

Climate Change Scenarios – Implications for Strategic Asset Allocation

ISSUE BRIEF

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INTRODUCTION

To support the growth of sustainable capital flows, IFC seeks to influence, support, and enable capital market stakeholders to better integrate environmental, social, and governance (ESG) factors into capital allocation and portfolio management processes, using IFC's own investment practices as a model. IFC is playing its part to support the growth of the market by funding the development of enhanced stock market indices, financial instruments, and through targeted market research.

Little research has focused on the investment implications of climate change at a portfolio level; how climate change might impact on the underlying drivers of the major asset classes around the world, and how institutional investors might respond. The report "Climate Change Scenarios – Implications for Strategic Asset Allocation" identifies the

potential sources of risks under various probable scenarios, and it shows that it is essential to measure, monitor and manage these risks over time to protect the long-term assets that institutional investors oversee on behalf of their stakeholders.

The report is the result of a collaborative endeavor led by Mercer together with 14 global institutional investors¹, representing around \$2 trillion in assets under management. The research was supported by Carbon Trust, and IFC in partnership with Italy, Luxembourg, the Netherlands, and Norway.

This summary version of the report "*Climate Change Scenarios – Implications for Strategic Asset Allocation*", which can be downloaded in full from IFC's website, highlights the major findings of the study.

OVERVIEW

It is widely acknowledged that climate change will have a broad-ranging impact on economies and financial markets over the coming decades. This report analyses the extent of that impact on institutional investment portfolios and identifies a series of pragmatic steps for institutional investors to consider, including allocation to climate sensitive assets and the adoption of an "early warning" risk management process.

- **Traditional approaches to modelling strategic asset allocation fail to take account of climate change risk:** Strategic asset allocation (SAA) is a key component of the portfolio management process, with some research estimating that more than 90% of the variation in portfolio returns over time is attributable to SAA decisions. Whilst standard approaches to SAA rely heavily on historical quantitative analysis, much of the investment risk around climate change requires the additional of qualitative, forward-looking inputs. Given the unclear climate policy environment and uncertainty around the full economic consequences of climate change, historic precedent is not an effective indicator of future performance.
- **New approaches to Strategic Asset Allocation are therefore required to tackle fundamental shifts in the global economy:** This report uses scenario analysis to anticipate future trends and develops four alternative pathways that might result from

climate change. Using the scenarios the report models climate change risks using the "TIP Framework". This framework assesses three variables for climate change risk: the rate of development and opportunities for investment into low carbon technologies (Technology), the extent to which changes to the physical environment will affect investments (Impacts) and the implied cost of carbon and emissions levels resulting from global policy developments (Policy).

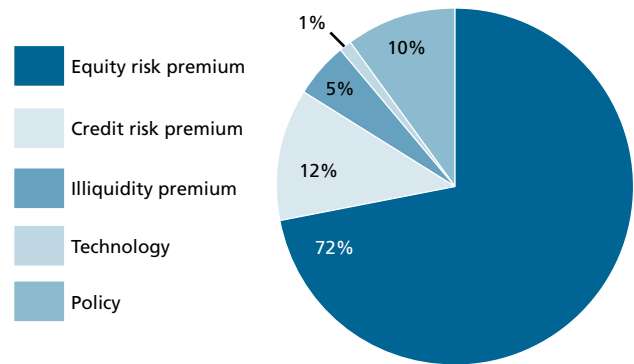
- **The "TIP" framework suggests climate policy could contribute as much as 10% to overall portfolio risk:** Uncertainty around climate policy is a significant source of portfolio risk for institutional investors to manage over the next 20 years. The economic cost of climate policy for the market to absorb is estimated to amount to as much as ~\$8tn by 2030. Additional investment in technology is estimated to increase portfolio risk for a representative portfolio by ~1%, although global investment could accumulate to \$4tn by 2030 which is expected to be beneficial for many institutional portfolios. The economic model used in this study excludes physical risks of climate change which are not consistently predicted by the range of scientific models and primarily for this reason concludes that, over the next 20 years, the physical impact of changes to the climate are not likely to affect portfolio risk significantly. However this does not imply the absence of significant (and growing) risk as shown by recent climate related disasters that investors need to monitor closely (See figure 1).

1. All Pensions Group (APG), the 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, the Netherlands.

- To manage climate change risks institutional investors need to think about diversification across sources of risk rather than across traditional asset classes:** Mitigating climate change risks will require a new approach for investors. The short-term horizon of traditional equity and bond investments means that it will be more difficult for investors to price in long-term risks around climate change compared to some of the more climate sensitive assets². Consequently the traditional way of managing risk through a shift in asset allocation into increased holdings of more conservative, lower risk, lower return, asset classes may do little to offset climate risks. Further, in some scenarios such a strategy could result in a decline in returns, adversely affecting long term portfolio performance and potentially impacting income for beneficiaries.
- Managing climate change risks could lead to increased allocation to climate sensitive assets:** This report finds that under some scenarios, the best way to manage the portfolio risk associated with climate change, whilst retaining similar returns, is to increase exposure to those assets which have a higher sensitivity to climate change “TIP” factors. The analysis suggests that under certain scenarios a typical portfolio seeking a 7% return could manage the risk of climate change by shifting around 40% of assets into more of the climate sensitive assets (this includes opportunities across a range of assets including infrastructure, real estate, private equity, agriculture land, timberland and sustainable listed/unlisted assets – see figure 2). Some of these investments might be traditionally deemed as more risky on a stand-alone basis but the report shows that 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. This offers the prospect that institutional investors’ interests can be aligned to both serve their beneficiaries’ financial interests as well as help tackle the wider challenge of climate change by increasing investment in mitigation and adaptation efforts globally.
- Investors can take steps now to improve the resilience of their portfolios to climate related risks:** This report proposes a series of pragmatic steps that investors can take today to begin the process of managing climate change risks. Initial actions could include: introduce a climate risk assessment into ongoing strategic reviews; increase asset allocation to climate sensitive assets as a climate “hedge”; use of sustainability themed indices in passive portfolios; encourage fund managers to proactively consider and manage climate risks; engage with companies to request improved disclosure on climate risks. It also highlights the need for investors to communicate with policy makers the need for a clear, credible and internationally co-ordinated policy response and for dialogue to emphasise the potential economic and financial cost of delay. Whilst many institutional investors

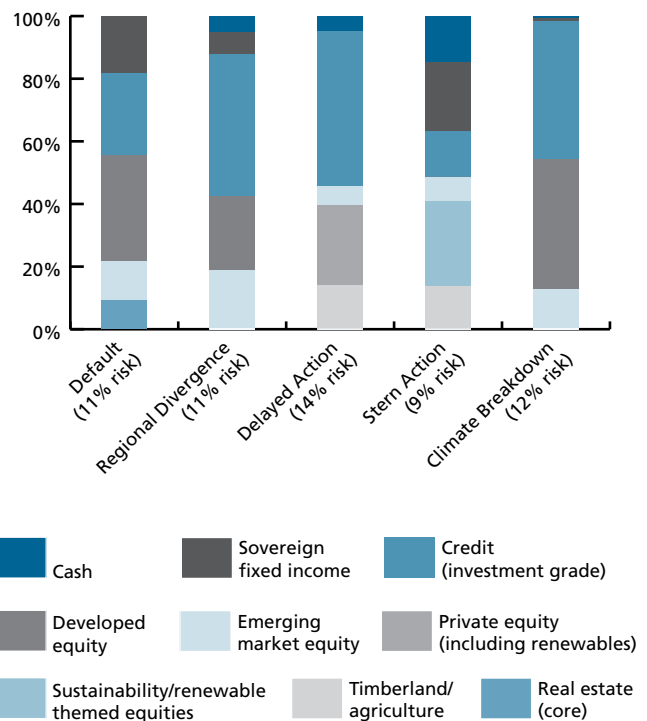
might view engagement with policy makers as a separate function from strategic decision making processes, the findings of this study suggest that it can play a vital role in overall portfolio risk management.

FIGURE 1. CONTRIBUTION TO RISK FOR REPRESENTATIVE PORTFOLIO MIX IN ‘DEFAULT’



Source: Mercer

FIGURE 2. EXAMPLE OF PORTFOLIO MIX ACROSS THE SCENARIOS-PORTFOLIO TO TARGET 7% RETURN



Source: Mercer

2. The climate sensitive assets examined in this study include investments that will adapt to a low carbon environment within infrastructure, private equity, real estate, agriculture land, timberland and ‘sustainable’ themed assets.

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Full report: <http://www.ifc.org/sustainableinvesting>

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