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Climate Change Scenarios – Implications for Strategic Asset Allocation

Executive Summary

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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.

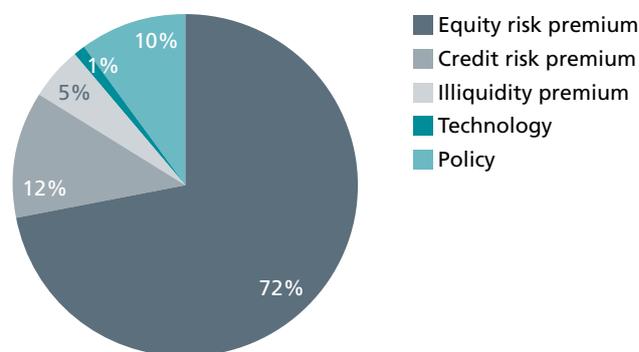
■ **Traditional approaches to modelling strategic asset allocation fail to take account of climate change risk:** Strategic asset allocation (SAA) is a key component of the portfolio management process, with some research estimating that more than 90% of the variation in portfolio returns over time is attributable to SAA decisions. While standard approaches to SAA rely heavily on historical quantitative analysis, much of the investment risk around climate change requires the addition 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 that 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 approximately \$8 trillion cumulatively, by 2030. Additional investment in technology is estimated to increase portfolio risk for a representative portfolio by about 1%, although global investment could accumulate to \$4 trillion 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 for the contribution to risk for a representative portfolio mix.

Figure 1
Contribution to risk for representative portfolio mix in ‘default’ case



Source: Mercer

■ **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 assets. 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 affecting 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, while retaining similar returns, is to increase exposure to those assets that 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 ensuring around 40% of assets are held in 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 for an example of asset class portfolio mixes by scenario. Some of these climate sensitive investments might be traditionally deemed as more risky on a standalone 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

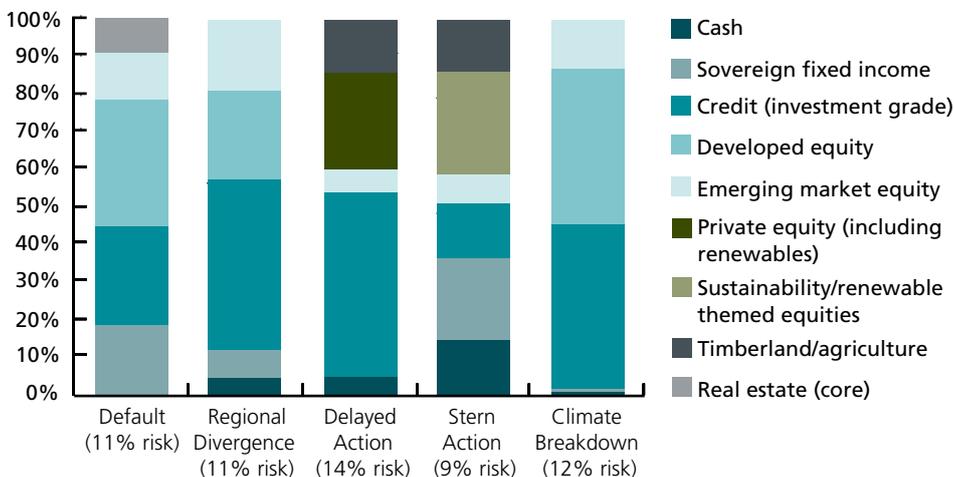
well as help tackle the wider challenge of climate change by increasing investment in mitigation and adaptation efforts globally. These results imply that typical funds are likely to require a shift in allocation towards more climate sensitive investments, as most will have only limited holdings in these classes. The extent of any shift will also depend on the overall view of the probability of different scenarios taking place.

■ **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 the following: introduce a climate risk assessment into ongoing strategic reviews; increase asset allocation to climate-sensitive assets as a climate “hedge”; use sustainability themed indices in passive portfolios; encourage fund managers to proactively consider and manage climate risks; and engage with companies to request improved disclosure on climate risks. It also highlights the need for investors to communicate with policymakers the need for a clear, credible and internationally coordinated policy response and for dialogue to emphasise the potential economic and financial cost of delay. While many institutional investors might view engagement with policymakers 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 2

Example of portfolio mix across the scenarios – portfolio to target 7% return



Source: Mercer

MERCER

Argentina

Australia

Austria

Belgium

Brazil

Canada

Chile

China

Colombia

Czech Republic

Denmark

Finland

France

Germany

Hong Kong

India

Indonesia

Ireland

Italy

Japan

Malaysia

Mexico

Netherlands

New Zealand

Norway

Philippines

Poland

Portugal

Saudi Arabia

Singapore

South Korea

Spain

Sweden

Switzerland

Taiwan

Thailand

Turkey

United Arab Emirates

United Kingdom

United States

Venezuela

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