate change mitigation, and given it will take a few years for any post-Copenhagen climate deal to become effective, early voluntary action to deliver profitable energy efficiency action by companies could be particularly powerful. If shareholders can support and encourage the world’s many thousands of listed companies in their efforts to improve operational carbon efficiency, they can play a very useful role in the process of carbon mitigation. This will require a comprehensive process of benchmarking companies’ energy efficiency performance to identify those whose energy management is

**** See discussion in Chapter 17 of the Stern Review.
***** The Carbon Trust (2005) The UK Climate Change Programme: Potential Evolution for Business and the Public Sector, London

INSIGHT INVESTMENT: MEASURING COMPANIES ON CLIMATE RISK

Insight Investment has committed to working on behalf of its clients to encourage better management of environmental risks. In 2007, Insight initiated 'Taking the Temperature', a survey assessing 125 major listed companies on how they manage their GHG emissions, with direct company comparisons.

Data collected from the public domain included recently published company CSR reports and company submissions to the CDP. Participating companies were also invited to submit additional information.

The survey found that most companies had implemented some level of management accountability for climate change issues (93%), published climate change policies (92%) and reported GHG inventories (90%). Most had also given some sort of statement or analysis on the financial or business risks and opportunities associated with climate change (86%).

On the other hand, Insight also found some weak points among the companies scored. These included: weak company climate policies; a mixed quality in emissions data reported; weak targets, climate-related risks and opportunities that had not been assessed; limited engagement on public policy; and a lack of clarity on how to reduce emissions.

Benchmarking of this kind provides investors with the ability to better assess and compare companies against their peers and identify best practices. This information enables investors to target companies with poor risk management and encourage them to adopt the practices employed by the best companies, reducing both carbon emissions and investor risk.

below good practice for their sector.

Some early initiatives have started to be undertaken. For example Insight Investment has completed a benchmark of large UK companies (see case study), and various research agencies provide information services for investors in this area.

What more could investors be doing?

Shareholders have considerable power to influence companies. They already routinely exercise this influence on a range of mainstream strategic issues, and on questions of corporate governance. As illustrated, they are starting to use this power effectively on climate change. On some aspects of corporate climate change management, they have already been very effective in mobilising corporate activity; most notably on carbon disclosure. However, investors have considerably greater potential to use their influence to encourage progress on climate change.

The world needs the business sector to respond positively, energetically and creatively to the challenges of climate change and to react quickly to new climate change policy. Earlier and more persistent investor support

for proactive company action on climate change strategy could be useful in encouraging this attitude across the corporate sector. Equally, shareholders should work with companies that may be acting defensively or obstructively.

There are also very substantial opportunities for companies to address operational energy efficiency, product design and specification, and low-carbon procurement, which would lead to reductions in carbon intensity and increases in corporate profitability. Shareholders could have a decisive role to play in catalysing more corporate activity in this area.

As the success of the Carbon Disclosure Project indicates, a large scale, coordinated programme of action to benchmark and engage with bottom quartile companies could deliver double benefits of large, voluntary, short-term emissions reductions and improved long-term profits.

Platforms such as the INCR and the PRI's Engagement Clearinghouse provide a useful forum for investors to work together to share ideas and collaborate on shareholder engagement with companies on climate change issues.



5. Investor engagement with public policy

Climate change is a systemic problem, requiring a systemic public policy response. If investors accept the long-term investment arguments for caring about climate change, then they should also help to ensure that the policy response to climate change is systemic, timely and adequate to the task.

Engagement with international policy

Investor collaboration around public policy is a relatively new development. It is perhaps easiest to understand how this has emerged by highlighting some examples.

Perhaps the first major cooperative effort at financial sector engagement with international climate change policy was catalysed by UNEP and a group of commercial banks including Deutsche Bank, HSBC, Natwest, Royal Bank of Canada, and Westpac. This group came together to launch the UNEP Finance Initiative in 1991. In May 1992, as the United Nations Framework Convention on Climate Change (UNFCCC) was being negotiated, the first UNEP Statement by banks on environment and sustainable development was issued in New York. A similar Statement of Environmental Commitment by the insurance industry was issued by UNEP and a group of leading insurance and re-insurance companies and pension funds in 1995.

These statements constituted an important expression of support for a number of principles incorporated into the UNFCCC and Kyoto Protocol, such as the precautionary principle and the principle of intergenerational equity. However, they were general statements, and only the one issued by the insurance industry mentioned climate change explicitly.

Institutional investors were not directly engaged in the public policy process until more recently. The Institutional Investors Group on Climate Change (IIGCC) was established by a group of European pension funds and other institutional investors in 2001. By mid-2008 the group had over 50 members, representing over €4 trillion of assets. It has also taken a leading role in bringing together the investment community so it can speak with one voice on climate change issues. The IIGCC's objectives include advocacy of "public

policy and market solutions that ensure that an orderly and efficient transition to a secure climate system which is consistent with long-term investment objectives." To this end, the IIGCC submitted an open letter to the December 2007 Conference of Parties in Bali (see box below).

IIGCC OPEN LETTER TO NEGOTIATORS AT THE BALI CLIMATE CHANGE CONFERENCE, 2007

The IIGCC open letter, submitted to the politicians and negotiators participating in this major conference, set out the elements relevant to investors that should shape a post-2012 framework. The group emphasized that, from an investment perspective, the global deal needs to set ambitious GHG emission reduction targets in the medium and long term, and that these targets should be informed by the best available scientific evidence based on the stabilization levels required to avoid dangerous climate change. They also highlighted the importance of an expanded global carbon market and greater use of a credible and more efficient CDM, as well as the need for more support for energy efficiency programmes, renewable energy, measures to reduce emissions from deforestation and for adaptation.

Strong policy signals are necessary to encourage investors to integrate climate change considerations into their investment decisions and to re-allocate capital towards a low carbon economy. A timely agreement on a post-2012 global climate deal is a crucial element in underpinning business and investor confidence in this area and the IIGCC will continue to engage with government on this. The IIGCC is working with partners on an updated letter that will inform the upcoming COP15 negotiations.



The Investor Network on Climate Risk, a similar grouping of 70 US-based investors representing US\$7 trillion in assets, was launched in 2003 at the first UN-supported Institutional Investor Summit on Climate Risk. Further such summits have been held in 2005 and 2008. The INCR joined together with IIGCC and the Australia/New Zealand Investors Group on Climate Change to issue a call for action at the 2008 Conference of Parties in Poznan, Poland (see box below). This statement represents the most detailed and prescriptive intervention in the international climate change policy process by investors to date.

INVESTOR STATEMENT TO THE POZNAN CLIMATE CHANGE CONFERENCE, 2008

The statement was signed by 152 investors representing over US\$9 trillion in assets. It sets out specific outcomes that investors are looking for from policy-makers, so that investors can allocate capital in a way that supports a low-carbon economy and adaptation to climate change. These desired outcomes include:

- A binding global target based on the latest available scientific evidence (which suggests that global GHG emissions must decline by 50-85% by 2050 against a base year of 2000).
- Developed countries should take the lead in establishing long-term targets (e.g. 80-95% reductions by 2050) as well as medium-term targets (e.g. 25-40% by 2020), backed up by effective national action plans.
- Contributions from developing countries, initially in the form of national action plans focused on energy efficiency commitments, but with the ultimate aim of absolute emission reductions.
- Continuity in the legally binding framework underpinning the carbon markets and provisions for an expanded and more liquid global carbon market, with more links between countries, regions and sectors. These should be complemented by other nationally appropriate policies such as incentives, regulations, product and process standards and/or taxation.
- The review, reformation, and expansion of the CDM.
- Government support for the development of new and near-commercial technologies, and support for technology transfer while protecting intellectual property and contract rights.
- Measures to reverse deforestation and value forests as carbon sinks.
- Increased measures and adequate and consistent financing for adaptation, including enhanced access to insurance markets and new technologies to improve climate resilience.

Engagement with regional and national policy

The largest carbon market in the world at present is not driven directly by the Kyoto Protocol, but rather by regional legislation. This is the EU Emissions Trading Scheme (EU ETS), where transactions reached an estimated US\$94 billion in 2008.* While it is unlikely that the EU ETS would have been implemented to the same extent in the complete absence of the international policy framework set up by the Kyoto Protocol, it is notable that the legislation establishing the scheme preceded the entry into force of the Kyoto Protocol itself by nearly two years. The original legislation also commits to continuation of the scheme beyond the Kyoto Protocol commitment period of 2008-2012, thus providing a crucial lifeline for investments with a post-2012 payback period. The EU recently agreed on the detailed arrangements for Phase III of the scheme, running from 2013 to 2020.

Other regional and national carbon trading schemes have emerged in the USA, Japan, Australia and elsewhere. The climate change policy framework in North America is currently fragmented, due to the lack (to date) of a comprehensive national response in both the USA and Canada. Three major regional initiatives (the Regional Greenhouse Gas Initiative, the Midwestern Greenhouse Gas Reduction Accord and the Western Climate Initiative) are in various stages of development, and a major challenge for both the USA and Canada will be to integrate these schemes in such a way as to provide a coherent, long-term, consistent pricing signal to investors.

Another challenge facing these schemes is the creation of an economy-wide market that is equitable for all participants. Currently these schemes cover a select group of industries (such as the power sector and large industrials). This means that they are bound by the rules and caps set by these schemes, while other industries can go along with business as usual.

There are many examples of groupings of national investment institutions making clear their support for an ambitious policy regime to their national governments.

* New Carbon Finance estimate, 8 January 2009

INVESTOR ACTION ON AUSTRALIAN CLIMATE CHANGE POLICY

The Australian Council of Superannuation Investors (ACSI) and the Investment and Financial Services Association (IFSA) joined forces in July 2008 to show support for the Commonwealth Government of Australia in tackling climate change. Through a joint media statement, the two groups supported the introduction of a national carbon pollution reduction scheme and encouraged the design of a scheme that facilitates market certainty and efficiency, while minimising the economy-wide costs of reducing emissions.

In September 2008, ACSI and the Australian Institute of Superannuation Trustees (AIST) made a joint submission to the Commonwealth Government's Green Paper on the Carbon Pollution Reduction Scheme. The joint submission commented on a number of aspects of the proposed scheme and supported the Government in taking early and effective action in tackling climate change on an economy-wide basis. Other investor groups also made submissions to the Green Paper supporting the introduction of a Carbon Pollution Reduction Scheme, including IFSA and the IGCC Australia/New Zealand.

Institution building

The policy frameworks described above create rules and incentives for overseeing organisations, but often leave the task of creating organisations to implement the frameworks to the market and the private sector. This is deliberate, and based on the assumption that markets and private sector actors are better suited to entrepreneurial risk-taking than intergovernmental agencies or national governments. This choice requires the private sector to respond quickly and effectively to the frameworks and incentives established by policy-makers.

This quick response is not always reliable. Even with well-designed policy instruments, it may take time for entrepreneurs to

PGGM: DISCUSSIONS WITH THE EUROPEAN PARLIAMENT ON A CLIMATE CHANGE RESOLUTION

In 2009, the Dutch investor PGGM had several discussions with Members of the European Parliament about the role that institutional investors could play in mitigating climate change.

The MEPs were all involved in the temporary committee on climate change and therefore responsible for drafting a resolution on an EU strategy for a comprehensive climate change agreement in Copenhagen and the adequate provision of financing for climate change policy. Through the discussions, PGGM was able to add an institutional investor-related point to the resolution, which made the European Parliament publicly acknowledge the role that investors could play under the right circumstances.

The wording was that the European Parliament, "Underlines that binding targets would enable investors to better assess the risks and opportunities associated with climate change and would involve investors in projects that would meet mitigation as well as adaptation targets; underlines, moreover, the need for clarity regarding the role of private capital in the investment necessary in order to reach the targets; The resolution was adopted by the European Parliament on 11 March 2009. It will serve as a guiding tool in future actions and decisions of the European Parliament."

assemble the expertise and capital necessary to establish organisations to enable tangible progress towards policy goals. With the global response to climate change, time is of the essence. There is a need to move very rapidly from entrepreneurial start-ups to large-scale international organisations.

This suggests another possible dimension for investor leadership. Some investors, particularly those with venture capital and private equity experience, have in-depth knowledge of the requirements for the rapid scale-up and growth of new businesses, whereas policy-makers, in general, do not. Investor input could help design mechanisms that are more amenable to these particular demands. At the very least, investors need to ensure they understand the policy frameworks that emerge from international, regional, national and local processes, in order to evaluate the associated risks and opportunities and respond with investment in new businesses and projects.

What more could investors be doing?

At the international climate change policy level, the principles and objectives already set out in the IIGCC/INCR/IGCC 2008 Investor Statement to the Poznan climate change conference (p.32) need to be translated into concrete suggestions at the COP15 negotiations. The investment community cannot afford to assume that international negotiators have the capacity, even if they have the willingness, to do so without assistance.

The need for investor leadership on climate change policy is particularly acute at the international level, due to the global, systemic nature of the problem and the urgent need for a timely, effective response.

The Copenhagen COP 15 negotiations, and subsequent meetings which will be required to elaborate any deal achieved in Copenhagen, will have unique importance for investors worldwide. This is due to the long-term nature of the policy framework being negotiated, its economic impact on investments across the board, and the knowledge that this time, the framework needs to be capable of mobilising not hundreds of millions of dollars of new investment, but hundreds of billions per year.

While general principles and objectives are still a necessary first step, the new policy framework will also build on the existing principles and objectives of the UNFCCC and Kyoto Protocol, as well as the body of knowledge that has developed in recent years about the operation of carbon markets, funds and other frameworks for investment. It will therefore be more detailed and prescriptive in terms of the actual design and regulation of instruments and measures, such as carbon markets and mechanisms for technology development and transfer. The more detailed the framework becomes, the greater the risk that government negotiators (typically drawn from environment departments) may not fully understand the consequences for investment and financing of the text that they negotiate.

This suggests two key areas on which investors could focus.

First, whenever possible, the investment community must speak with a single voice at the negotiations.

The various bodies already representing investors (UNEP FI, IIGCC, INCR, IGCC) should cooperate even more closely. The fact

that they are likely to join forces to produce a combined statement for Copenhagen is helpful. But given the nature of the UNFCCC process, it would be useful if they could seek to broaden their representation, in particular to developing country investors. In addition, investors are currently loosely represented by the business-and-industry constituency of observers to the climate change negotiations (known as the Business and Industry NGOs group, or BINGOs). Investors should ask themselves whether their interests are adequately represented as part of this diverse group, and whether a more specialised INGOs (Investment NGOs) group would provide a better means of highlighting investor concerns to the negotiating parties. If so, a request for recognition of an INGOs group could be made in Copenhagen, and this request in itself could raise the profile of the investment community at the summit.

Second, investors should seek appropriate engagement with the broadest possible range of negotiators directly involved in the process. Investors should seek to ensure that they allocate resources to enable their representatives to contribute effectively to the

CARBON MARKETS & INVESTORS ASSOCIATION

The Carbon Markets & Investors Association (CMIA) was formed in August 2008 by the merger of the Carbon Markets Association (CMA) and International Carbon Investors and Services (INCIS). The association represents around 50 companies involved in the carbon markets, including financial institutions, carbon funds, project developers, lawyers, accountants, verifiers, emissions brokers and IT firms.

As well as acting as a representative body for these investment and services companies, the association provides support for the development of market enabling factors such as improved global trading rules and arbitration facilities, training and standardization. A key area of the CMIA's policy engagement is focussed on the reform of post-2012 carbon market institutions, such as the CDM Executive Board.

negotiations. This includes providing capacity building to governmental negotiators (especially from under-resourced developing countries), so they understand the potential impact on future investment decisions of the regulatory framework to which they are signing up. A Copenhagen deal is achievable only by consensus between all of the 190+ parties involved.

The relatively more mature European carbon market has seen the emergence of a specialised Carbon Markets & Investors Association to represent investor interests and engage in market development at this more detailed level (see box on previous page). Similar new investor forums may be required to fulfil a similar role in the major developing country markets around the world.

In the wake of the crisis in conventional financial markets, governments will expect

increased oversight and regulation of carbon markets. This may not be a bad thing. Increasing the transparency of carbon financial instruments and preventing excess volatility in carbon prices may also help to reduce risk premiums that in turn constrict investment flows into climate change mitigation and adaptation. Investors should research the forms of regulation that could be applied to carbon markets in order to come to a collective view on the most investment-friendly alternatives, and then engage with policy-makers and regulators to ensure that these options are implemented.

Finally, investors should investigate options for overcoming the effects of the credit crisis on sourcing finance for climate change mitigation and adaptation projects, such as government-backed climate bonds.



6. Conclusions

Stabilising carbon emissions at a level that will successfully mitigate the risk of catastrophic climate change is a huge challenge. Investors have a vital role to play in enabling us to meet it.

In the next 20 years, their most basic role will be to provide much of the capital needed to finance the development and deployment of low-carbon technologies and solutions.

Investors will not be able to do this unless policy-makers ensure that such investments are financially rewarding. This will not happen by itself. Leading investors around the world must work constructively with national governments to ensure public-policy frameworks drive this forward rather than holding it back.

Even if policy-makers deliver the necessary frameworks, creating the organisations and markets large enough to channel trillions of dollars of finance to appropriate investment opportunities in the short time necessary will be challenging. Leadership will be required from investors to ensure they are ready to develop and scale up institutional responses as soon as governments establish policy frameworks.

It is also vital that this capital is allocated efficiently in the face of ongoing uncertainties about climate science, technology and policy. Investors that over-emphasize the short-term profits arising from carbon intensive businesses and under-emphasize long-term carbon price risks will impede the transition to a sustainable low-carbon economy, and, in the end, fail to serve the interests of their clients.

Tackling this requires clear incentives within the investment value chain to reward excellence in this area, and this ultimately depends on strong signals from the asset owners at the top of the value chain. It is also important that there are improvements to research on climate change risks, better training of financial analysts, and a continued push for greater disclosure of material climate change information from companies and other investee entities.

As well as providing capital, investors are also shareholders. As owners of the world's biggest carbon emitting companies, they have a direct opportunity to drive carbon efficiencies across the economy, while also improving their investment returns. Leading investors are starting to demonstrate that they can play this role effectively.

The challenge of climate change is so great that all sectors of the economy must play their part if we are to meet it. Along with investors, governments, voters, companies, and consumers all have important roles to play.

The fourth report of the IPCC shows that if the world fails to stabilise emissions somewhere near 450ppm, we run a substantial risk of an extremely dangerous outcome; one that may undermine the ability of long-term investors to deliver the returns they (and their beneficiaries) have been counting on. It is firmly in the interests of investors that they help avoid this outcome, and devote the resources necessary to rise to the challenge of leadership.

Methodology

This report draws on the authors' extensive experience working in the field of investment and climate change.

Craig Mackenzie has lead the responsible investment teams at two PRI signatory asset management companies, and has also worked for a PRI signatory investment consultant, advising asset owners on PRI implementation. He now leads climate change work at the University of Edinburgh Business School.

Francisco Ascui has worked in climate change policy and carbon markets for the past 10 years, in government and as an independent consultant. He is the lead author of UNEP's Guidebook to Financing CDM Projects

and a registered CDM and JI expert for the UNFCCC. He lectures in business and climate change at the University of Edinburgh Business School.

The authors conducted a survey of recent literature, reports, and web materials relating to investment and climate change. They also interviewed individuals in a number of PRI signatory organisations and, assisted by the PRI Secretariat, conducted a consultation of the PRI signatories. Extensive comments and helpful advice were provided by a large number of other stakeholders and a special note of thanks must go to David Russell of USS, Rob Lake of APG, Marcel Jeucken of PGGM, Butch Bacani and the UNEP FI team, PRI Secretariat and PRI Board



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SIX PRINCIPLES OF THE PRI

- 1

We will incorporate ESG issues into investment analysis and decision-making processes.
- 2

We will be active owners and incorporate ESG issues into our ownership policies and practices.
- 3

We will seek appropriate disclosure on ESG issues by the entities in which we invest.
- 4

We will promote acceptance and implementation of the Principles within the investment industry.
- 5

We will work together to enhance our effectiveness in implementing the Principles.
- 6

We will each report on our activities and progress towards implementing the Principles.

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The Ten Principles of the United Nations Global Compact

HUMAN RIGHTS

- Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights; and
Principle 2 make sure that they are not complicit in human rights abuses.

LABOUR

- Principle 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4 the elimination of all forms of forced and compulsory labour;
Principle 5 the effective abolition of child labour; and
Principle 6 the elimination of discrimination in respect of employment and occupation.

ENVIRONMENT

- Principle 7 Businesses are asked to support a precautionary approach to environmental challenges;
Principle 8 undertake initiatives to promote greater environmental responsibility; and
Principle 9 encourage the development and diffusion of environmentally friendly technologies.

ANTI-CORRUPTION

- Principle 10 Businesses should work against corruption in all its forms, including extortion and bribery.

