

GLOBAL INVESTOR SURVEY ON CLIMATE CHANGE

ANNUAL REPORT ON ACTIONS AND PROGRESS 2010



MERCER



About Institutional Investors Group on Climate Change

The Institutional Investors Group on Climate Change (IIGCC) is a forum for collaboration on climate change for investors. IIGCC's ambition is to provide European investors with a voice on climate change and to engage with policymakers, companies and investors on addressing long-term risks and opportunities associated with climate change. The group currently has over 70 members, including many of the largest pension funds and asset managers in Europe, representing assets of over \$10 trillion.

In detail, the IIGCC's objectives are:

- To encourage the adoption of public policy solutions that ensure an orderly and efficient move to a low carbon economy as well as measures for adaptation which are consistent with long-term investment objectives.
- To encourage a pro-active approach on climate change amongst asset owners and asset managers in order to preserve and enhance long-term investment values.
- To improve climate-related disclosure, reporting and management of climate related risks and opportunities across different asset classes.

www.iigcc.org



About Investor Network on Climate Risk

The Investor Network on Climate Risk (INCR) supports 100 institutional investors with assets exceeding \$10 trillion in addressing the financial risks and investment opportunities associated with climate change. INCR works with its members on climate-related investment practices, corporate engagement, corporate disclosure and policy issues.

INCR is coordinated by Ceres, a US-based coalition of investors, environmental groups and other public interest organizations working with companies to address sustainability challenges including climate change and water scarcity.

Launched by 10 investors in 2003 at the first Investor Summit on Climate Risk hosted by Ceres at the United Nations, INCR has grown to include leading North American institutional investors. It works to shape responsible investment practices among state and city treasurers and comptrollers, public and labour pension funds, foundations, other institutional investors and a wide range of asset managers.

www.incr.com



About Investor Group on Climate Change

The IGCC represents institutional investors, with total funds under management of approximately \$700 billion, and others in the investment community interested in the impact of climate change on investments. IGCC's 60 members aim to encourage government policies and investment practices that address the risks and opportunities of climate change, for the ultimate benefit of superannuants and unit holders. We also aim to:

- Raise awareness of the potential impacts, both positive and negative, resulting from climate change to the investment industry, corporate, government and community sectors;
- Encourage best practices approaches to facilitate the inclusion of the impacts of climate change in investment analysis by the investment industry; and
- Provide information to assist the investment industry to understand and incorporate climate change into the investment decision.

www.igcc.org.au

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Foreword

Trillions of dollars of investment will be required to fund climate mitigation measures and to achieve the transition to a low carbon economy. It is increasingly recognised that this is unlikely to happen at the scale and pace required without attracting money managed by institutional investors such as pension funds.

This report provides the results of the first global survey of investment practices co-ordinated by the three investor networks on climate change – the IIGCC, based in Europe, INCR, based in North America and the Australia/New Zealand IGCC. As such it provides an overview of investment practices around the world, highlighting best practice and analysing the drivers for change.

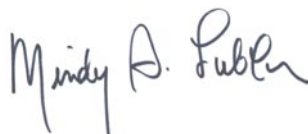
It is clear from our survey that credible and consistent climate change legislation and regulation is required to drive greater integration of climate change into investment practices and to provide the major impetus for a shift from high carbon to low carbon investment. Without strong climate policy that provides transparency, longevity and clarity for investors, the revolution that is called for in transforming our energy systems will not be possible.

Nevertheless, despite current policy limitations and significant regional differences, it is also clear that the investors who participated in this survey have made headway in addressing climate change issues in their investment analysis and engagement activities. This report will help investors benchmark their performance and learn from others' experiences.

There is still much scope for improvement and the investor networks will continue to encourage greater awareness of climate related issues across asset owners and investment teams; to encourage asset owners to instruct their asset managers on taking account of climate risks and opportunities; to develop guidance for integrating climate change across asset classes; and to support improved transparency and reporting by managers on climate related issues. Most critically, we will continue to collaborate on an active dialogue with governments on adopting policies that accelerate investments in support of a low carbon economy.



Ole Beier Sørensen
Chairman, IIGCC



Mindy Lubber
Director of INCR and
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Executive Summary

This is the first jointly sponsored report by the European Institutional Investors Group on Climate Change (IIGCC), the North American Investor Network on Climate Risk (INCR) and Australia/New Zealand Investor Group on Climate Change (IGCC), collectively “the investor groups”. The report provides an overview of the investment practices of investors around the world relating to their actions on climate change, in addition to presenting a selection of case studies.

The report is based on survey responses from 44 asset owners and 46 asset managers with collective assets totalling more than \$12trillion. (Respondents include 23 asset owners and 18 asset managers based in Europe; 16 asset owners and 19 asset managers from Australia/New Zealand; as well as 5 asset owners and 9 asset managers based in North America).

What are investors doing?

Mercer’s own research shows that approximately 10% of global investment managers have begun to integrate environmental, social and governance (ESG) issues into their investment process. These managers demonstrate a strong level of commitment at the firm-level to integrate ESG factors in their investment decision making and are able to provide some examples of how ESG data and research is being taken into account in valuations.

Amongst the respondents to the global investor survey, this percentage appears to be higher, demonstrating that addressing the risks and opportunities arising from climate change is an important focus for these investors. Most respondents view climate change as constituting a material investment risk and/or opportunity across their organisation’s entire investment portfolio. It is becoming a strategic management issue, supported by the finding that responsibility and accountability for climate change now resides at board level or equivalent for the majority of investors. However, there is no one-size-fits-all approach, and the respondents take a range of approaches to integration of climate change into their investment processes.

Typically, managers that are most proactive in this area make use of a range of information and research, including annual reports, industry publications, broker and independent research reports, and informal conversations with corporate stakeholders. These managers tend to recognise the link between climate change issues and investment risks and returns. However, investors still struggle with how to translate currently available climate change related data and research into investment practices and decisions. Some challenges identified include lack of data availability, uncertainties around climate change policy and the price of carbon, lack of confidence in the materiality of climate change amongst portfolio managers – partly due to the longer term nature of some climate change-related issues – but also a lack of experience in interpreting and analysing data on climate change impacts.

Regional differences

Compared to their regional counterparts, regulators based in the European Union demonstrate considerably stronger leadership in implementing policies to reduce carbon emissions, with policy mechanisms ranging from market-based to regulatory solutions. These policy interventions have put a price on carbon via the EU Emissions Trading Scheme (ETS) and provided government support for low-carbon technologies, which has facilitated quantifying and integrating climate change considerations into investment analysis for European investors. For example, feed-in tariffs can be used directly in investment models and subsidies

in certain sectors can be directly mapped to returns. However, there is also a notable frustration that the carbon market in Europe has failed to provide an adequate price signal for carbon and retroactive policy changes to support schemes for renewable energy. One thematic investment manager highlighted that a price on carbon only has an impact on their investment models in the medium to long term.

Australian investors have recently turned their attention to climate change and wider environmental issues en masse. Our respondents showed strong enthusiasm in developing their approach to climate change and are in many areas catching up with their European counterparts, but the delays on the policy side, especially in relation to the proposed carbon trading scheme, present a major impediment for further development. A growing recognition of the physical impacts of climate change, exacerbated by the recent droughts and flooding, has also driven Australian investors to recognise climate volatility as posing risks to their portfolios particularly in their infrastructure and real estate assets.

US investors continue to lag behind their regional counterparts, in particular with regards to integration of climate change across asset classes. US investors have boosted their focus on corporate disclosure and engagement but (with a few exceptions) have done relatively little to integrate climate change into valuations or actively encourage their investment managers and fund managers to do so. This appears to be due, in part, to a weaker regulatory environment. The US government is far behind its European counterparts in implementing greenhouse gas reduction regulations and other climate change related policies. Some regional, state and local initiatives are underway in the US but there remains high uncertainty around the policy agenda at the federal level. As a result, US investors have taken fewer actions than their European and Australian counterparts to address climate change.

Asset class variation

Knowledge and experience with integrating climate change is now evident in public equity and real estate investments, although other asset classes such as hedge funds still present challenges. The main challenge within these asset classes is the short-term investment horizon, which is not being aligned with longer term investment drivers such as climate change.

Integration is also becoming more prominent in private equity and infrastructure investments. The illiquidity and long-term investment horizons associated with these investments make them particularly sensitive to unexpected climate related policy changes and technological advancements. There now appear to be an increasing number of low-carbon opportunities available in the private equity and infrastructure space and one respondent highlighted that it is becoming easier to find mainstream funds with a “cleantech flavour”.

Improving investment practice

The report identifies a number of areas for improvement in investor practices on integrating of climate change in investment processes, including:

- Better depth and breadth of research on climate change impacts across all sectors and asset classes;
- Extended awareness and training across investment teams regarding the potential risks and opportunities arising from climate change;
- A clearer direction from asset owners for their asset managers and consultants to make climate-related risks and opportunities an integral part of their investment strategies and practices across all asset classes;
- Further development of tools such as gap analysis or competency benchmarking by asset owners to assess external investment managers on climate change integration;

- Extended analysis of climate change issues for investments in hedge funds, government bonds and commodities;
- Improved transparency and reporting around climate change activities in private equity investments;
- Greater level of consideration of climate change risks and opportunities at the strategic level, including specific, detailed analytical processes to identify deal-specific opportunities across asset classes.

Key constraints on improved investor practice

- More consistency and clarity around climate change policy. In particular, investors are calling for a meaningful price on carbon and clearly articulated renewable targets;
- Comprehensive and comparable data on carbon emissions, emissions reductions, and energy efficiency cost savings associated with assets. Further disclosure is also needed to highlight how companies are managing climate change-related risks and capitalizing on opportunities.

Key findings

Investor commitment – challenges and appetite

Most participating investors view climate change issues as a material investment risk/opportunity across their organisation's entire investment portfolio (87% of asset managers and 98% of asset owners). It is also becoming a more strategic issue, supported by the finding that responsibility for climate change now resides at the board level for the majority of investors (rather than with the SRI team). This is also evident from the inclusion of a reference to climate change in investment policies. More than 80% of asset managers and 57% of asset owners make specific reference to climate change risk in their investment policy. Respondents to this survey are predominantly members of the investor networks on climate change and as such are likely to have higher levels of commitment than other investors.

However, many investors still lack the knowledge and resources to address climate change related risks and opportunities across their portfolios. To build knowledge, the majority of investors support research on climate change and join collaborative initiatives to engage with policymakers and/or investee companies to address climate change. In fact, around 60% of both asset owners and asset managers participate in 4 or more collaborative initiatives and/or industry associations.

Market evolution – increasing demand by region

Asset owners are becoming more proactive in considering climate change when appointing new external fund managers. In particular, they are increasingly asking climate change-related questions in meetings with potential investment managers. More formal assessments are still relatively uncommon, although this year's results show that almost half of the members of the IGCC use Investment Manager Agreements (IMAs) to encourage investment managers to consider climate change issues.

A growing number of asset owners ask investment advisors and consultants to consider climate change in the advice they provide, for example in manager assessments, portfolio carbon exposures and general trends in regulation and market best practices. In particular, Australia/New Zealand-based investors more frequently instruct advisors to incorporate climate change in their advice. European investors appear to use consultants to a lesser extent when short-listing managers, with some of the respondents indicating that they have built capacity and proprietary tools in order to assess their managers.

North American asset owners primarily use consultants for advice on peer comparison and positioning.

There is little evidence, however, that asset owners actively perform gap analysis or competency benchmarking between investment managers on climate change. This is an area where we have identified scope for improvement in the future.

The public policy agenda

Investors continued to engage with policymakers on a wide range of issues, in particular specific targets on greenhouse gas emissions, support for an emissions trading scheme, support for renewable energy policy, low carbon technologies and energy efficiency. There is no significant variation in engagement topics between asset managers. Amongst asset owners, Europeans are more inclined to discuss specific targets on greenhouse gas emissions (87%), support for renewable energy policy and low carbon technologies (87%) whilst Australian/New Zealand investors discuss support for an emission trading scheme (92%) and mandatory climate change disclosures (85%). North American asset owners focus on specific targets on greenhouse gas emissions (60%), support for renewable energy policy (60%) and mandatory climate change disclosures (60%). 85% of asset managers and 91% of asset owners have engaged on at least one issue related to climate change policy in 2010.

The vast majority of engagement activities in relation to climate policy were undertaken through the investor groups (i.e. IIGCC, IGCC and INCR).

A relatively small number of investors choose to engage with policymakers directly (39% of asset managers and 23% of asset owners). This is primarily because they feel that they lack in-house resources and/or because they feel collaborative initiatives will attract greater attention from policymakers due to the collective size.

Raising standards – corporate engagement

Engagement with companies continues to be an important tool utilised by investors to address climate change. More than 90% of investors maintain a dialogue with their investee companies around climate change risk and opportunity. However, European investors are ahead of other regions when it comes to assessing the effectiveness and outcomes of their engagement activities.

Engagement efforts tend to focus on reporting and disclosure of climate change impacts (the Carbon Disclosure Project is often referenced) and risks as well as integration of climate change considerations into business strategies.

Strengthening approaches to investment analysis

Listed equity continues to be the asset class for which investors consider climate change issues most frequently (61% of asset owners and 94% of asset managers). There continues to be a lack of analysis of climate change issues for investments in hedge funds, government bonds and commodities. The main challenge for hedge funds and commodities is the short-term investment horizon not always being aligned to sustainable investment practices and thus climate change issues may not be considered.

Investors consider a wide variety of climate related factors in their investment analysis, including regulation for companies in carbon intensive sectors such as energy, utilities and infrastructure and government support schemes such as feed-in tariffs for wind and solar investments.

The majority of investors utilise advisory generated research material such as broker reports, in-house bespoke research and company reports – both financial and environmental reports. There has also been a significant increase in the number of asset owners conducting internal research on climate change.

When analysing the impact of climate change, the majority of investors take a combined qualitative/quantitative approach (80% asset managers and 58% asset owners). A range of data is applied using different investment approaches such as negative and positive screening based on climate change performance, top-down thematic, sector themed, best-in-class and bottom-up selection.

An increasing number of investors integrate carbon pricing models and projections for feed-in tariffs into their fundamental research process. In some large investment houses, the responsibility for carbon price scenario analysis has moved from the SRI team to specialist quant investment modelling teams who are building these projections into models for sectors such as those linked to natural resources.

A small but growing number of investors are also considering climate change risks and opportunities at the strategic level and have developed a specific, detailed analytical process to identify deal-specific opportunities across asset classes. Extending this approach across the investment community has an important role to play in the overall transition towards a low-carbon economy.

Key challenges identified in integrating climate change into investment analysis include data availability, the perceived ambiguity of scientific research, uncertainties around climate change policy and the price of carbon, lack of confidence in the materiality of climate change amongst portfolio managers – partly due to the longer term nature of some climate change-related issues – but also a lack of experience in interpreting and analysing data on climate change impacts.

Thematic investment opportunities

Over half of investors surveyed invest in funds focused on climate change, with a further 15% of asset managers and 45% of asset owners considering an allocation to thematic investments over the next few years. A key driver for thematic investments is the potential for favourable returns coupled with a positive environmental impact, such as lower hydrocarbon generated energy usage. Furthermore, global government policy in relation to climate change is expected to increase the investment appetite for low-carbon technologies and other climate change themed funds.

Asset owners have invested most commonly in thematic private equity, followed by listed equity and infrastructure. Private equity is a starting point for many investors as these funds are best positioned to profit from the value created within clean tech companies before they become available to public investors. However, some investors favour listed equity due to easier accessibility and greater liquidity and transparency compared to private equity.

As investors begin to recognise the opportunities offered by climate-related investments, the asset classes that attract the greatest share of thematic investments from asset managers are listed equity, listed emerging market equity and private equity.

Total allocation to thematic investments is still relatively small, representing on average, a mere 0.3% of the total respondents' assets under management (or approximately \$63bn of almost \$12trillion managed by respondents to this survey).

As noted above, certainty and clarity around climate change legislation and regulation will be an important determinant for the future growth of thematic investment. However, other drivers such as increasing demands for energy, rising fossil fuel prices, concern over energy security and supply and the threat of physical impacts of climate change will continue to make this sector increasingly appealing to investors.

Real estate and climate risk

Australian/New Zealand and European investors are more inclined to integrate climate change issues within their real estate investments than their North American counterparts. This may

partly be explained by the fact that Western Europe, New Zealand and Australia have achieved greater breadth and effectiveness of federal and local building energy efficiency legislation compared to the US¹, which facilitate the understanding of the investment implications in these regions. However, we caution drawing any significant conclusions due to the limited number of North American respondents to the survey. Issues such as energy efficiency, water and waste management systems, water harvesting, and transport links/access are considered by the majority of real estate investors.

Interestingly, Australian/New Zealand-based investors engage more actively with all stakeholders compared to their European and North American counterparts. Interviews with global investors revealed that Australian investors to a large extent consider the physical risks from climate change, partly driven by their recent experiences of extreme weather events. They also perceive that there is a relatively stringent and stable domestic regulatory environment. To address these risks, Australian investors are engaging with real estate managers, developers and tenants to reduce energy and water use, ensure efficient water and energy technologies and identify physical climate risks at potential new locations for development.

Climate change considerations in private equity investments

An increasing number of investors are considering climate change in their “mainstream” private equity portfolios. This is articulated through increased allocation to assets that are set to benefit from a transition to a low-carbon economy (for example, cleantech, renewable energy and infrastructure) or selection of fund managers that demonstrate a greater awareness of the risks and opportunities associated with climate change. Some of the factors influencing the uptake of sustainable private equity investments include supportive government policies, breakthroughs with new technological developments, and high and sustained rises in the cost of traditional sources of energy that impact on the breakeven for investment in alternative energies and technologies.

Well over half of investors state that they consider climate change issues during private equity ownership activities. Half of General Partners (GPs) monitor climate change issues at a portfolio level. However, there continues to be a lack of transparency and reporting around these activities. In fact, only one third of GPs report on how climate change is addressed within private equity portfolios.

¹ Please see RREEF Research (2008) Globalization and Global Trends in Green Real Estate Investment for further information. Examples of initiatives include the EU Energy Performance Building Directive and Minimum Energy Performance Standard (MEPS) requirements in Australia.

1 Introduction

For the first time this year, the three regional investor groups (IIGCC, IGCC and INCR) have come together to survey and report on global investment practices relating to climate change. The purpose of the report is to highlight best practice and share practical actions on integrating climate change into the investment process. The report is based on survey responses from 44 asset owners and 46 asset managers based in Europe, Aus/NZ and North America on their actions on climate change during the year 2010.

Methodology

The methodology for this project was divided into three distinct stages:

1. Survey
2. Verification of data
3. Analysis of data

The investor groups commissioned Mercer to develop two surveys, one for asset owners (including those with internal asset managers) and one for asset managers. The surveys were based on the questions used in the preceding IIGCC questionnaire,² with some modifications, in order to allow for year-on-year comparison of results where possible.

Mercer was asked to conduct follow-up interviews with 30 respondents, selected to ensure coverage of the demographics of all respondents such as investor type, size and region. In addition to verifying responses given, these calls were utilised to ask a set of broader questions along major themes identified by Mercer and the investor groups:

- How are policy related risks factored into the investment process? Why do some investors still not actively manage this risk? What challenges exist?
- What is the role of thematic investments in the development of further integration of climate change issues into investment processes?
- A recent Mercer report found that investing in infrastructure, private equity, real estate and sustainable investments will help buffer against climate risk³. What is the best structure to access these kinds of investments?
- Only a small group of asset owners carry out a formal assessment of how investment managers are integrating climate change into investment decision-making. What challenges exist?

The report considers the results of both the surveys and the verification calls.

The report analyses how investors are building their knowledge of climate change and its implications for their investments and considers how they are taking account of climate change in their investment decision-making and engagement activities with regard to their assets. It also considers how investors are individually and collaboratively encouraging policymakers to provide a policy framework that is supportive of long-term investment decision-making and the move to a low carbon economy.

The report highlights trends in investors' activities – both positive and negative – and highlights best practice. Case studies are used to illustrate how investors are taking action on the issue. Finally, the report considers what factors will continue to affect the integration of

² Please see <http://www.iigcc.org/iigcc-investor-statement> for further information on previous annual reports published by the IIGCC.

³ Please see www.mercer.com/climatechange for further information.

climate change issues into investment decision-making and how investors and other stakeholders can better support and gain exposure to a global low carbon economy.

The remainder of this report is structured as follows:

- **Section 2** provides an overview of the degree of firm-wide commitment to climate change demonstrated by investors.
- **Section 3** focuses on the action taken by asset owners to encourage external managers to consider climate change in investment decisions.
- **Section 4** highlights how investors are responding to climate change policy risk through their engagement activities.
- **Section 5** describes how asset owners and managers that invest in equities and corporate bonds engage with companies on climate change issues, the issues which they consider to be most important and how they measure the effectiveness of their engagement.
- **Section 6** provides an overview of how asset managers and the internal managers of asset owners integrate climate change considerations into investment analysis or due diligence process and the impact on decision making processes.
- **Section 7** explores the drivers and challenges related to climate-related thematic investment opportunities and the extent to which asset managers and asset owners allocate funds to these investments.
- **Section 8** aims to assess how asset managers and asset owners with real estate investments integrate climate change considerations into their investment analysis or due diligence process.
- **Section 9** aims to assess how GPs and LPs with private equity investments integrate climate change considerations into their investment analysis or due diligence process.
- **Section 10** provides conclusions and considers the steps that investors can take individually and collaboratively to become more effective in their response to climate change.

2 Investor commitment – challenges and appetite

This section provides an overview of the degree of firm-wide commitment to climate change demonstrated by investors including an overview of the initiatives taken by survey respondents during 2010 to enhance their in-house capacity to integrate climate change in investments.

Referencing climate change

The majority of asset managers state that they specifically reference “climate change risk” or refer to environmental issues more generally in their investment policies. Some investors argue that they do not wish to single out climate change as there is a range of other equally important environmental issues that should consequently also be addressed. European and Australian/New Zealand investors are more likely to specifically reference “climate risk” in investment policies than North American investors.

Materiality/responsibility of climate change

Climate change issues are viewed as a material investment risk/opportunity across the entire investment portfolio by the majority of responding investors (87% of asset managers and 98% of asset owners). Due to this perceived importance, accountability and responsibility for climate change generally lies at the board level (72% of asset managers and 70% of asset owners) rather than residing with the specialist SRI teams.

Responsibility for climate change remains with the SRI team for the majority of North American investors; this differs to the other regions where responsibility is increasingly at the board level (or similar executive level) for the vast majority of investors.

Staff training

There is a significant difference in the number of employees dedicated to the consideration of climate change between asset owners and asset managers. Almost all asset managers (93%) have dedicated staff whilst in comparison only 59% of asset owners have this resource. Training staff on climate change issues remains an important tool to build capacity in this area for asset managers (85%). However, less than half of asset owners (45%) provided staff training on climate change-related issues in 2010. This may be partly explained by asset owners having more limited resources. The majority of investors organise seminars and workshops to educate their staff.

Despite a greater portion of European asset owners allocating staff to climate change issues, it is interesting to note that they are least likely to provide staff training on such issues.

Reporting and disclosure

Encouragingly, the majority of responding investors report on their climate change related activities (96% of asset managers and 88% of asset owners), with the majority disclosing their activities publicly on their websites. Reporting generally covers voting activity and engagements with investee companies on climate change-related issues.

Research

67% of asset managers and half of asset owners commissioned and supported climate change research in 2010. Many investors contributed through the research conducted by the investor groups on climate change.

Asset owners use the research to build knowledge internally and, in some cases, organise training for investment staff around the findings of selected research reports. Some research is also designed to support the integration of climate change directly in the investment process such as broker reports exploring climate-related investment opportunities around for example renewable energy technology or energy efficiency.

As highlighted earlier in this report, access to high quality research is not sufficient to address the barriers faced by investors in integrating climate change into their investment processes – one investor argued that “a major challenge remains in understanding how to translate the findings across investment portfolios in face of high policy uncertainty”. However, the breadth and depth of research on climate change can be extended, in particular in medium carbon impact sectors such as industrial goods and services, construction and materials or food and beverage. These sectors are exposed to risk and opportunities arising from climate change but are still receiving relatively limited attention from investors.

Box 1 Deutsche Asset Management

Research capabilities

Deutsche Asset Management (“DeAM”) has published nearly 30 reports and white papers addressing climate change issues since 2007 through its climate change investment division, DB Climate Change Advisors. Topics of research have included investment risk and return in major asset classes, policy trends analysis and momentum, renewable energy and energy efficiency and implications for agriculture.

The research is utilised by DeAM in four ways:

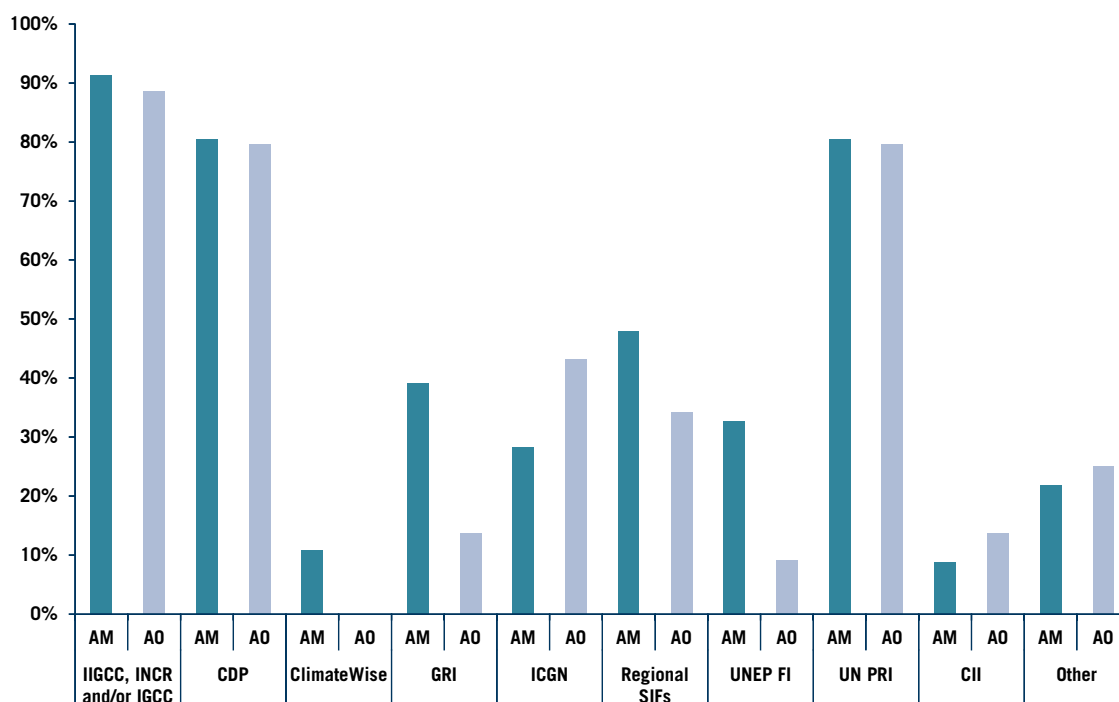
- DeAM uses the reports and white papers as an educational tool to help clients understand the risks and opportunities related to climate change.
- The research is used by investment teams as part of standard training for all portfolio managers to ensure knowledge of the materiality of climate change across asset classes, UN PRI are standard training for all portfolio managers. Carbon analysis at a company level is also available to portfolio managers through the research platform, as are all public white papers and reports.
- As a way to ensure progress of the climate change debate in the investment market. The Climate Policy Tracker is used to examine government climate policy around the world and links that to investment opportunities and potential emission reductions.
- To ensure DeAM presents an informed opinion when engaging with policymakers on climate change. The focus of DeAM’s engagement efforts in this area is aimed at moving policy in the direction required to meet the needs of long-term investors and they believe that this can only be done when all parties are well informed on the subject.

Collaborative initiatives

Collaborative initiatives remain popular amongst all investors. The recognition of the materiality of climate change-related risks and opportunities is evident through the number of collaborative initiatives and industry associations available to the investor community. Many of the investors (61% of asset managers and 64% of asset owners) participate in four or more collaborative initiatives. The most popular initiatives are the IIGCC, IGCC, INCR, CDP and UN PRI.

“Other” initiatives mentioned include the Responsible Investment Association Australasia (RIAA), ESG Research Australia, the European Sustainable Investment Forum (Eurosif), the Local Authority Pension Fund Forum (LAPFF), the Extractive Industries Transparency Initiative (EITI) and the Interfaith Center on Corporate Responsibility (ICCR).

Figure 1 Membership of collaborative initiatives



IIGCC	Institutional Investors Group on Climate Change (Europe)
INCR	Investor Network on Climate Risk (North America)
IGCC	Investor Group on Climate Change (Australia/New Zealand)
CDP	Carbon Disclosure Project
GRI	Global Reporting Initiative
ICGN	International Corporate Governance Network
Regional SIFs	Regional Social Investment Forums (Eurosif, UKSIF, USSIF and ASrIA)
UNEP FI	UN Environment Programme Finance Initiative
UNPRI	UN Principles for Responsible Investment
CII	Council of Institutional Investors

Box 2 Environment Agency, BTPS, CalPERS, Australian Super

Integration of climate change research

The recent collaborative report by Mercer “Climate Change Scenarios: Implications for strategic asset allocation”, analyses the potential financial impact of climate change on investors’ portfolios, identified through a series of four climate change scenarios playing out to 2030. The report identifies the implications for the major asset classes and regions and suggests some pragmatic steps for institutional investors to take in their strategic asset allocation.

In the report, a framework is outlined that can be used by institutional investors to enhance their understanding of climate-related investment risks and opportunities across asset classes and regions. Mercer’s “TIP Framework” estimates the rate of investment into low carbon technologies (T), the impacts (I) on the physical environment and the implied cost of carbon resulting from global policy (P) developments across the four climate scenarios.

Several asset owners within the membership of the investor groups participated in the project, each planning to utilise the research in different ways:

- The Environment Agency Pension Fund (EAPF) is currently reviewing its investment strategy and asset allocation. The EAPF is using the findings and recommendations of the research project to develop its future investment strategy and asset allocation. The EAPF has indicated that by 2015 it would hope to have 25% of its fund contributing to the green economy.
- CalPERS intend to use the research to educate their internal staff on the potential climate change impacts across the investment portfolio. Furthermore the research is being integrated within CalPERS’ investment processes in developing its strategic ESG-integration plan.
- The BT Pension Scheme will use the research to monitor the direction of climate policies and pricing of carbon models as well as quantify potential absolute loss scenarios. The analysis will feed into the Scheme’s ESG risk factors which are integrated into their wider risk reporting.
- AustralianSuper intends to draw on the research to review its current asset allocation mix. Initially, they will review and analyse the risks associated with changes to policy and physical impacts on their current assets.

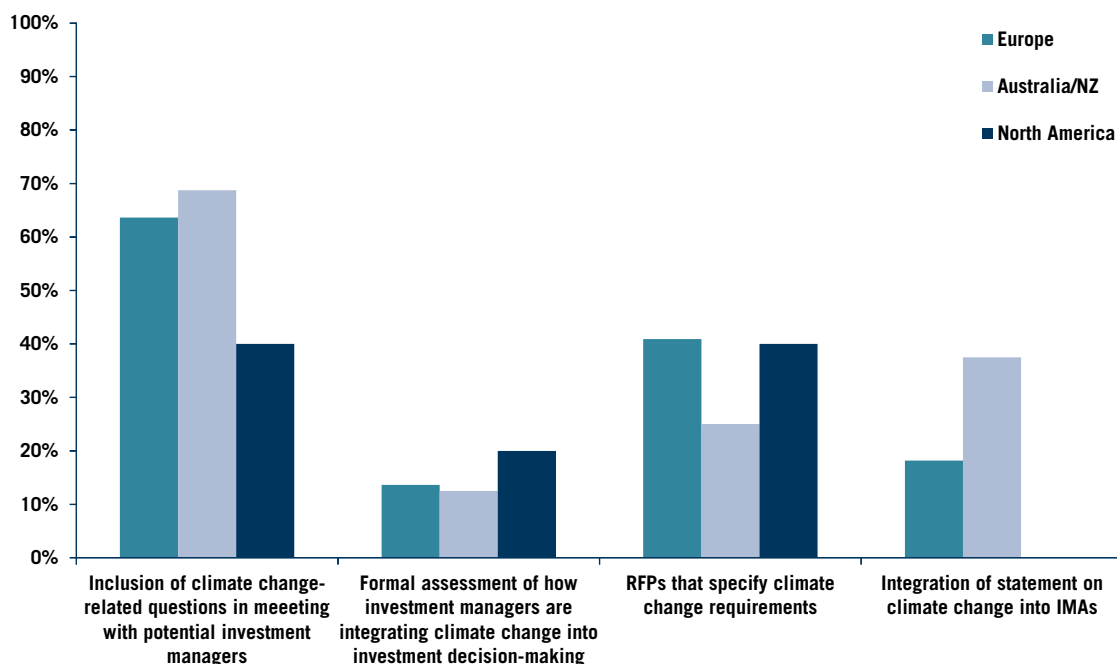
3 Market evolution – increasing demand by region

Demand from asset owners is an important driver for fund managers to integrate climate change in their investment activities and decision-making processes. This section focuses on the actions taken by asset owners to encourage their external managers to consider climate change in their investments.

Appointment of new fund managers

Asset owners are becoming more proactive in asking climate change related questions when meeting with potential managers. Over three quarters of asset owners (77%) surveyed consider whether potential fund managers integrate climate change in their investment processes when appointing new external fund managers. However, there is still only a small group of asset owners (18%) across all regions that have developed a formal process to assess prospective managers' climate efforts. Instead, the majority of asset owners (82%) ask questions around integration of climate change, or more broadly environmental policy and management, when meeting with potential investment managers. Some asset owners expressed that they will step up their efforts in this area over the next year, but still face some barriers including lack of resources or understanding of the relevant issues across asset classes or sectors. They feel that this may inhibit their ability to effectively assess manager capabilities.

Figure 2 Appointment of new fund managers



Interestingly, almost half of Australian investors integrate a statement on climate change into investment manager agreements (IMAs). Only a handful of European asset owners and no North American investors integrate climate change into contractual agreements. Some of the barriers stated include timing (i.e. climate change issues are more easily integrated when mandates are revisited), possible legal costs incurred from amending agreements and lack of resources to monitor compliance. Australian investors appear to have overcome some of these barriers through using side letters instead of amending agreements in pooled arrangements.

Evaluation of progress

Three quarters of asset owners monitor the extent to which existing fund managers integrate climate change into their investment processes. They will for example ask climate change-related questions in quarterly meetings. An increasing number of asset owners are now also assessing their managers through formal processes such as asking managers to report on:

- their engagement activities with respect to climate change (59%);
- how impacts of climate change and related changes in policy are being taken into account in investment decisions, i.e. buy, hold and sell decisions (56%); and
- on their proxy voting activities with respect to climate change (53%).

Less than one third of asset owners (31%) undertake “carbon footprint assessments” of existing managers, and only 16% of asset owners currently monitor existing managers through benchmarking tools. This is an area for asset owners to examine opportunities for improved performance in future years.

The assessment efforts by asset owners appear to be having an influence in encouraging progress in asset manager practices. Some of our respondents highlighted that by asking climate change-related questions when meeting with managers, they have noticed some improvement in investment manager practices over time. The majority of asset owners state that their external investment managers meet their expectations with regards to climate change integration only “occasionally”. European asset owners appear to be more satisfied than investors from other regions, indicating that the industry as a whole is more progressive in Europe (although we caution drawing any major conclusions due to the small sample size of North American investors).

Figure 3 Evaluation of external investment managers

Do your investment managers meet your expectations with regards to integration of climate change?

	Always	Often	Occasionally	Rarely	Never
Europe	5%	29%	62%	5%	0%
Australia/NZ	0%	33%	53%	13%	0%
North America	0%	25%	50%	25%	0%

With regards to asset classes, asset owners believe that infrastructure and property managers most often meet their expectations in this area. This indicates that investment managers are catching up with the growing climate related physical and regulatory risks and opportunities in these illiquid, climate-sensitive asset classes. However, across asset classes, managers are still not living up to expectations in some areas due to stated resource limitations amongst boutique managers, and the dismissal by some of climate change as a material issue due to its impacts being too long term. The survey did not question whether asset owners specifically articulate in detail their expectations in relation to climate change. It will be of interest to explore this area in future years.

Box 3 The Guardians of New Zealand Superannuation

Assessment of existing and potential managers

The Guardians of New Zealand Superannuation (Guardians) is an operationally autonomous agency of the New Zealand Government, charged with managing the New Zealand Superannuation Fund. The Guardians annually review the actions taken by investment managers with respect to RI, including climate change issues.

The Guardians' RI policy applies to all asset classes and procedures for each become more detailed as best practice standards are developed. ESG requirements are integrated in investment due diligence including assessment of climate change risks where this is particularly relevant. For property investments, climate change guidelines focus on energy efficiency; for the New Zealand direct investments, and forestry holdings, the focus is on the risks and opportunities associated with the Guardians liability to the New Zealand Emissions Trading Scheme.

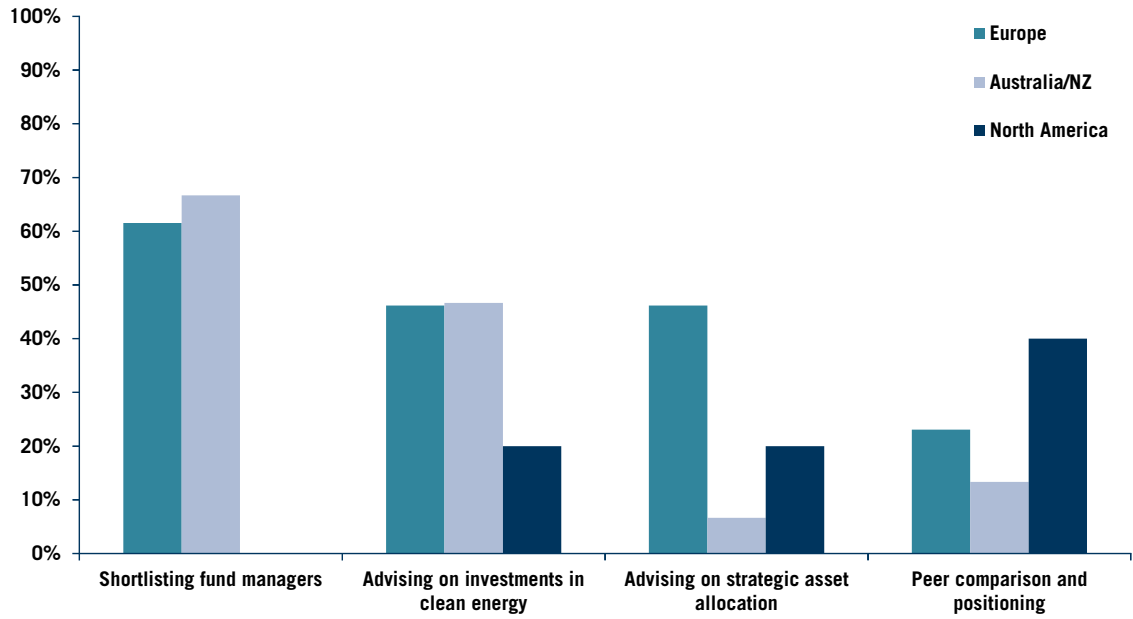
When appointing property, rural or forestry managers, climate change is incorporated into due diligence of the manager and mandate. As part of its RI requirements more broadly, the Guardians include ESG requirements in all private market manager agreements. Where it is not possible to include an ESG clause directly in the head agreement, especially in the case of a limited partnership, the Guardians use a side letter. The side letter sets out the Guardians' ESG requirements and sometimes specifically requires the manager to address climate change as part of environmental risk in the execution of their mandate.

In addition to inclusion of climate change considerations within formal processes and documentation, the Guardians have established an internal climate change "think tank" group. The group's role is to assess climate change risks and opportunities for the Fund, and comprises members of the Asset Allocation, Investment, Treasury, Communications and RI teams.

Instructing investment consultants to consider climate change

A growing number of asset owners (70%) ask investment advisors and consultants to consider climate change in the advice they provide. In particular, Australia/New Zealand-based investors more frequently instruct advisors to incorporate climate change considerations in their advice when short-listing managers relative to advice on strategic asset allocation, clean energy and, peer comparison and positioning. European investors appear to use consultants more commonly across all processes, with some of the respondents indicating that they have built capacity in-house to assess managers. North American asset owners primarily use consultants for advice on peer comparison and positioning.

Figure 4 Instructing consultants to consider climate change



4 The public policy agenda

Transparent, credible and stable policy is critical to ensuring that climate change issues, particularly those related to low carbon energy generation, are integrated into investment decision-making. A recent Mercer study showed that climate policy uncertainty could contribute to as much as 10% of the risk for a representative portfolio over the next 20 years⁴. This section outlines how asset owners and asset managers are responding to this risk by engaging with policymakers on specific climate change issues.

Climate change issues

Investors continue to engage in dialogue and in initiatives related to government policy and industry regulations on a range of climate change issues. Key issues include the establishment of a carbon market and a meaningful price of carbon as well as government support for renewables. There is a general recognition that policy engagement takes time.

In Europe, IIGCC members were active in a number of policy engagements, including: producing a position paper on EU climate and energy policy; a conference on EU policy and shifting investment from high to low carbon assets; various submissions in response to EU and national consultations; letters to the Spanish government on the impact of the planned changes to support mechanisms for renewable energy; and private meetings with national governments and EU officials on a range of climate-related issues.

Similarly, in Australia and New Zealand, IGCC members participate in a number of ways in policy engagement including: via submissions to government inquiries on policy design; participation in formal Government policy making consultative committees including the Business Roundtable on Climate Change and the Peak Stakeholder Liaison Group; in private meetings with political and bureaucratic representatives; and, via public statements in the media. All survey respondents who are IGCC members participate either directly or indirectly in these activities.

In the US, investors have participated in policy analysis and advocacy through the INCR Policy Work Group. A key example of policy engagement by INCR members was their successful petition asking the U.S. Securities and Exchange Commission to issue formal guidance outlining what publicly traded companies need to disclose to investors about material climate-related risks they face. The SEC issued this guidance in 2010. INCR members were also active in helping defeat California's Proposition 23 referendum (which would have indefinitely mothballed the state's climate and energy programme), supporting the extension of renewable energy tax credits and advocating for strong auto and truck efficiency and greenhouse gas emission standards.

All three investor networks, together with UNEP FI and support from UN PRI, collaborated on an international investor statement ahead of COP16 in Cancun which called for stronger policy action at national, regional and international level in order to fill "the climate investment gap". This was the largest call on policy makers ever by investors and was signed by over 260 institutions from the developed and developing world. The networks also sent delegations to participate in discussions and events at the UN climate conference in Cancun.

⁴ www.mercer.com/climatechange

Figure 5 Public policy engagement by issue⁵

Climate change issue	Europe		Australia/NZ		North America	
	AM	AO	AM	AO	AM	AO
Specific targets on GHG emissions	67%	87%	69%	44%	67%	60%
Support for emissions trading scheme	61%	74%	75%	75%	67%	20%
Support for renewable energy policy, low carbon technologies or energy efficiency	78%	87%	75%	44%	78%	60%
Mandatory climate change disclosures	61%	43%	75%	75%	78%	60%
Adaptation to climate change	50%	74%	56%	44%	56%	20%
Other	17%	0%	6%	6%	33%	40%

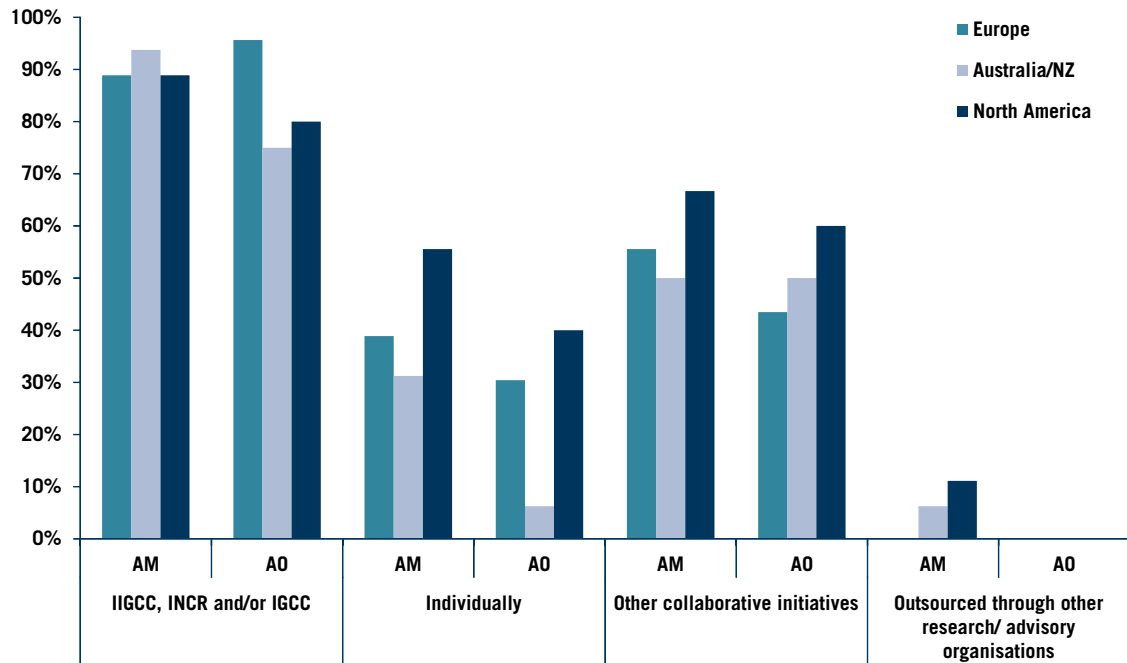
The results shown in Figure 5 indicate that the level of evolution in the policy framework in a particular region influences the policy issues on which investors engage governments. Significant differences in advocacy activities around renewable energy policies, low-carbon technologies or energy efficiency possibly reflect the differences in policy framework development between Europe and Australia, where energy efficiency policies, for example, are seen as important complements to a carbon price. In North America, the higher level of engagement on renewable energy and energy efficiency is more likely to reflect the fact that carbon pricing is making no progress at a political level.

Collaborative engagement through the investor groups continues to be the focal point for engagement with policymakers on climate change. Other collaborative initiatives through which investors participate include the Carbon Disclosure Project, which focuses on disclosure, and UNEP Finance Initiative (FI) which concerns engagement with national governments on United Nations Framework Convention on Climate Change (UNFCCC) processes. In addition, many investors engage in regional initiatives such as the Australian Council of Superannuation Investors and the UK's Local Authority Pension Fund Forum (LAPFF).

- 85% of asset managers and 91% of asset owners have engaged with policymakers on at least one issue related to climate change policy during 2010.
- Investors engaged with policymakers on a wide range of issues, in particular specific targets on greenhouse gas emissions, support for an emissions trading scheme, and support for renewables energy policy, low carbon technologies and energy efficiency.
- The majority of engagement activities in relation to climate policy were undertaken through the investor groups (85% of asset managers and 86% of asset owners).

⁵ "Other" includes issues such as reducing emissions from deforestation and degradation and climate financing.

Figure 6 Engagement with policymakers and regulators



A relatively small number of investors choose to engage with policymakers directly (39% of asset managers and 23% of asset owners). This is due to the lack of resources and/or a belief that collaborative initiatives will attract greater attention from policymakers as a result of their collective size. One asset owner highlighted that it is important that “people who know the detail sit down with policymakers”. It was mentioned that investor networks in particular have been very effective in this space and their engagement impact is superior to what investors could achieve individually.

5 Raising standards – corporate engagement

Institutional investors are increasingly taking action to raise standards in climate policy and risk management of investee companies. This includes requests for improved disclosure of emissions levels, environmental impact assessments, as well as full disclosure and reporting of sustainability management policies and practices. This section provides an overview of how investors in equities and corporate bonds engage with investee companies on climate change, the issues which they consider to be most important and how they measure the effectiveness of their engagement.

Engagement by issue

Today, engaging with investee companies on climate change issues appears to have become common practice amongst the respondents to the survey. Almost all asset managers (94%) and asset owners with equities and corporate bonds managed in-house (87%) engage with investee companies on these issues, both directly and in collaboration with other investors. An increasing number of asset owners are also using third-party engagement service providers to engage with investee companies on their behalf. This is done on the assumption that these service providers are better informed to challenge companies.

Engagement activities can take a number of forms, including filing shareholder proposals, writing letters, undertaking phone interviews or meeting face-to-face with senior management. It is worth noting that North American investors are more likely to engage with companies by filing shareholder resolutions and then negotiating with management about the proposal. In 2010, 101 climate and energy related shareholder resolutions were filed in the US and 51 were withdrawn by agreement. A subset of INCR members has been very active in pursuing shareholder resolutions and related corporate engagements around reporting and reducing greenhouse gas emissions and related issues.

Investors feel that they increasingly get access to senior management or the board when engaging on climate issues as these issues move up the corporate agenda.

Dedicated SRI teams generally have an advantage when engaging with companies on climate change due to their issue-specific expertise, however, portfolio managers often have detailed knowledge of portfolio companies that can be useful for an effective engagement process. Despite this, some of the respondents highlighted that it is still difficult to get portfolio managers to participate in meetings on climate change issues (except for certain sectors such as European utilities) and these discussions are most often undertaken solely by a dedicated specialist SRI team. The interviews suggested that portfolio managers are more likely to participate in meetings where they believe that an issue is material, and further work appears to be required in building greater awareness across investment teams on the link between climate change-related issues and investment returns.

Asset managers engage more frequently than asset owners across the range of issues highlighted in the chart below. The most topical issues are in relation to reporting and disclosure of climate change impacts (the Carbon Disclosure Project is often referenced) and risks as well as integration of climate change considerations into business strategies.

The areas that are not commonly discussed with investee companies include the link between executive compensation to achievement of greenhouse gas emission reduction targets and companies engagement with policymakers on climate change, either directly or via third party groups.

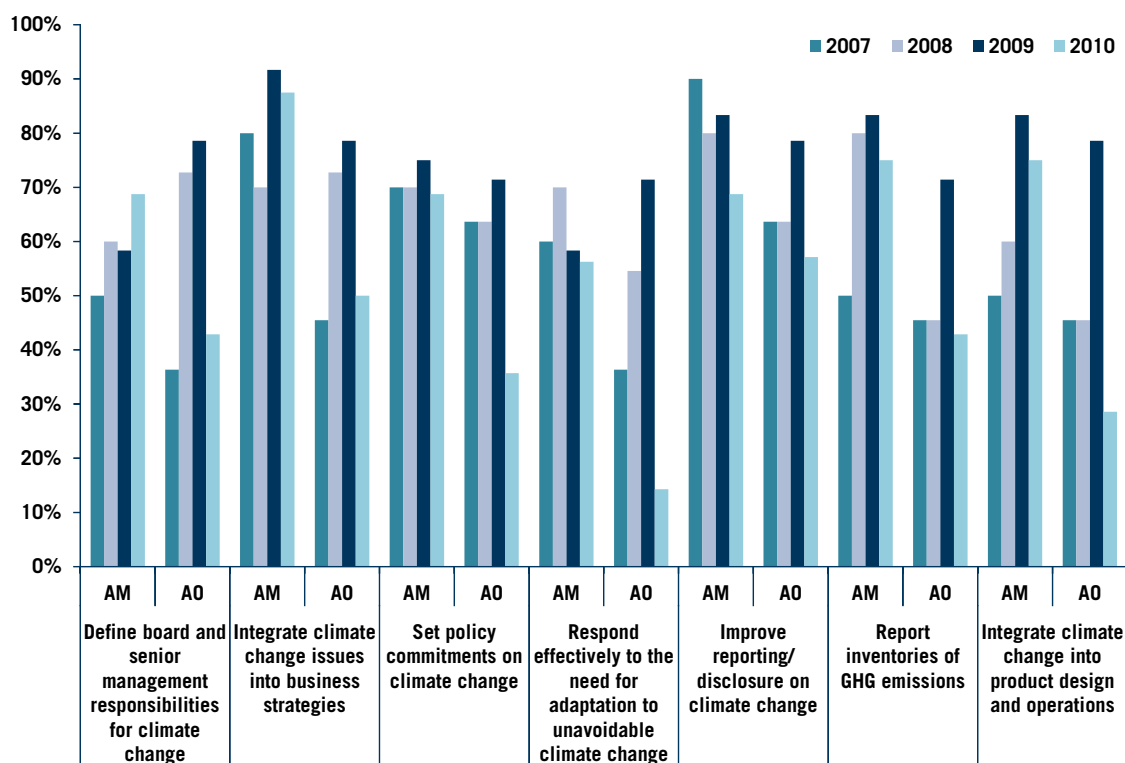
With regards to outcomes, some investors mentioned that engagement efforts in lower carbon intensive sectors have been more successful than those targeting more high impact sectors such as utilities, where there are a wider range of operational and regulatory issues and therefore progress tends to take longer.

Figure 7 Engagement by issue

Climate change issue	Europe		Australia/NZ		North America	
	AM	AO	AM	AO	AM	AO
Define board and senior management responsibilities for climate change	69%	43%	75%	57%	75%	50%
Integrate climate change issues into business strategies	88%	50%	75%	57%	75%	50%
Set policy commitments on climate change	69%	36%	75%	57%	63%	50%
Respond effectively to the need for adaptation to unavoidable climate change	56%	14%	88%	29%	50%	50%
Improve reporting/disclosure on climate change	69%	57%	75%	57%	88%	50%
Report inventories of GHG emissions	75%	43%	75%	57%	75%	50%
Integrate climate change into product design and operations	75%	29%	63%	29%	50%	50%
Companies' engagement with policymakers on climate change	44%	36%	75%	14%	63%	50%
Companies' engagement with policymakers via third party groups on climate change	38%	7%	63%	29%	38%	50%
Link executive compensation to achievement of GHG emission reduction targets	31%	14%	63%	29%	38%	50%

The chart overleaf demonstrates how investor focus amongst European investors has developed over the last four years (investors in North America and Australia/New Zealand are not included as they were not surveyed in previous years). Across the board, it appears that investors have reduced their engagement activity on most issues during 2010, although this should be viewed with caution as the sample size has expanded quite significantly during 2010, now also including additional members of the IIGCC (i.e. not only signatories to the IIGCC Investor Statement on Climate Change). The more significant variation between engagement activity undertaken in 2009 and 2010 is amongst European asset owners. The reason for the decreased level in corporate engagement was not determined although our discussions with some of the respondents indicated an increased focus on policy engagement in 2010. It is also worth noting that managers have increasingly focused on senior management responsibilities for climate change over the last year.

Figure 8 Year on year analysis (Europe only)



Measuring the effectiveness of engagement

It is important that investors take steps to assess the effectiveness of their engagement activities to ensure progress and to measure outcomes. The majority of investors monitor their investment activities, but only 44% of asset managers and 22% of internal managers of asset owners attempt to assess the effectiveness of their engagement activities. European investors are taking the lead in this area. The Australian/New Zealand asset owners surveyed have yet to measure the outcomes of their engagement on climate change issues.

Of those investors that do measure the outcome of engagement on climate change, the tools used include:

- Establishing specific engagement objectives and assessing success.
- Measuring improvement in investee company climate change performance as a result of engagement.
- Measuring the number of shareholder resolutions withdrawn as a result of a successful engagement process.

A key challenge highlighted is the difficulty in determining whether changes in corporate practices were a direct result of the investor engagement.

6 Strengthening approaches to investment analysis

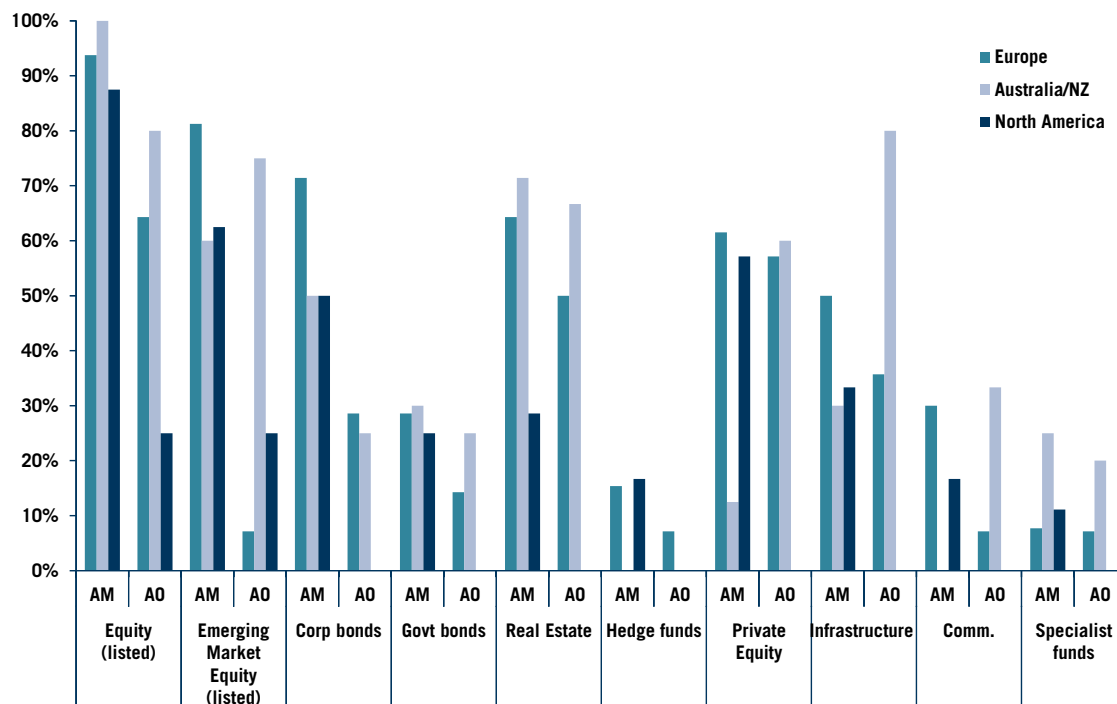
This section aims to assess how asset managers and asset owners with internally managed assets integrate climate change considerations into their investment analysis or due diligence process and how climate change is having an impact on investment decisions-making.

Asset classes

Listed equity continues to be the asset class for which investors consider climate change issues most frequently (61% of asset owners and 94% of asset managers). Asset managers tend to integrate climate change into the investment process more often than their asset owner counterparts with the exception of private equity and infrastructure investments.

There is a lack of analysis within hedge funds, government bonds and commodities, with integration into commodities declining in 2010 amongst both asset owners and asset managers.

Figure 9 Climate change integration by asset class



Infrastructure is a major focus for Australian/New Zealand-based asset owners, partly driven by physical impacts of climate change (flooding, sea-level rise and extreme weather events) and an uncertain policy environment increasing risk exposure for domestic assets. Australian asset owners also focus on integrating climate change into emerging markets equities to a larger extent than their European and North American counterparts.

North American asset owners only consider climate change in relation to equities, whereas their asset manager counterparts integrate climate issues across all asset classes but at a much lesser extent in real estate than European and Australian managers. Interestingly, Australian managers do not consider climate for private equity to the same extent as European and North American managers.

One investor highlighted that there are now an increasing number of low-carbon opportunities available in the private equity and infrastructure space and it is therefore easier to find mainstream funds with a “cleantech flavour”. European asset owners increasingly appear to find attractive low-carbon opportunities in infrastructure – making direct investments, or sometimes in partnership with other investors.

Climate change issues

When investors integrate climate change into investment processes, the majority take into account a wide variety of climate related factors. Regulation is most commonly discussed with companies in carbon intensive sectors such as energy, utilities and infrastructure. Feed-in tariffs for wind and solar investments was the main issue considered in respect to government support schemes, with the retrospectively reduced subsidies by the Spanish government providing a cautionary tale for investors in this space. The social impacts of climate change (e.g. migration, health effects) are considered by the smallest number of investors, however, this is still considered by approximately half of asset managers and one third of asset owners.

Figure 10 Climate change issues considered in investment decision-making

Climate change issue	Europe		Australia/NZ		North America	
	AM	AO	AM	AO	AM	AO
Existing or prospective regulatory changes related	78%	79%	81%	86%	89%	25%
Regulations on energy efficiency	78%	64%	81%	71%	100%	25%
Government support schemes	78%	71%	81%	43%	100%	25%
Changes in market demand	78%	57%	88%	86%	89%	25%
Physical impacts	61%	57%	81%	71%	78%	25%
Social impacts	22%	21%	69%	43%	67%	25%
Quality of corporate governance policies, management	78%	64%	81%	57%	89%	25%
Risk of litigation	39%	43%	63%	43%	89%	25%
Other	6%	7%	0%	29%	22%	0%

Research

Investors source a varied amount of research to improve their understanding of climate change and its impact on investments. The majority of investors utilise advisory generated research material such as broker reports, in-house bespoke research and company reports, including both financial and environmental reports. Asset owners in Europe source research to a larger extent than their Australia/New Zealand and North American counterparts.

The research is disseminated across investor organisations using various methods such as inclusion in the proprietary database, internal communications such as reports, websites, newsletters and presentations. The most common way of distributing climate change research is via an SRI/climate change analyst (56% of asset managers and 53% of asset owners).

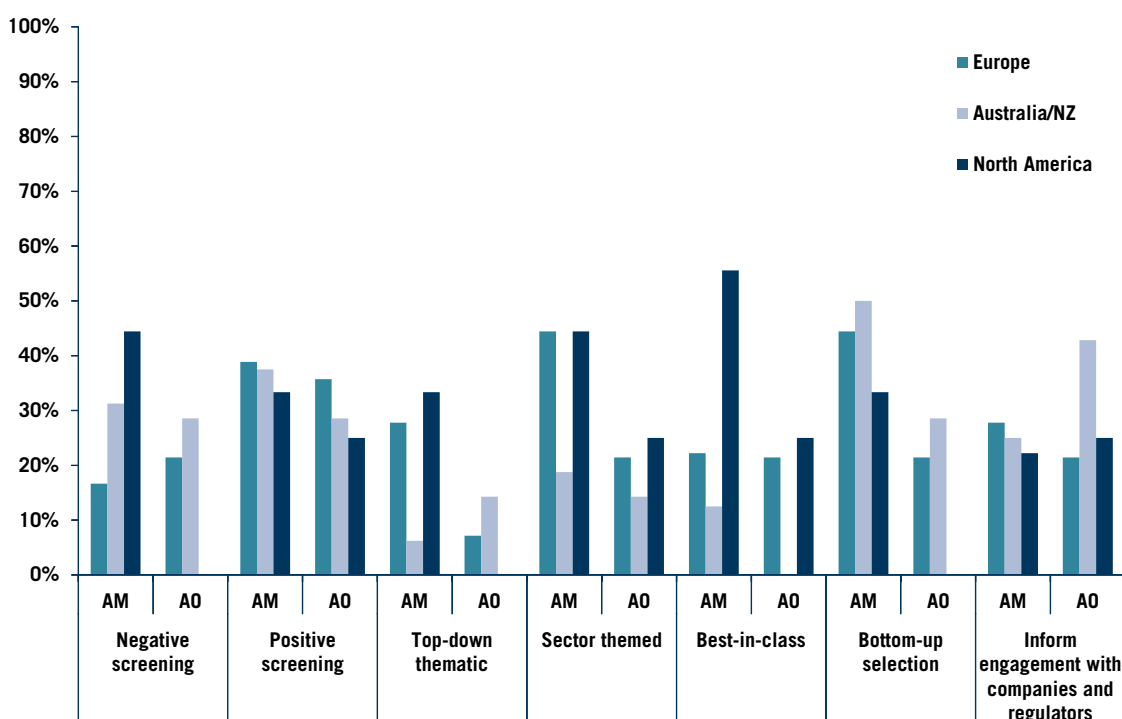
Availability of high quality research does not appear to be viewed as the main barrier for further integration of climate change issues in investment processes. Instead, investors struggle with how to translate the findings into supporting the investment case for a range of alternative energy related opportunities, for example. Key challenges identified in integrating climate

change into investment analysis include uncertainties around climate change policy and the price of carbon, the lack of confidence in the materiality of climate change amongst portfolio managers – partly due to the longer term nature of some climate change-related issues – but also a lack of experience in interpreting and analysing data on climate change impacts.

Investment approaches

The majority of investors take a combined qualitative/quantitative approach (80% asset managers and 58% asset owners). Just over one third of asset owners use only qualitative data extracted from environmental surveys and reports. Investors state that quantitative data is most commonly used when assessing real estate opportunities. Quantification in this asset class is facilitated by the fact that the regulatory environment around sustainable real estate is relatively clear, the investment case for energy efficient buildings is convincing, and data availability in developed countries is fairly robust.

Figure 11 Investment approaches



The application of the data varies quite evenly amongst the possible investment approaches including negative and positive screening (which here refers to screening companies based on climate change-related performance), top-down thematic, sector themed, best-in-class and bottom-up selection approaches.

Screening, best-in-class and sector themed approaches are most popular amongst North American investors, whereas Australian investors tend to use engagement and bottom-up selection. Bottom-up selection, positive screening and sector themed approaches are most frequently used by European investors.

An increasing number of investors integrate carbon pricing models and projections for feed-in tariffs into their fundamental research process. In some large investment houses, the responsibility for carbon price scenario analysis has moved from the SRI team to specialist quant investment modelling teams who are building these projections into models for sectors such as those linked to natural resources for example timberland and agriculture. Sensitivity analysis is used to assess the ability to take on extra costs or abate emissions at different

points for costs of carbon. However, it was also stressed that carbon pricing is only considered relevant if/when the carbon price becomes high enough to have a material impact on operating costs of investee companies.

Box 4 Robeco

Integration of climate change issues into investment processes

Robeco integrates sustainability into investment processes to ensure that all investment risks and opportunities attached to investee companies are addressed.

Following the acquisition of SAM in 2007, Robeco utilises SAM's sustainability expertise throughout its full range of investment strategies through the inclusion of SAM's sustainability scores into the investment analysis process. Climate change and environmental issues are components of a broader corporate sustainability assessment. Based on the information provided by companies during the annual SAM Corporate Sustainability Assessment, SAM quantifies each company's sustain

ability performance, which is expressed in the form of a sustainability score for each company. The following three elements underpin the sustainability scores:

- 1. Economic criteria, such as governance**
- 2. Environmental criteria, such as eco-efficiency**
- 3. Social criteria, such as human capital management**

Climate change analysis tends to be industry specific and focuses on a variety of issues. For example, it might highlight carbon risk for the utilities and energy sectors, or the sustainable use of water and natural resources for the food and beverage sectors.

SAM provides Robeco analysts and portfolio managers with its sustainability scores and Robeco analysts receive written corporate sustainability profiles for each company, explaining the background and reasoning behind the company's respective sustainability score. These company profiles are then discussed between the Robeco investment team and the responsible SAM analyst.

A small but growing number of investors are also considering climate change risks and opportunities at the strategic level and have developed a specific, detailed analytical process to identify deal-specific opportunities across asset classes.

Barriers to further integration, with the exception of the lack of transparency, longevity and consistency of climate change policy, and the absence of a globally accepted price on carbon, vary depending on asset class and region. For example, data availability and transparency was mentioned particularly in relation to emerging markets assets. Lack of knowledge and resources is also frequently quoted by asset owners. However, the question of materiality remains a key issue, which is closely linked to a wider industry problem of "short-termism" and policy. It was suggested that asset owners have a critical role to play in signalling to their managers that they are long-term investors and consider climate-related risks and opportunities material to their strategic long-term investment decisions.

Box 5 Nordea Asset Management

Integrating climate change across equity and corporate bond portfolios

Nordea views climate change as one of the material issues having potentially negative and positive impact on its investments. Nordea makes efforts to integrate ESG factors – which includes specific climate change issues – across its equity and corporate bond portfolios. The level of integration is determined on the basis of risk/reward of the key ESG issues relevant for each stock. This approach is currently being further developed and will result in an “ESG stock strategy”, where the portfolio manager will determine each stock’s exposure to ESG issues. This will include climate change issues when considered to be financially material.

As part of this process, certain business sectors are allocated a “climate weight” given the overall climate impact. For example, banks in terms of their financing strategy, as well as other climate sensitive sectors such as transport, energy, mining and agriculture companies.

Nordea periodically undertakes climate foot-printing of its portfolios using data produced via the Carbon Disclosure Project (CDP). This is carried out as an indicator of the carbon sensitivity of its investments.

Box 6 Ethos Foundation

Mainstream integration across all asset classes

Ethos considers climate change as part of its overall assessment of ESG risks and opportunities in its investment analyses across all asset classes. With respect to listed equities and corporate bonds, Ethos conducts ESG analyses that incorporate climate change issues whilst investment managers conduct the financial analysis. Financial managers are given a sustainable investment universe screened against ESG criteria of which the investee companies are selected. Ethos mandates a specialised sustainability rating agency to provide different ESG data and ratings used in the multi-step investment process. In particular, the process includes an environmental impact rating using a quantitative model that estimates, through life-cycle analysis and input/output matrix, the greenhouse gas intensity of companies over the entire value chain including direct (production) and indirect emissions (supply chain and product use). Ethos systematically assesses the carbon footprint of its portfolios by using this methodology which allows for the calculation of CO₂ emissions per unit of investment.

As for sovereign bonds, the Ecological Footprint, defined by the Global Footprint Network and which includes the Carbon Footprint, is one of three ESG indicators used to evaluate investments.

Finally, Ethos’ investment in private equity, via its private equity fund of funds, also integrates climate change risks and opportunities in the investment process. The investment analysis defines the environmental contribution, including the Carbon Footprint, of the goods or services offered by the investee companies. The first step of the analysis aims to understand the main contribution of the product to an ecologically sustainable development (i.e. the contribution from the phase of its life-cycle where most impact takes place). This understanding must then be validated with an assessment of the impacts resulting from the other phases – supply chain, production, use phase, elimination – according to the phase retained as the most important one. The analysis is then complemented by an ESG appreciation of the companies. Ethos also engages with General Partners on climate change-related risks and opportunities of investee companies.

7 Thematic investment opportunities

Climate-related thematic investment products are designed to benefit from the transition to a low carbon economy, particularly in the area of new technologies such as renewable energy, energy efficiency and water. They span a number of asset classes, including public equity, private equity, real estate and infrastructure. This section explores the drivers and challenges related to climate-related thematic investment opportunities and the extent to which asset managers and asset owners allocate funds to these investments.

Asset classes

Thematic investment products are relatively new on the market but assets in these funds have grown rapidly over the last few years. Currently, 57% of asset managers and 50% of asset owners invest in funds with a climate change theme, with a further 15% of asset managers and 45% of asset owners considering an allocation to thematic investments over the next few years. A key driver for thematic investments is the potential for favourable returns coupled with a positive environmental benefit, such as lower fossil fuel energy usage and therefore reduced carbon emissions. Furthermore, government policy globally, in relation to climate change, is expected to increase the investment appetite for low-carbon technologies and other climate change themed funds.

Climate change themed investments are most common within European investment portfolios (78% of asset managers and 70% of asset owners). According to Australian/New Zealand asset owners, 69% are considering an allocation to their investment portfolio within the next three years.

Private equity, listed equity and infrastructure are the asset classes most heavily invested in by investors looking for a thematic product. As investors begin to recognise the opportunities offered by clean technology, private equity is a starting point for many investors as these funds are best positioned to profit from the value created within clean tech companies, before they become available to public investors. However, some investors favour listed equity exposure due to easier accessibility, transparency, greater liquidity and often reduced technology or project related risks as compared to the more illiquid options such as private equity.

It is important to note the distinction between thematic funds that focus on addressing concerns over the impacts of climate change and approaches to mitigate those, and “mainstream funds” that do not focus on climate change specifically, but may make clean-tech related investments where opportunities with potential favourable returns arise. Most respondents to the survey believe that climate-related thematic investments are a credible option in responding to the climate change challenge, but recognise that these investments alone are not sufficient. The availability of “integrated” products with a less “niche” investment approach, but that actively seek to invest in climate change-related opportunities with favourable returns, is equally important to allow investors to diversify their portfolios. As noted earlier in this report, one investor highlighted that there are now an increasing number of low-carbon investment opportunities available in the private equity and infrastructure space and it is therefore easier to find mainstream funds with a “cleantech flavour”.

Total allocation to thematic investments is still relatively small, representing on average, a mere 0.3% of the respondents’ assets under management (or approximately \$63bn of almost \$12trillion managed by respondents to this survey).

A key barrier to further thematic investments is the instability of policy and lack of transparency. A couple of investors highlighted that due to the uncertain future policy environment,

they seek to invest in high-quality, robust assets that could benefit from a low-carbon policy framework. In the instances where policy changes materialise this is viewed as a potential upside but is not in itself a prerequisite for the decision to invest.

In summary, the consistency and clarity around climate change legislation and regulation will be an important determinant for the future growth and confidence in climate related thematic investment. However, other drivers such as population growth and the increasing demand for energy, rising fossil fuel prices, concerns over energy security and supply and the threat of physical impacts of climate change will continue to make this sector of increasing interest to investors.

Box 7 California Public Employees Retirement System

Establishment of climate change fund

California Public Employees Retirement System (CalPERS) invested \$500 million into a new strategy that invests in global public companies that are actively working to improve the environment and mitigate the adverse impact of climate change. The strategy is internally managed and is modelled on HSBC's Global Climate Change Benchmark Index (the 'index'). In order to be included in the portfolio, companies must derive a material portion of their revenues from the following:

- low-carbon energy production including wind, solar, biofuels and other alternative energy;
- water, waste and pollution control;
- energy efficiency and management including building insulation, fuel cells and energy storage; and
- financial products which may include carbon trading and other capital deployment efforts.

For selection within the index, a company's annual reported revenues from climate-related activities must be greater than 10% of overall revenues. Once a stock enters the index, it will remain a member as long as it continues to satisfy all the necessary conditions. A stock's weight is modulated by revenues associated with climate change related businesses. The HSBC customized exposure factor is reviewed on an annual basis and is unconstrained in terms of country and sector weights. The index is reviewed on a quarterly basis.

CalPERS receives index data from HSBC daily which is used to ensure uniformity between the CalPERS strategy and the index.

8 Real estate and climate risk

Real estate is one of the asset classes where investors believe that climate change issues have the greatest potential impact on investment risk and returns. This section aims to assess how asset managers and asset owners with real estate investments integrate climate change considerations into their investment analysis or due diligence process.

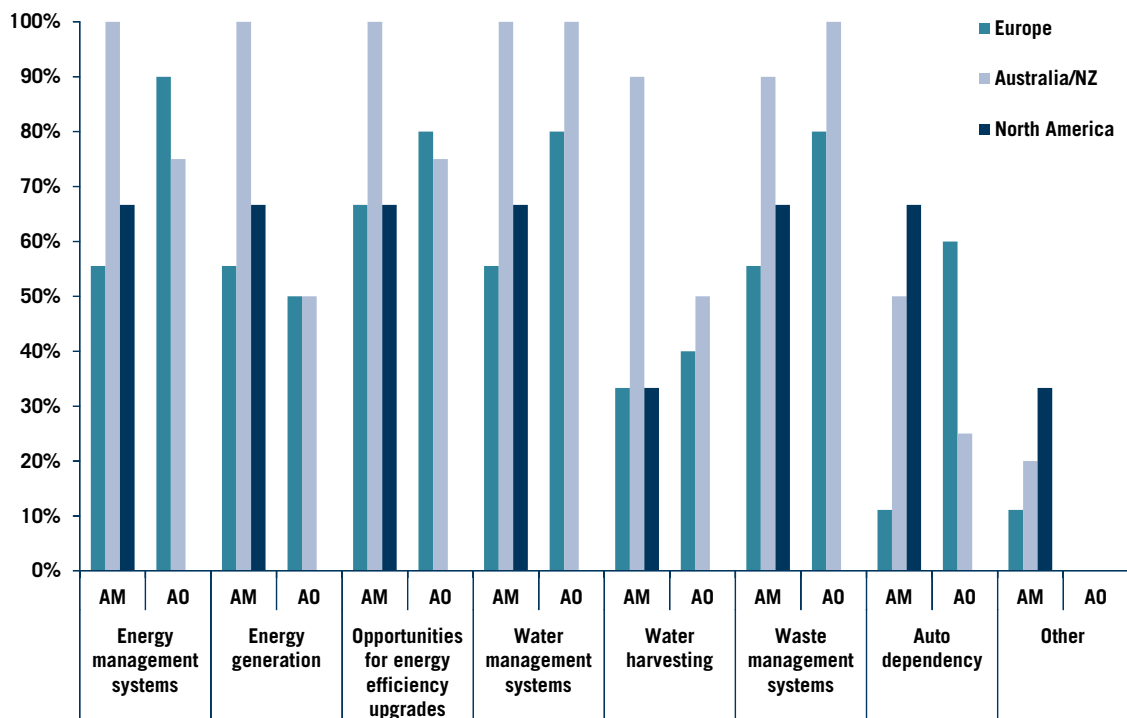
Climate change drivers

Real estate managers perceive that their portfolios are primarily exposed to climate change through extreme weather conditions, regulatory and policy initiatives, tenant demand for “green” buildings and cost reductions. Risks from extreme weather conditions have moved up the agenda for Australian investors following the recent drought and severe flooding events in North East Australia.

Consideration of climate change in the due diligence process

The consideration of climate change factors in due diligence processes for buying and continuing to hold real estate assets is most prevalent in Australia/New Zealand and Europe.

Figure 12 Considering climate change in due diligence



Typically the due diligence of real estate investments covers a variety of climate change factors due to the substantial longer term risks to these investments. A range of issues are considered, such as energy, water and waste management systems, water harvesting, and auto dependency (i.e. transport links and access).

On-site climate change activities

Investors are involved in a large range of climate change-related on-site activities which are primarily focused on energy efficiency, waste management and water management.

Figure 13 On-site environmental activities

Climate change issue	Europe		Australia/NZ		North America	
	AM	AO	AM	AO	AM	AO
Energy efficiency	56%	60%	70%	50%	67%	0%
Use of renewable energy	56%	10%	30%	25%	67%	0%
Energy generation	22%	30%	60%	50%	33%	0%
Climate change impacts in the supply chain	0%	20%	10%	25%	0%	0%
Water management	44%	30%	60%	50%	67%	0%
Water harvesting	33%	20%	50%	25%	0%	0%
Waste management	56%	40%	60%	50%	67%	0%
Flood prevention	11%	10%	30%	25%	0%	0%
Green travel plan	22%	20%	30%	0%	33%	0%

North American investors are less likely to be involved in on-site building improvements, retrofits, or other energy or climate change-related activities compared to Australian/New Zealand and European investors. This may partly be explained by the fact that Western Europe, New Zealand and Australia have achieved greater breadth and effectiveness of federal and local building energy efficiency legislation compared to the US⁶, which facilitates the understanding of the investment implications in these regions. However, any major conclusions should be drawn with caution as there were only a small number of North American respondents to the survey.

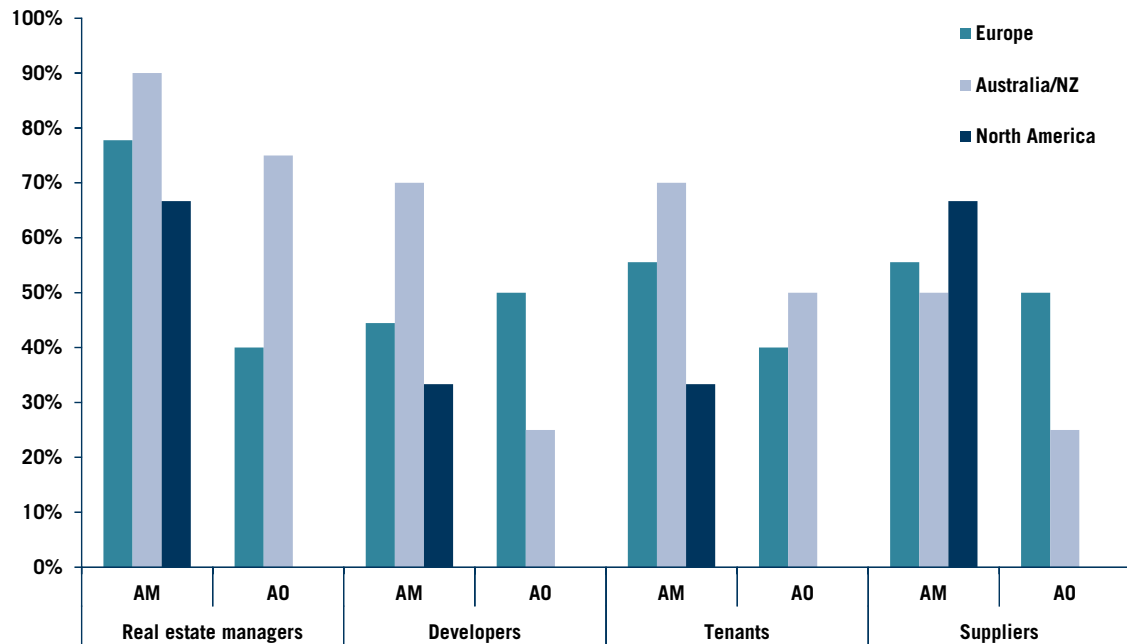
Engaging with stakeholders

Asset managers engage more actively with stakeholders across all the groups highlighted in the chart overleaf, in comparison to the internal managers of asset owners. Real estate managers remain the primary focus of investors in relation to engagement activities (72% asset managers and 39% asset owners).

Interestingly, Australian/New Zealand-based investors engage more actively with all stakeholders compared to their European and North American counterparts. Interviews with global investors revealed that Australian investors consider the physical risks from climate change “to a large extent”, partly driven by their recent experiences of extreme weather events. They also perceive that there is a relatively stringent domestic regulatory environment which has had the effect of improving environmental and sustainability standards of construction, build and fitting. To address these risks, Australian investors are engaging with real estate managers, developers and tenants to reduce energy and water use, ensure efficient water and energy technologies and identify physical climate risks at potential new locations for development.

⁶ Please see RREEF Research (2008) Globalization and Global Trends in Green Real Estate Investment for further information. Examples of initiatives include the EU Energy Performance Building Directive and Minimum Energy Performance Standard (MEPS) requirements in Australia.

Figure 14 Engaging with stakeholders



Box 8 APG Asset Management

Assessing existing real estate managers

APG has made efforts to understand and improve the environmental performance of its real estate portfolio. This is primarily driven by an acknowledgement that improved climate change, and more widely, environmental performance in the real estate sector can lead to higher financial returns. As a first step, APG screened its existing real estate investments based on climate change/environmental performance (for example on criteria such as total energy consumption, total water consumption and total CO2 emissions). It has undertaken to carry this out on an annual basis, using an investor-led initiative, the Global Real Estate Sustainability Benchmark (“GRESB”) carried out by Maastricht University with the founding members being APG, PGGM and USS.

As part of this survey, all new APG real estate investments (listed and non-listed) must complete a survey, which forms the basis of the sustainability benchmark. The results of the GRESB are utilised by APG to determine areas for improvement for each of its real estate managers, and it is the intentional that these conditions will be written into contracts.

Unfortunately, APG found that less than 20% of the 200 respondents to the first GRESB survey actually measure their energy consumption. This was disappointing as they believe that simply monitoring consumption often leads to savings of 10 to 20% of energy use. It also highlights the potential improvements in real estate portfolios that can still be made.

APG also examines the climate change performance of prospective new real estate investments, and this is considered alongside financial performance in the decision-making process of APG’s investment committee.

Box 9 Eureka Funds Management

Real estate

Eureka Funds Management (EFM) and National Australia Bank (NAB) have established a Fund which will allow asset owners to invest in environmental upgrades of commercial property via tripartite Environmental Upgrade Agreements (EUAs). The Federal Government's Low Carbon Australia (LoCAL) (formerly the Australian Carbon Trust) is an investor in the Fund and will co-brand and assist in marketing.

Commercial property owners will be able to access competitive long term finance to undertake energy efficiency and sustainability retrofits, with borrowed funds repaid via a priority ranking charge levied by Council through the Council property rates process. This fund and related legislation overcomes many of the market failures that the commercial property sector faces when investing in sustainability improvements for existing commercial buildings (split incentives; small scale of investments; building owner capital constraints; information gaps).

It is estimated that the value of energy efficiency works required across all commercial property (including office, retail, hotels and industrial) in New South Wales and Victoria will be circa AUD\$10Bn.

The Fund is to be initially capitalised with capital from LoCAL and NAB and forecast origination is to grow the Fund nationally to \$250m in the first instance. Third party institutional capital will be sought to invest alongside NAB and LoCAL.

Box 10 DEXUS Property Group

Engagement with stakeholders

DEXUS Property Group engages with its stakeholders, tenants and suppliers on issues related to the improvement of its climate change-related performance. Engagement is undertaken through various methods including annual tenant surveys, regular meetings, an online Tenant Service Request (TSR) system and informal discussions. The feedback that they receive from these engagement activities is a key factor in determining its overall property investment strategy.

DEXUS believes it is important to engage with its tenants to improve their understanding of how DEXUS can enhance energy efficiency and GHG reduction efforts. This approach has resulted in the signing of "green leases" which formalise mutual obligations with respect to environmental conditions. A requirement of green leases is the establishment of "Green Building Committees" with representation by tenants.

DEXUS also strives to positively influence suppliers to support its climate change-related initiatives. For example, this year DEXUS partnered with water providers at two of their properties to understand water usage and metering requirements as well as how to reduce overall water consumption. Suppliers' resource efficiency credentials are assessed during tender evaluation and climate change-related key performance indicators (KPI's) are included in contracts.

9 Climate considerations and private equity

This section aims to assess how General Partner (GPs) and Limited Partners (LPs) with private equity investments integrate climate change considerations into their investment analysis or due diligence process.

Climate change drivers

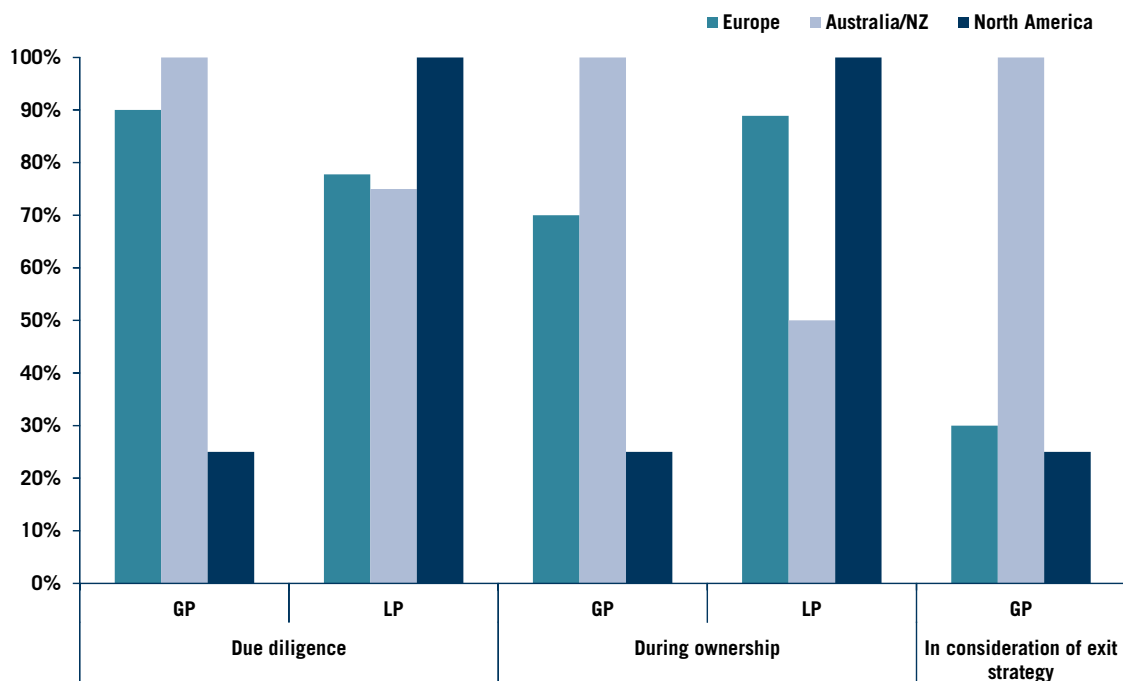
Private equity investments are generally illiquid and held for a minimum of 3-5 years, which make them particularly sensitive to unexpected climate related policy changes and technological advancements. There are important opportunities associated with a transformation to a low carbon economy where the private equity market will play a key role in terms of the financing and commercialising of such technologies and infrastructure. Some of the drivers influencing the uptake of sustainable private equity investments include supportive government policies, breakthroughs with new technological developments, and high and sustained rises in the cost of traditional sources of energy that impact on the breakeven for investment in alternative energies and technologies.

Climate risk assessment

GPs are now realising the potential risks and opportunities in the private equity space and assess the impact of potential climate change policy on existing and new investments more frequently than LPs. However, GPs based in North America do not consider climate change impacts on private equity investments to the extent that GPs in other regions do.

Three quarters of GPs and half of LPs assess the impact of climate change during due diligence processes and ownership activities. However, with a few exceptions, only Australian GPs consider climate change related issues when determining their exit strategy.

Figure 15 Considering climate change in private equity investments



Monitoring and reporting

Despite investors of private equity actively assessing climate change impacts and climate change policy, there is very little monitoring of such issues at a portfolio level. Half of GPs monitor climate-related issues at portfolio level. Methods adopted by investors in monitoring climate-related issues include annual surveys of investee companies, reviews of company reports, and the inclusion of disclosure requirements in investment policies.

During 2010, only 38% of GPs reported on how climate change-related investment risks and opportunities are addressed within private equity portfolios. A large, global GP stated that the reporting disclosed to LPs highlighted the opportunities within this space and directly led to the establishment of a climate change themed private equity fund of funds.

In future years, there is an opportunity to examine LPs' requirements of GPs in relation to reporting on climate change risk monitoring activities.

10 Conclusion

National and regional climate and energy policy is a key driver for the integration of climate change considerations into investment practices, and largely explains the differing degrees of focus on climate by investors in Europe, Australia/New Zealand and North America.

European investors have made the most progress in addressing climate issues, driven by action at the EU level on carbon pricing and the setting of targets for renewable energy usage and emissions reductions. Policy interventions in the region have provided a price on carbon and with some exceptions, a reasonable level of certainty around the prospects and trajectory for low-carbon technologies, which has facilitated quantifying and integrating climate change considerations into investment analysis for European investors.

Australian investors have recently turned their attention to climate change and are in many areas catching up with their European counterparts, in particular in real estate investments. However delays on the policy side, especially a delay in the carbon trading scheme, presents a major impediment for further development across asset classes.

Finally, the US government is far behind its European counterparts in adopting climate-related regulatory policies, which appears to have slowed the integration of climate change in investment practices amongst US investors. However, it is important to view this finding with caution given the relatively small number of US respondents to the survey (which may in itself indicate less focus on climate change issues amongst US investors).

The need for collaborative engagement to encourage transparent, credible and stable policy both internationally and across the regions appears to have become stronger. Many respondents to this survey mentioned that they lack the resources, skills and knowledge to engage directly and effectively with regulators and they believe that investor networks have been much more highly effective in identifying consensus and addressing key issues.

This year's survey highlighted that most respondents view climate change issues as a material investment risk/opportunity across their organisation's entire investment portfolio that should be addressed at the strategic level. Investors also state that they use a wide range of research to support the integration of climate change in investment idea generation. An increasing number of European investors now integrate carbon pricing models and projections for feed-in tariffs into their fundamental research process. In some large investment houses, the responsibility for carbon price scenario analysis has moved from the SRI team to specialist quant investment modelling teams who are building these projections into models for sectors such as those covered by the Emissions Trading Scheme and those linked to natural resources such as timberland and agriculture. However, many investors still struggle with how to translate currently available climate change related data and research into investment analysis and decision-making.

Some of the challenges identified, including the lack of experience in interpreting and analysing data on climate change impacts, could be addressed through enhanced education, knowledge sharing and the development of tools to facilitate improvement in practices across investment teams. However, potential cultural barriers, scepticism about materiality and the problems around "short-termism" are more difficult to eliminate.

Respondents indicated that asset owners have a critical role to play in signalling to their managers that they are long-term investors and consider climate-related risks and opportunities material to their investment strategy. Asset owners are increasingly encouraging their investment managers to consider climate change factors but formal contractual requirements and assessments are still relatively uncommon. Indeed, there is evidence that improved assessment efforts by asset owners encourage progress in asset manager practices. Today, the majority of asset owners state that their external investment managers meet their expect-

tations with regards to climate change integration only “occasionally”. Thus, asset owners should be more explicit in communicating their expectations related to climate change to their asset managers.

The survey results show that investors are making progress in integrating climate change in their investments across a range of asset classes. For example, there is notable progress in collaborative engagement activities, integration of climate change in real estate investments and asset owner initiatives to encourage improved practices amongst asset managers. Some of the challenges that still exist vary depending on asset class and region. For example, data availability and transparency are an issue in emerging markets investments. Asset owners also feel that they lack of knowledge and resources to progress with climate change- related practices. Collaborative initiatives have an important role to play here, but also further commitment from senior level to allocate further resources to this area.

Despite policy limitations, investors have made headway in addressing climate change issues in their investments, but there is still scope for improvement. It is recognised that given the lack of clear signals from policy makers, investors are exposed to considerable risk and any leapfrogging developments by investors in this area in the future will be driven by policy settings.

A number of areas have been identified where further analysis is recommended in future:

- What is the role of strategic asset allocation in addressing the climate change challenge? How far have investors progressed in addressing climate change at the strategic level and what implications will this have for future investment practices?
- What is the portfolio level risk and opportunity exposure?
- There is evidence that asset owners are increasingly assessing their investment managers with regards to integration of climate change in investment practices. An area that can be explored further is how this information is used and the extent to which it has an impact on asset owners’ manager selection processes.
- The survey did not question whether asset owners specifically articulate in detail their expectations in relation to climate change. It will be of interest to explore this area in future years.

A number of areas for improvement of investor practice on integrating of climate change in investment processes were also identified, including:

- Better depth and breadth of research on climate change impacts across all sectors and asset classes by asset owners and asset managers;
- Extended awareness and training across investment teams regarding the potential risks and opportunities arising from climate change;
- A clearer direction from asset owners for their asset managers and consultants to make climate-related risks and opportunities an integral part of their investment strategies and practices across all asset classes;
- Further development of tools such as gap analysis or competency benchmarking for asset owners to assess external investment managers on climate change integration;
- Extended analysis of climate change issues for investments in hedge funds, government bonds and commodities;
- Improved transparency and reporting around climate change activities in private equity investments;
- Greater level of consideration of climate change risks and opportunities at the strategic level, including specific, detailed analytical process to identify deal-specific opportunities across asset classes.

Improving the operation of the survey in future

In addition to these areas for further analysis in future, the investor groups will undertake a review of the operational and governance arrangements of this survey. This will help to ensure that the information gathering and reporting process is improved for the benefit of participating investors and their beneficial members.

Appendix: list of respondents

Asset Owners	Asset Managers
APG Asset Management	AMP Capital Investors
ARIA	AMUNDI
ATP	Arkx Investment Management
Australian Government Employees Superannuation	Australian Ethical Investment Limited
AustralianSuper	Aviva Investors
BBC Pension Trust Ltd	BlackRock
Bedfordshire Pension Fund	BNP Paribas Investment Partners
BT Pension Scheme	BT Investment Management
CalPERS	Calvert Investments
Catholic Super	Celeste Funds Management Limited
Cbus Superannuation Fund	Cleantech Ventures
Central Finance Board of the Methodist Church	Colonial First State Global Asset Management
Christian Super	Deutsche Bank AG
Church Commissioners for England	DEXUS Property Group
Church of England Pensions Board	Earth Capital Partners LLP
Church of Sweden	Eureka Funds Management
Environment Agency Pension Fund Ltd	F and C Management
Ethos Foundation	Five Oceans Asset Management
First Swedish National Pension Fund	Franklin Templeton Investments Australia Limited
Fourth Swedish National Pension Fund	Generation Investment Management
General Board of Pension and Health Benefits of The United Methodist Church	GPT Group
Greater Manchester Pension Fund	Henderson Global Investors
HESTA Super Fund	Hermes Fund Managers Ltd
HOSTPLUS	Hunter Hall Investment Managers
Joseph Rowntree Charitable Trust	Impax Asset Management
Local Government Super	Kleinwort Benson Investors
London Pensions Fund Authority	Mirvac
Mercy Investment Services	New Forests
Merseyside Pension Fund	Nordea Investment Funds
New Zealand Superannuation Fund	Osmosis Investment Management Ltd
Non-Government Schools Super Fund	Pax World Management LLC
North Carolina Retirement System	Perpetual Investments
PGGM Investments	Prudential Investment Management
PKA	PRUPIM
Railpen Investments	Robeco
SAS Trustee Corporation	Scottish Widows Investment Partnership
Second Swedish National Pension Fund	Solaris Investment Management Limited
State Super	State Street Global Advisors
Statewide Super	Stockland
The Nathan Cummings Foundation	The Cooperative Asset Management
The William Leech Foundation Limited	The Northern Trust Company
UniSuper Management	Trillium Asset Management Corporation
USS	VantagePoint Venture Partners
Vision Super	VFMC
	Walden Asset Management
	Winslow Management



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