

THROUGH THE LOOKING GLASS:

HOW INVESTORS ARE APPLYING THE RESULTS OF THE CLIMATE CHANGE SCENARIOS STUDY

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CONTENTS

1. Introduction	1
2. The climate change project– a refresher	3
– Purpose of the project	3
– Methodology.....	3
– Post-Durban scenario assumption updates	6
– Summary of project findings.....	7
3. Update on partner activities – survey findings	8
– Participation at partner institutions – who was involved?	8
– Sharing the results and training.....	9
– Changes to strategic oversight.....	11
– Case study: Första AP-fonden (AP1)	12
– Case study: Environment Agency Active Pension Fund	13
– Changes to investments.....	13
– Case study: AustralianSuper.....	15
– Changes to engagement strategy.....	16
4. Reflections and next steps	17
– Did this project make a difference?	17
– Ensuring “climate change” is adequately resourced	18
– Enhancing the SAA process.....	18
– Overcoming the barriers to investing in climate-themed assets	18
– Moving the industry forward	20
– In closing.....	20

1

Introduction

Mercer's report: *Climate Change Scenarios – Implications for Strategic Asset Allocation* published in February 2011, broke new ground in examining the investment implications of climate change at the total portfolio level. The report was the culmination of a year-long, Mercer-led project involving 14 asset owner partners, two industry sponsors, one climate change research partner, nine research group industry experts and 27 individuals from Mercer.¹

As at December 1, 2011, the *Climate Change Scenarios* report has been downloaded over 5,500 times and has received extensive attention from partners, the press, and professionals across the investment industry.

In the months following its release, Mercer held discussions with the investor partners² involved in commissioning the research. The objectives of these discussions were to gain feedback on the partners' experience with the collaboration, and gain insight regarding any action that has, will or may take place as a result of the study's findings and recommendations. This report shares those findings.

¹ Project partners included: All Pensions Group (APG), Netherlands; Första AP-fonden (AP1), Sweden; AustralianSuper fund, Australia; British Columbia Investment Management Corporation (bcIMC), Canada; British Telecom Pension Scheme (BTPS), United Kingdom; California Public Employees' Retirement System (CalPERS), USA; California State Teachers' Retirement System (CalSTRS), USA; Environment Agency Pension Scheme, United Kingdom; Government of Singapore Investment Corporation (GIC), Singapore; Maryland State Retirement Agency, USA; Norwegian Government Pension Fund, Norway; Ontario Municipal Employees Retirement System (OMERS), Canada; VicSuper Pty Ltd., Australia; PGGM Investments, Netherlands

² Please note that the survey findings discussed throughout this report reflect the responses of 12 of 14 partners.

The key actions being undertaken by project partners as a result of the Climate Change Scenarios study are shown in Figure 1.

Figure 1: Key “post-project” partner actions

Internal education and training	Changes to strategic oversight
<p>Nearly all partners have updated, or are currently updating, their Boards and/or investment committees on the findings of the study.</p> <p>Almost 20% of partners have already communicated the study findings to members/beneficiaries. Another 65% of partners are either in the process (or planning) to do so.</p>	<p>Half the partners have decided to include climate change considerations in future risk management and/or SAA processes.</p> <p>40% of partners have not decided whether they will change their allocations or processes.</p> <p>One partner has no plans to change its asset allocation as a result of the project findings.</p>
Investments	Engagement
<p>A third of partners have decided to allocate more to “climate sensitive assets”, with another half indicating they may do so in future.</p> <p>More than half of partners have already conducted, are in the process of, or are planning to review the “climate credentials” of holdings within climate sensitive asset classes vis-à-vis the report findings.</p>	<p>The majority of partners engage with companies and policy makers, and have done so for several years.</p> <p>About 80% of partners have increased, or will increase, their engagement on climate change with these two groups in light of the findings of the study.</p> <p>Several partners report they are working to integrate asset class and region-specific findings into their engagement activities.</p>

The following section briefly reviews the *Climate Change Scenarios* study and its major findings.

Section 3 summarizes follow up discussions with the project partners and presents aggregated data on the discussion highlights including: how partners are using the results of the study, who was involved in the project, and the general feedback on the project process and outcomes.

The final section presents practical steps the industry can take to continue the momentum towards a fuller assessment of climate change related risks and opportunities in strategic asset allocation (SAA), risk management and institutional investment.

2

The climate change project – a refresher

This section provides a short summary of the project's key findings and recommendations, as well as a review of the background, methodology and approach to the study. For access to the full report, visit www.mercer.com/climatechange.

Purpose of the project

Until recently, little consideration has been given to understanding what climate change means for long-term investment risks and opportunities in the context of strategic asset allocation decision-making.

In 2010, Mercer led a collaborative project involving significant industry and investor participation in order to offer unprecedented answers to a set of driving questions:

- What risks does climate change present to investors?
- How can these risks be measured and quantified in the context of strategic asset allocation?
- What actions can institutional investors take to manage these risks?
- What are the messages for climate change policy makers?

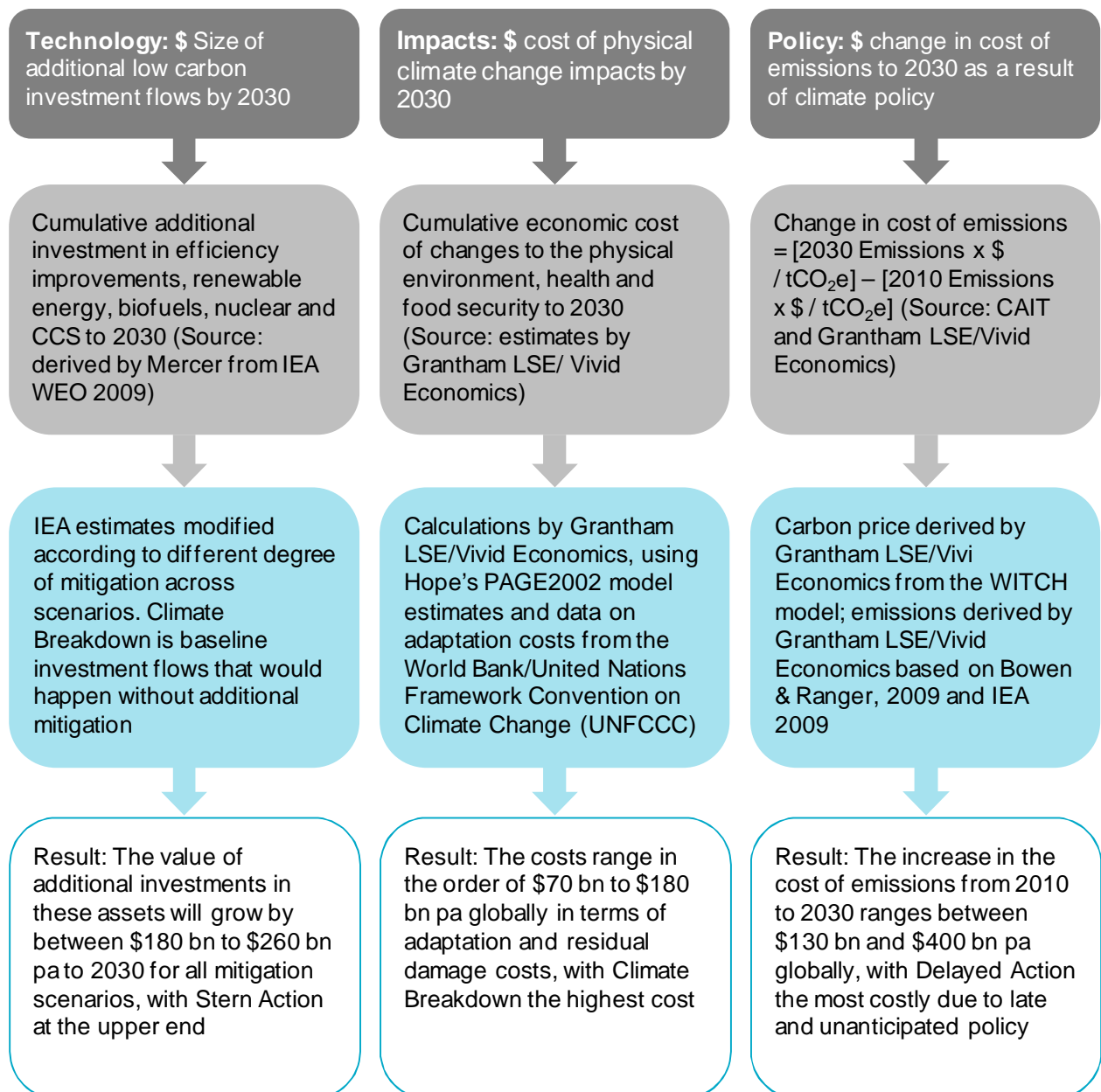
Methodology

Mercer developed the TIP™ framework (Figure 2) to represent the investment impacts of climate change. This framework has allowed for the examination of three key factors related to climate change that may affect asset class returns:

- Technology (T): Investments in carbon efficient technologies could accumulate to \$3-5 trillion by 2030
- Impacts (I): Costs of physical damage could accumulate to \$4 trillion by 2030
- Policy (P): Costs of delayed, uncoordinated policy could accumulate to \$8 trillion by 2030.

The figure below provides more detail on the TIP™ framework including sources of data, and the logic used to develop our assumptions.

Figure 2: Key climate change risks – TIP™ frame work formulation



Source: Mercer. The factors have been discounted to the net present value using a 3% discount rate. This was chosen based on a composite of global 10-year bond yields as at October 2010.

Figure 2 introduces the effect each TIP factor can have in terms of economic costs. These costs will vary based on how the political and natural world reacts to climate change. Therefore, hypothetical climate change scenarios were developed as part of the project to provide a framework for understanding how asset classes may respond to the TIP factors under different conditions. In considering how climate change might have an impact on a portfolio's asset mix from now until 2030, four scenarios were developed. The key features and outcomes of these four scenarios are summarised below in Figure 3.

Note the scenarios do not represent a forecast for the future and they should not be interpreted in a probabilistic way; rather, they provide a framework for considering the key climate change drivers from an investment perspective over the coming decades.

Figure 3: Impact of scenarios on source of investment risks

Scenario	Fundamental factors	Market factors	Climate change factors		
	<i>Economic cycle Inflation</i>	<i>ERP Volatility</i>	<i>Technology</i>	<i>Impact</i>	<i>Policy</i>
Regional Divergence	Unchanged	Higher volatility	High dispersion of capital inflow into low carbon investments; leading countries include the EU and China	Higher risk of future impact costs due to slower reduction in emissions	Higher uncertainty and potentially higher reward for some assets due to regional disparity in climate policy
Delayed Action	Higher inflation Higher interest rates	Higher volatility Lower realised ERP	Business as usual (BAU) investment in low carbon until 2020 when policy measures stimulate flows	Higher risk of future impact costs due to delay in policy response	Higher uncertainty around policy until 2020, then dramatic U-turn reduces policy uncertainty
Stern Action	Unchanged	Lower volatility Higher realised ERP	Clarity on climate policy stimulates strong capital flows into low carbon solutions	Lower risk of future impact costs due to reduction in emissions	Policy clarity at the global level reduces investment uncertainty
Climate Breakdown	Unchanged	Unchanged; risk of higher volatility	Higher risk attached to low-carbon technology investments due to policy inaction	Higher impact risks due to lack of policy action, rising future costs and market pricing in future policy shift	BAU climate policy (unchanged from today's measures)

Source: Mercer

By examining the scenarios and TIP™ risk factors together, their mutual influence can be recognised. For example:

- Technology investment (T) is assumed to reach its upper range of \$3-5 trillion in the Stern Action scenario where policy is established early and is coordinated.
- Costs from physical impacts are likely to reach the upper limit of \$4 trillion in the Climate Breakdown scenario where policy and technology investments are essentially non-existent.
- The Delayed Action scenario is where policy (P) is uncoordinated and delayed and therefore most costly at up to \$8 trillion to 2030.

Post-Durban scenario assumption updates

The key outcome from the 17th Conference of the Parties (COP17) to the United Nations Framework Convention on Climate Change (UNFCCC) hosted in Durban, South Africa, was the Durban Platform for Enhanced Action. This extends the Kyoto Protocol into a second commitment period with the objective of delivering a “new” protocol or an “agreed outcome with legal force” by 2015 to be enacted by 2020.

This outcome arguably points to a slight bias from a Regional Divergence scenario towards a Delayed Action scenario. These scenarios, developed as part of the asset allocation and climate change work, provide a framework for investors in understanding climate change risk drivers but should not be interpreted in a probabilistic way. While some regions (EU and China/East Asia and an alliance of smaller states) continue to demonstrate strong leadership in responding to the need to reduce emissions, the Durban Platform and timetable indicate that internationally coordinated action remains some ways off. However, the exact nature of what the new protocol would develop in terms of legal instruments or agreed outcomes is yet to be decided and provides for material policy related risks.

On the upside, the agreement on the structure of the Green Climate Fund points to potential investment opportunities in low carbon technologies and services though the facility has yet to be funded.

Ultimately, to properly assess climate change risk, investors must make their own assessment on likely scenarios to inform how they should be positioned. Section 3 of this paper provides examples of partners that are taking steps in this direction and Section 4 provides potential next steps for investors.

Summary of project findings

The TIP factors, scenarios, and asset class modelling illuminated several important considerations, as summarized below:

- Climate change, particularly uncertainty around climate policies, can account for a significant proportion of total fund risk. This can have a significant impact on portfolio performance over time.
- Traditional models for strategic asset allocation cannot adequately capture the effects of climate change. There is no source of historical data and traditional factor risks are not sufficient to measure the associated uncertainties.
- By embedding a scenario analysis process and monitoring key climate change developments over time, investors can develop an “early warning” system to help form and track a view of future climate related outcomes (such as emissions levels and carbon price) that will influence the volatility and returns of asset classes.
- Allocation to “climate-sensitive” assets can improve the resilience of a portfolio mix. The report found that sustainable-themed equities, efficiency/renewables in listed and unlisted assets, timberland and agricultural land perform comparatively well across the mitigation scenarios compared to core assets (except in the case of the Climate Breakdown scenario).
- Investors should “kick the tires” of existing investments across asset classes to assess the sensitivity of each asset-class to climate change risk factors and their “climate resiliency”.
- Institutional investors should engage with companies on climate risk management issues. Where relevant, investors should engage with active fund managers to ensure the portfolio is positioned for the uncertainties that climate change presents, including ongoing assessment of climate policy developments. Finally, investors should engage with policymakers on targeting specific policy measures at the local and global levels in light of the notable contribution of policy uncertainty to portfolio risk over the coming 20 years.

The next section discusses how investment partners in the project (who received a report tailored to their own asset allocation) are internalizing and acting on the conclusions of the report.

3

Update on partner activities – survey findings

In the second half of 2011, Mercer held discussions with individual project partners to gain feedback on their experience of the collaboration, as well as the actions that partners had taken – or may take – as a result of the study’s findings and recommendations. The questionnaire that framed these discussions addressed:

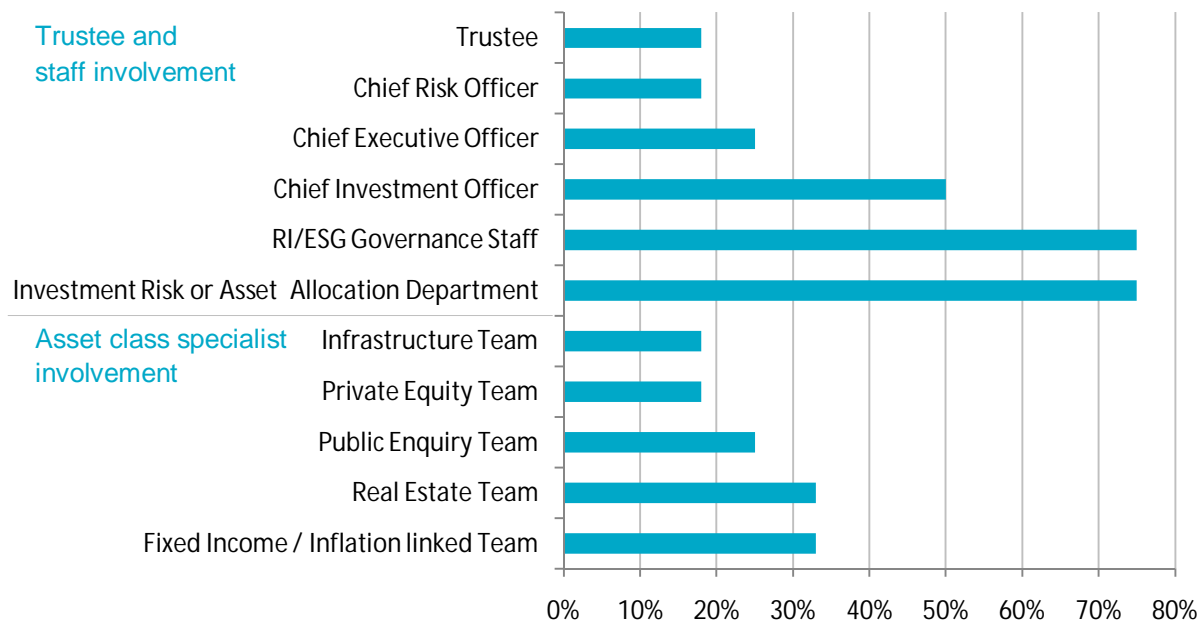
- Participation at partner institutions: roles and responsibilities among the partners
- Education and training: sharing results and exploring how to utilise the research
- Changes to strategic oversight: considering climate change in the SAA process
- Investments: new mandates and increasing climate-related portfolio analysis
- Engagement: with investments managers, companies, and policy makers

Participation at partner institutions – who was involved?

The *Climate Change Scenarios – Implications for Strategic Asset Allocation* project reflects an increasing trend of asset owners working together to address systemic issues that may affect the group’s ability to meet shared or similar long-term objectives. Regular communication between the project group members, Mercer and external experts was an integral aspect of the project throughout its major stages – from research design, to agreeing assumptions and communicating results. However, some partners noted that they would have enjoyed more discussion and interaction among the group of partners.

A unique aspect of this project was the range of individuals from each partner organization who were involved (see Figure 4). Partners reported that Investment Risk / Asset Allocation Departments (42%) and RI/ESG Governance staff (58%) typically took a lead role, and managed the collaboration that took place with other internal groups. Partners reported that frequent interactions took place with CIOs (42% of partner CIOs had some involvement), with more limited involvement of front line investment staff. Asset class teams were typically involved in the review of asset class reports, as well as in discussions around determining the assumptions related to returns and correlations – the most appropriate point for their involvement.

Figure 4: Participation at partner institutions



Sharing the results and training

At the time of being surveyed, the vast majority of partners reported having updated their Board on the findings of the study, or having near-term plans to do so (see Figure 5). In addition to communicating the results of the study internally, nearly all partners reported they have communicated – or planned to communicate – the report’s findings to their beneficiaries or the public.³

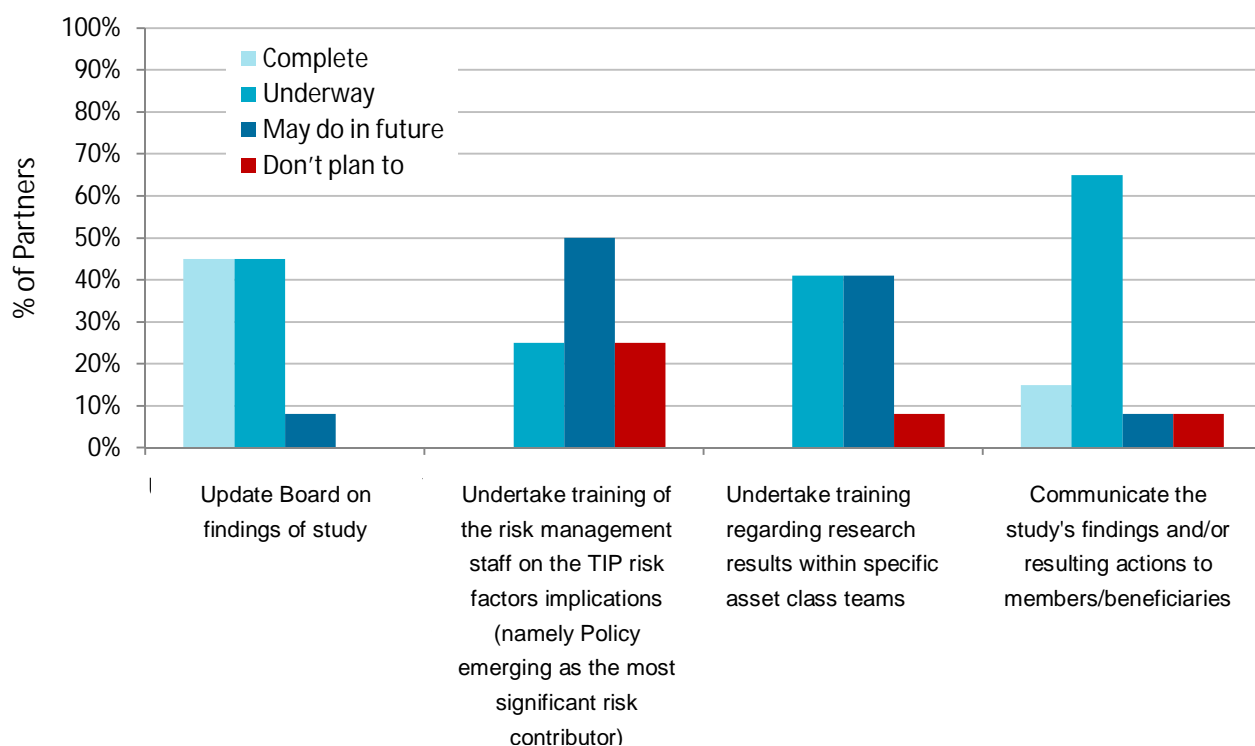
One-quarter of study participants reported the initiation of training for risk management staff on the study’s findings and the TIP™ risk factor implications for strategic planning. More than half indicated they may undertake such training in the future. Partners often highlighted the time required to discuss how the findings apply or could be integrated into an organisation’s internal processes.

Many funds indicated that, in the near-term, they were more likely to focus on undertaking training regarding the study with specific asset class teams as well as applying findings to existing and future investments in order to develop a deeper understanding of climate change risks and opportunities. Some partners would have preferred the study to provide deeper analysis at the sector level in order to make results as practicable as possible.

³ As an example, please see CalPERS ESG Opportunities Workshop held on August 15, 2011 at <http://www.calpers.ca.gov/index.jsp?bc=/investments/video-center/view-video/esg-workshop.xml>

Mercer has observed a similar trend among our broader client base; conclusions that are framed in terms of asset class impacts (and sectors) are most tangible and thus actionable. Changes to asset allocation and risk management processes often require additional strategic preparation and agreement among a broader range of staff, consultants and board members. Anecdotally, it appears those funds that are, or were, in the midst of a broader strategic asset allocation or ESG integration project were more likely to have made steps towards internal integration of the concepts covered by the project.

Figure 5: Sharing the results and training

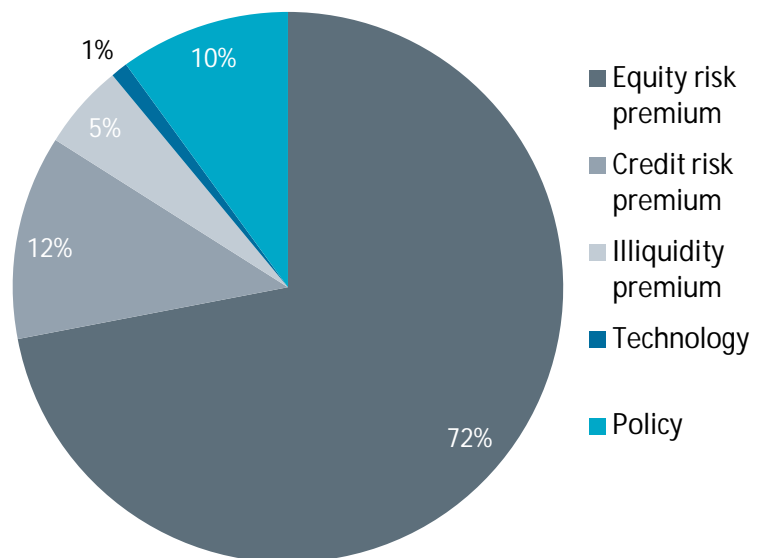


Changes to strategic oversight

Understanding the exposure of a portfolio to its underlying return drivers is a key component of strategic decision-making. One of the key findings from the report demonstrated that climate policy will be a significant contributor to portfolio risk over the next 20 years (see Figure 6).

Figure 6: Contribution to risk for representative portfolio mix in 'default' case

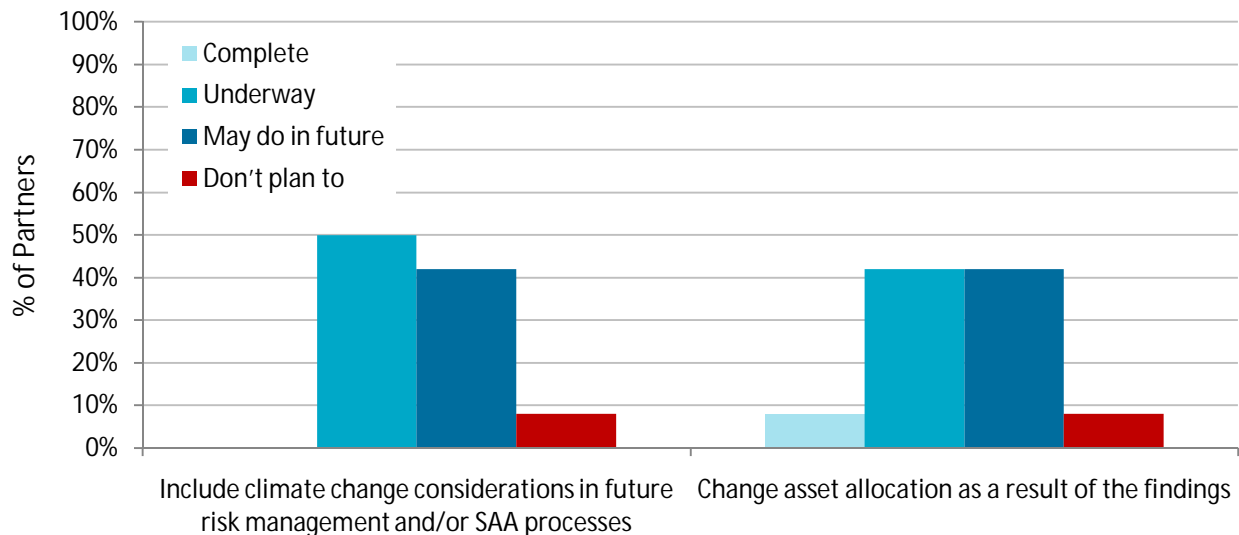
Using a representative portfolio and incorporating TIP™ factor risks alongside traditional risk factors, the study showed that climate policy (P) factor contributes 10% to portfolio risk, with technology (T) contributing just over 1% risk. The impact (I) factor was not a significant contributor to risk in the representative portfolio, given the small allocation to climate-sensitive assets and the timeframe for the analysis (to 2030). These results vary significantly based on the scenario analyzed, and each fund's allocation.



As a result of the potentially significant impact of climate change risk factors on portfolio risk, the report pointed out that embedding climate change risk into the asset allocation process can help investors adequately capture the nature of the economic transformation process and the potential sources of risk and opportunity associated with climate change. The report supports the use of scenario analysis as a tool that can potentially improve risk management and SAA processes. Thinking of strategic asset allocation in terms of diversifying across sources of risk, rather than via asset classes, and embedding qualitative factors into decision-making processes is recommended. We note that particularly following the recent financial crisis, this approach has gained significant traction among Mercer clients and the industry.

As shown in Figure 7, survey findings indicate that slightly more than half of partners have decided to include climate change considerations in future risk management and/or SAA processes. One partner has already added climate change to its internal enterprise risk management process. Slightly fewer plan to change their asset allocation.

Figure 7: Changes to strategic oversight



Första AP-fonden (AP1)

Country: Sweden
AUM: US\$ 32.5 billion



AP1 believes that climate change is an important risk factor that has implications for our portfolio, and therefore needs to be taken into consideration during the asset allocation process. The tailored findings AP1 received as part of the climate study have provided a significantly more structured and effective approach to reviewing climate change risks.

The findings in the climate report have strengthened the Fund's conviction in the necessity of increasing the share of real assets in the portfolio, for example through investments in real estate, agricultural land, timberland and infrastructure. We have already determined that we can invest more in agricultural land and timberland. It is consistent with the overall profile we are aiming for, and the findings in the report underline this conviction. We have thus been given an even stronger basis for making these investments but there are considerable other environmental, social and governance issues to be analysed prior to investing.

Our participation in the project has not only given us better insight into the potential effects of climate change on different asset classes and the long-term performance of our portfolio, it has also provided us with better tools for our strategic asset allocation analysis, which is the core of our investment model. Going forward, the analytical approach that was applied in the study will be incorporated into the strategic reviews that AP1 uses to determine its long term investment orientation.

Environment Agency Active Pension Fund

Country: United Kingdom

AUM: US\$ 2.6 billion



Environment Agency Active Pension Fund (EAPF) aims to use this project and its findings to directly feed into the fund's regular investment strategy reviews by monitoring the fund's exposure to climate change risk factors and strategic planning with regards to asset allocation.

The Environment Agency Active Pension fund is currently researching additional exposure to climate sensitive assets such as timber, sustainable infrastructure and green bonds. We are taking these steps to fulfil our fiduciary duty to manage the financial impact of climate change.

Changes to investments

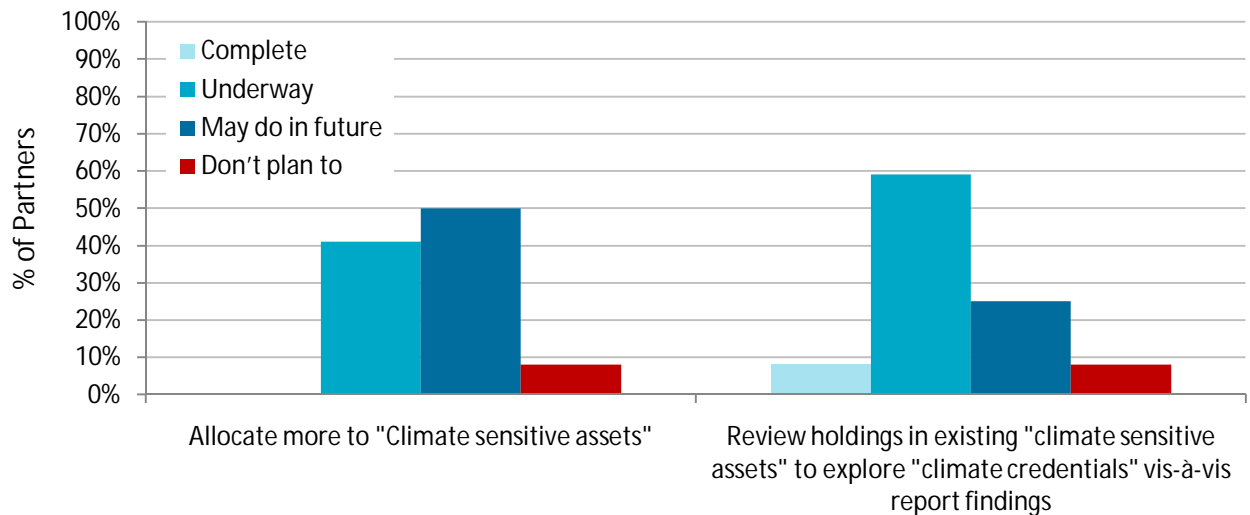
"Some of these climate-sensitive investments might be traditionally deemed as more risky on a standalone basis, but the report shows selected investments in climate -sensitive assets with an emphasis on those that can adapt to a low-carbon environment could actually reduce portfolio risk in some scenarios..."

Mercer, 2011: Climate Change Scenarios – Implications for Strategic Asset Allocation

The report found that under some scenarios, the best way to manage portfolio risk associated with climate change while retaining similar levels of overall risk and return is to increase exposure to those assets that have a higher sensitivity to climate change TIP™ factors. These are often real, unlisted, long term assets – including those that are energy/resource driven and include broad asset classes such as infrastructure, private equity, and real estate, as well as sustainability-themed listed equity and listed/unlisted efficiency/renewable, timberland, agricultural land and carbon. These assets will likely capture the greatest opportunities under the three mitigation scenarios; but these asset classes (particularly the themed assets) face the greatest risk from the Climate Breakdown scenario.

As shown in Figure 8, about 40% of partners surveyed reported plans to allocate more of their assets to "climate sensitive assets". Another 50% suggested they may do this in future. We note that a number of strategic and market factors will influence these decisions. It would be inaccurate to suggest they are a direct result of the project. However, to varying degrees across partner funds, the findings of this project have played a role in inspiring or confirming such investment decisions.

Figure 8: Changes to investments



Another key report recommendation was that – within the asset classes defined as most sensitive to climate TIP™ factors – investors should consider the extent to which individual portfolio holdings will be resilient to climate change developments.

Partners showed considerable activity in this regard. At the time of the survey, two-thirds of funds surveyed had completed, were completing, or had near-term plans to consider completing the “climate credentials” of existing holdings. For example, one project partner as established a formal plan to review the climate change risks across its range of asset class investments.

AustralianSuper

Country: Australia
AUM: US\$ 42 billion



Under multiple scenarios, the Climate Change Scenario report highlighted Australia and the Pacific region as being particularly vulnerable to climate change risks. As a result of the report's findings and the analysis of AustralianSuper's current asset allocation, a number of actions to review the climate change risks across various assets in its portfolios has been undertaken. These actions are aimed at reducing the impact of climate change on the Fund's investment portfolio and to protect the Fund's assets.

Equities

AustralianSuper commissioned Trucost to analyse the carbon footprints of its total equities portfolio, with a deeper focus on its ten Australian equities fund managers. AustralianSuper then engaged with its Australian equities fund managers on this data. In addition, AustralianSuper undertook a carbon valuation analysis on its portfolio, based on the upcoming Australian carbon price scheme.

Property

AustralianSuper conducted a high level assessment of the impact of climate change-related policies and potential environmental impact on our top 20 property and infrastructure assets. The assessment of climate change impacts assisted us to develop our thinking about the issues we will need to deal with.

AustralianSuper's top 20 property assets are all in Australia and are a mix of commercial and retail properties. Our internal assessment found potential environmental impacts from climate change will vary according to location but could include increased days of extreme heat, fire risk, higher rainfall levels and greater wind speed. According to the report, this could result in potentially higher building operating costs and greater capital expenditure to mitigate these environmental impacts. On the policy front, the Australian Government has already introduced policies to reduce GHG emissions from this sector.

During the year AustralianSuper joined the Global Real Estate Sustainability Benchmark (GRESB), an initiative to assess the environmental and social performance of public and private property investments. GRESB conducts an annual survey and provides its GRESB members with a tool to assess the environmental performance of their real estate investments. This includes:

- Environmental and social performance
- Peer benchmarking and reporting (region, sector, and investment universe)
- Investments can be instantly benchmarked at any moment in time
- AustralianSuper will review the GRESB outcome and engage with our property fund managers

Infrastructure

For AustralianSuper's infrastructure investments, the report found the physical impacts of climate change are likely to vary depending on the asset, its age and its location. AustralianSuper's top 20 infrastructure assets are a mix of asset types and locations. Impacts such as heat, fire risk, flooding and storm damage have the potential to affect these assets to varying degrees. As a result of this high level review, AustralianSuper is working with a specialist engineering firm to undertake a thorough assessment of the physical risks that could impact our assets due to climate change up to the years 2030 and 2050.

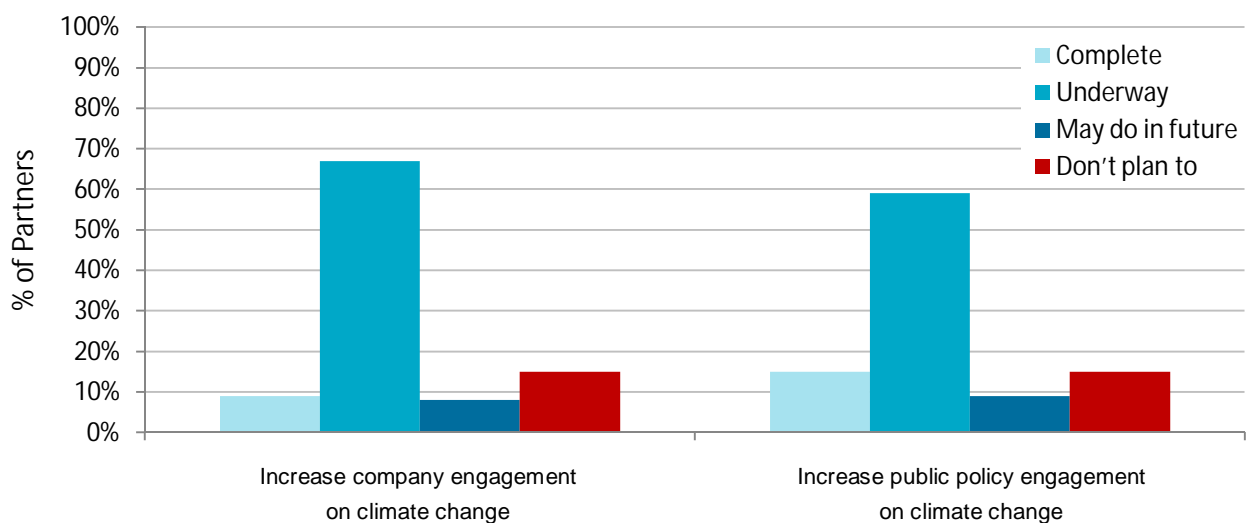
Good risk management requires us to understand the risks that are posed by climate change. Following the engineering firm's review, AustralianSuper aims to incorporate climate change risk management as standard practice into due diligence and ESG processes. AustralianSuper will then work with fund managers and management at the companies in which they are invested to ensure decisions relating to these investments are made in the context of likely future scenarios.

Changes to engagement strategy

Climate policy uncertainty is a notable source of risk for investors over the coming 20 years, contributing 10% to risk for a representative portfolio, and a higher proportion to many of the partner’s individual asset allocations. This risk will be determined by the timeliness of policy implementation as well as the predictability of the policy. The longer policy is delayed, the more stringent and costly it will have to be to achieve the necessary reductions of emissions. Similarly, less predictable policies are less efficiently implemented and therefore less upside will be captured by investors through a smooth transition to a low-carbon economy. This situation presents a compelling argument for institutional investors to engage with policymakers and advocate for a swift, actionable global framework agreement on climate change as part of their risk management process.

Within the group of project partners, a large proportion of funds had well-established, active engagement policies and practices in place prior to this study. It was also this area where we found the most commitment from investors to take action: a large majority of partners reported the findings of the study strengthened their conviction for the need to engage with companies and policy makers to tackle climate risk management. This is demonstrated in Figure 9.

Figure 9: Changes to engagement strategy



4

Reflections and next steps

Did this project make a difference?

Clearly the *Climate Change Scenarios* project created a significant “splash” in the industry. The resulting report has been downloaded some 5,500 times and continues to regularly draw reference in the media and within other industry reports and publications. More importantly, a majority of project partners indicated the climate change project helped to provide a structured approach to reviewing climate change risks at the portfolio level.

There are also several areas where the project’s findings and recommendations are having direct impact:

- Tailored reports have provided a “point of departure” for individual partners to understand their own risk exposure and consider a framework for monitoring the impact of climate change risks within strategic decision-making processes going forward.
- Half of the partners have begun, or plan to begin, to change the process for SAA to include a discussion of climate change risk factors. Slightly fewer have plans to change their target allocations to reflect the conclusions of the study. Many partners are still in the process of digesting the conclusions or considering contrary views.
- Two-thirds of partners have reviewed, or will review climate change risks within existing portfolio holdings. Survey findings suggest the project would have benefited from a greater focus on sector and industry-specific outputs to support investment staff in this regard.
- The most significant finding relates to the proportion of partners that have strengthened their conviction to engage with companies and policy makers as a means of climate change risk management and paving the path towards a preferred scenario.

While partners are currently focused on digesting the results and recommendations of the project, many have indicated they are interested in updating the scenarios and TIP™ factor analysis. At this time, possibilities for the further development of the project include:

- Updating the climate change scenarios and signposts (such as policy developments or updates to the scientific opinion on the physical impacts of climate change).
- Updating the TIP™ factor assumptions and recalibrating the correlations used in modelling the impact of climate change risk factors on portfolio risk.
- Applying the updated TIP™ factor risk model to the partners’ asset allocation to provide an updated and relative assessment of risk and opportunity.
- Helping determine more effective ways to allocate money to climate sensitive assets, such as the development of new or innovative investment vehicles.

Ensuring “climate change” is adequately resourced

Our analysis shows that the policy risk alone of climate change could contribute 10% of risk to a representative portfolio. Arguably, this means that 10% of a hypothetical risk expenditure should be allocated to addressing this issue. Risk management on the issue of climate change has developed rapidly however we sense is that it reflects nowhere near 10% of the average risk manager’s budget or attention.

We contend that in order to effectively face climate change risk in the future – investors will need to spend more time managing the issue. While many institutional investors might view climate change risk management as a separate function from strategic decision-making processes, the findings of the study suggest that it can play a vital role in overall portfolio risk management. Further, there are many existing tools, organizations and initiatives to help investors take on this challenge.

Enhancing the SAA process

Mercer believes that many investors globally are broadly reviewing SAA processes and models. This is due to many factors: increased return correlations of asset classes realized during the recent financial crisis; persisting systemic risk factors afforded new attention during the crisis; de-risking of defined benefit plans; and continued development of alternative investments and structured products.

The following opportunities exist to escalate the conversation on the strategic considerations of climate change and new frameworks for SAA:

- **Multiple risk factors:** Investors have gained a greater appreciation for systemic risks following the financial crisis and geopolitical developments. As a result, many are considering or already implementing analysis of risk exposures instead of (or in addition to) traditional returns based analysis to inform SAA decisions. A discussion of which risk factors to include offers an opportunity to raise the issue of climate risk.
- **Scenarios:** Many risk factors analyzed in the SAA process have high levels of uncertainty. Qualitative risk factors such as political instability and climate change have also arisen. As a result, qualitative scenario analysis has gained traction as an analytical tool to inform SAA decisions. The *Climate Change Scenarios* report frames some scenarios, including macroeconomic behavior and possible signposts to indicate a change in trajectory between scenarios, to offer a framework for broader consideration of scenario analysis and climate change risk.

Overcoming the barriers to investing in climate-themed assets

Given the relatively short time since the report’s release, most partner activities regarding investments have focused on reviewing existing “climate sensitive” holdings for climate risk resilience. The exploration of new investments in climate sensitive or themed assets is a more strategic decision and warrants a broader, more comprehensive review. In both areas there are significant opportunities and challenges.

There are several practical challenges for large investors when implementing changes to investments per the recommendations in the report. For example, there is a significant opportunity to finance energy efficiency installations globally and yet there is a widespread lack of understanding about the opportunity, “how to” experience and institutional quality investment vehicles that provide scale and alignment of interest.

In addition, where solid investment opportunities potentially exist, they may be overlooked because they don’t fit neatly into an asset-class silo. More strategic discussion needs to take place to consider the characteristics of key climate themed investments, and to determine which asset class or risk group should have oversight. (The overall role in the portfolio also needs to be considered).

For reasons of cost, influence over terms, transparency and illiquidity, large asset owners often prefer certain aspects of direct or co-investment structures in many climate sensitive asset classes (such as infrastructure, private equity and real estate). However this route requires a level of due diligence, expertise and oversight that is not readily available internally for many investors. There is also a challenge of scale for large investors with some potential investments.

Overall, there appears to be a high level disconnect between stated interest and the ability for large asset owners to dedicate resources and develop expertise in issue specific, as well as investment specific, aspects of climate sensitive investment opportunities. With these challenges in mind, the following steps may facilitate the consideration of additional investments in climate sensitive or climate themed assets:

- Discussions between climate finance experts, financial intermediaries, and CIOs are necessary to determine next steps and priorities for scoping the opportunities and institutional requirements. These discussions have begun in various regions and forums but structured ongoing discussions are necessary among (and within) organizations to move the market forward.
- The role of investment consultants and investment managers to determine alternative structures for due diligence, portfolio construction and deal sourcing is also critical.

Collectively, large pension and sovereign funds (and other asset owners) have the power (and perhaps the resources) to determine objectives, fund vehicles and structure deals. Potentially, they may also have the capacity to create new entities to effectively deploy assets as necessary to fund (and profit from) a transition to a lower carbon economy. It will be no small task to accomplish this across regions, market segments and asset classes, but the stage has been set through membership organizations and established intermediaries to explore alternative investment structures, outsourcing opportunities and agreement on requirements. Focus should be put on developing these solutions and the associated deployment of assets - as a priority.

Moving the industry forward

The nuances of this research and the fact that there is no baseline for comparison of its conclusions and methodology are what made this project both necessary and successful. But those characteristics also make the work difficult to communicate and digest. However, if efforts are not made to share and explain the basis for this project and its conclusions, then a major risk for investors may remain largely unacknowledged.

In light of this realization of the importance of this project there are some practical steps the industry, including Mercer, can take to continue the momentum.

- Share and discuss the research with colleagues, clients, consultants, and academics. We welcome challenges to the conclusions and methodology – they can be improved and enhanced. At some point the scenarios, assumptions, correlations and TIP™ factors will need to be updated – other revisions could take place at the same time.
- Discuss climate change at gatherings of peer investors. Organizations such as INCR and IIGCC have made efforts to distribute the research to their members and at conferences. Other organizations may have climate change or ESG topics as sub-themes within their broader program and may be interested in discussing this topic.
- Collaborate on training materials. Mercer and others have delivered several presentations on this research. We welcome the opportunity to work with industry colleagues on training modules that may help extend the reach of this project.

In closing

Mercer has enjoyed the challenge of this project, and it is rewarding to see that the findings are being digested and put to practice by partners and beyond.

Within Mercer, the TIP™ framework is being utilised to help investors understand and optimize their exposure to climate change risks and opportunities. In addition, we are working to develop a more compact “climate dashboard” to bring this analysis to smaller investors in a straightforward way.

Changing and evolving traditional methods is often challenging and this seems to be particularly the case with climate change. As a consulting organisation, we are proud to be working with our clients to measure and address climate risks and opportunities, and look forward to continuing to raise the bar on this issue.



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