

LONG-TERM INVESTORS: ARE YOU AWARE OF YOUR CLIMATE CHANGE RISK EXPOSURE?

Investors are increasingly re-examining how they identify and manage risk. This involves articulating an investment time horizon — often multi-decade — and then defining which risks warrant consideration beyond standard measures such as market volatility. How could economic, environmental, technological, societal, and geopolitical issues impact the ability to meet return objectives? What steps can be taken to mitigate risks or capture opportunities accordingly?

Within this context, climate change deserves special focus, given its potential impact and the narrow time frame that's left to address it. Mercer recently led an in-depth collaborative study with 16 investors in order to answer three critical questions. Every investor must be prepared to answer these questions if we are to effectively tackle climate change risks and capitalise on associated opportunities:

1. How big a risk/return impact could climate change have on our portfolio?
2. What are the key risks and opportunities?
3. What plan of action can ensure portfolio resilience?

The ensuing [Investing in a Time of Climate Change](#) report, together with our associated climate risk [framework](#), considers four climate scenarios and four climate risk factors to estimate the climate impact on potential returns.

CLIMATE SCENARIOS (TO 2050)

Four scenarios chart potential outcomes in an uncertain future. They reflect the economic cost of emissions, physical damages, and policy developments:

1. Transformation (2°C).
2. Coordination (3°C).
3. Fragmentation — Lower Damages (4°C).
4. Fragmentation — Higher Damages (4°C).

WHY LIMIT GLOBAL WARMING TO 2°C?

Just as investors set investment objectives, so too policymakers have set a goal to make sure our world gets no warmer by 2100 than 2°C over pre-Industrial levels. The 2°C limit has been identified by climate scientists as the maximum if we're to avoid dangerous interference with the climate system. The current estimate acknowledges that there has already been a 0.8°C increase, and assumes that a 1.5°C rise is already "baked in" to the system and cannot be avoided, regardless of action taken now.*

Driving global warming, as a [Bloomberg infographic](#) demonstrates, is the emission of greenhouse gases (GHGs) largely from fossil fuels, on which our modern economy continues to rely heavily. This is why policymakers are meeting in Paris in December 2015 to negotiate a new global climate agreement, build on regional climate policies, and limit emissions.

* Source: World Bank Group, *Turn Down the Heat*.

CLIMATE RISK FACTORS

Four investment-related risk factors were identified — the “TRIP” factors:

1. Technology.
2. Resource availability (e.g. water).
3. Impact (e.g. storms).
4. Policy.

Quantitative estimates of the climate impact on return were then developed by making assumptions about: 1) the relative sensitivity of asset classes and industry sectors to each risk factor (in terms of direction and magnitude); and 2) the relative impact the risk factors would have under each scenario over time.

Some key messages from the report include the following:

- **Future economic growth may not continue to rely predominately on fossil fuels:** a substantial structural change across economies and portfolios is possible.
- **Changes to policy and industry sectors are happening now:** climate risk management is no longer an issue beyond investor time frames.
- **Financial impacts can now be estimated in a quantifiable way:** fiduciaries are increasingly expected to have considered climate risk.

THE KEY FINDINGS

Four key findings (refer below) suggest that anticipating and preparing for the impact of climate change on investment returns should be an integral part of the investment process.

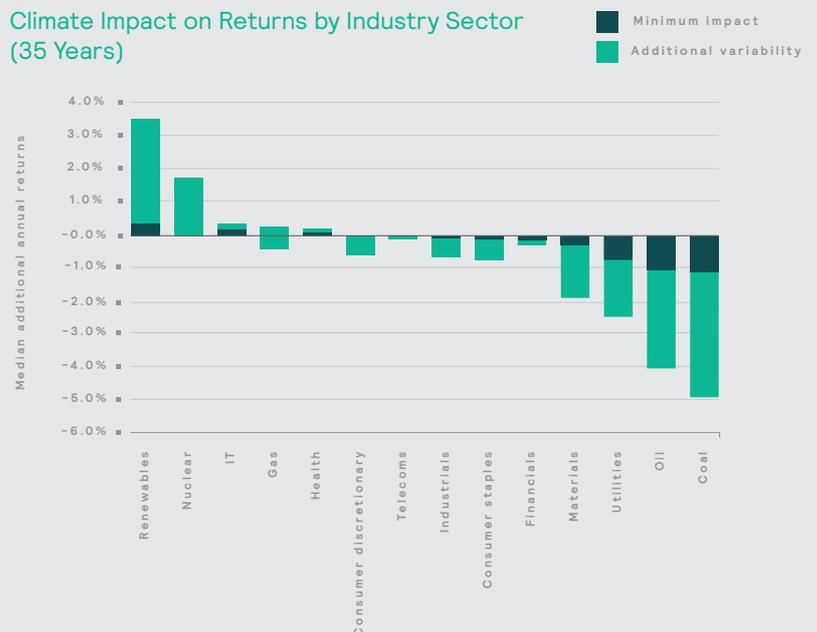
Key Finding 1

Climate change will have an impact regardless of the scenario.

Key Finding 2

Potential sector impacts are most meaningful — particularly over the next 10 years to 2025.

Climate Impact on Returns by Industry Sector (35 Years)

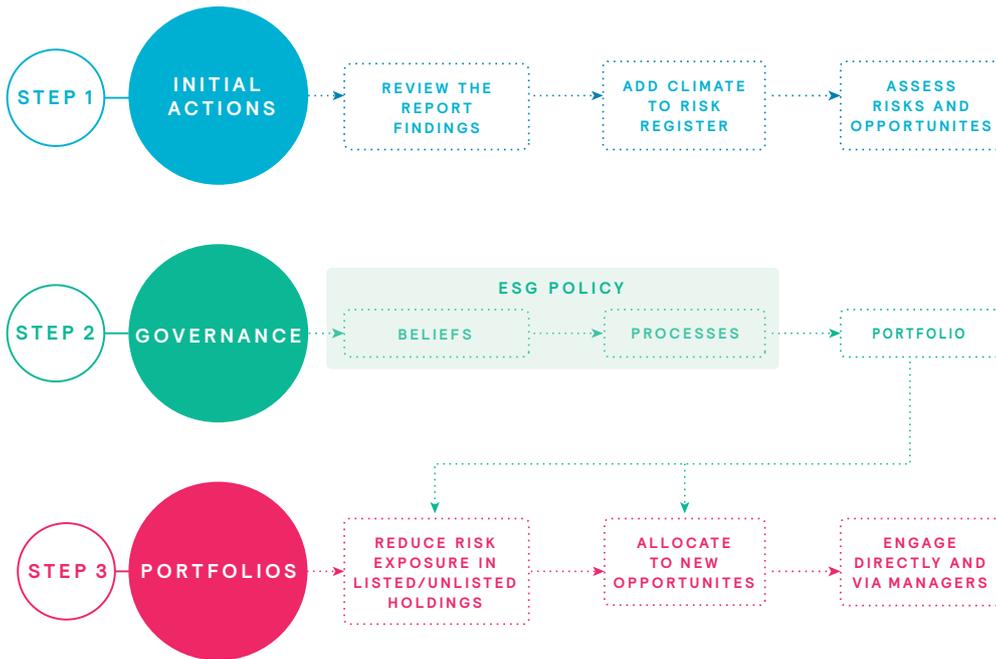


WHY MERCER?

We're experts at assessing climate risk for investors and we can help you:

- **Build awareness** through education and a portfolio climate risk assessment.
- **Improve and effectively communicate portfolio decisions** by incorporating climate change within your governance system.
- **Implement** using the twin portfolio levers of investment and engagement to prioritise portfolio risk reduction and investment opportunities.

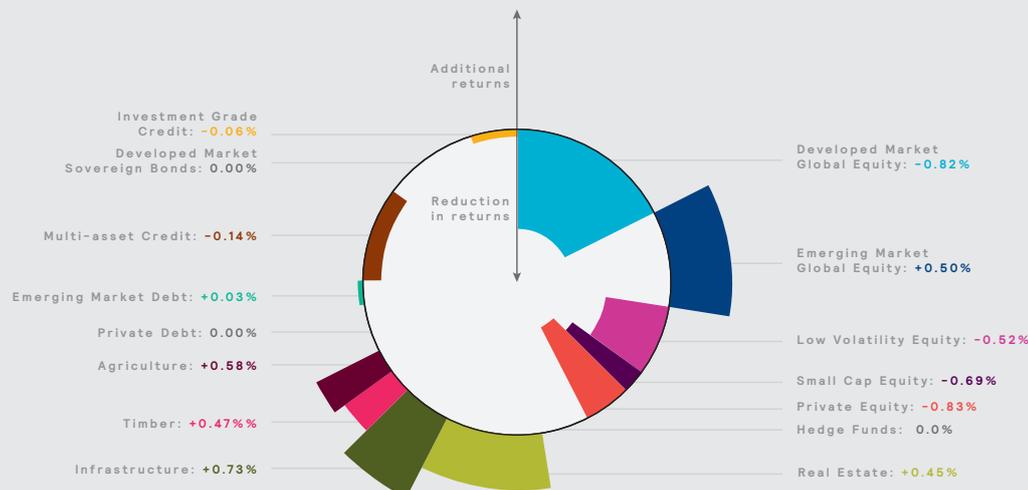
The framework diagram below outlines the key steps Mercer can now help you take:



Key Finding 3

Asset class impacts can also be material – and vary by climate scenario.

Portfolio Impacts – Transformation
(Median Annual Return Impact Over 10 years)



Key Finding 4

A 2°C (Transformation) scenario need not harm total diversified portfolio returns out to 2050.

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