Australian Government

Clean energy and climate scenario analysis

Investors are increasingly aware of the need to understand the implications of a changing climate, so they can see blind spots in their existing portfolios and identify new investment opportunities. How can investors use climate scenario analysis to assess forward expectations and investment risk when there is a high degree of uncertainty around potential investment pathways?

AllianceBernstein

> "We are pleased to have provided seed capital for this strategy which, in our view, opens up new possibilities in sustainable equities investing. The aim and philosophy of the strategy is consistent with our foundation's ethos of investing over the long term in a way that produces broad environmental and social benefits."
>
> **Martyn Myer AO**
> Life Governor of The Myer Foundation

Green MVE portfolio

~70 companies
low volatility, superior expected return

90%
lower emissions than the benchmark

$50m
CEFC cornerstone equity investor

CEFC investment

Global asset manager **AllianceBernstein** is pursuing an Australian equities strategy which aims to set a new standard in low carbon investing. The AB Managed Volatility Equities – Green (Green MVE) portfolio is aiming to be carbon neutral while generating attractive returns.

The **CEFC** made a cornerstone commitment of $50 million to Green MVE, its first investment in listed equities. The investment allows the CEFC to further extend its emissions focus across a diverse portfolio of businesses listed on the ASX.

Green MVE has also attracted investment support from the **Myer Foundation**, which co-founded ClimateWorks Australia, a leading researcher into decarbonisation at scale.

Climate scenario analysis

Climate scenario analysis recognises the complexity and uncertainty presented by climate change, from transition and physical risks to growth opportunities. It is a growing area of focus for:

- **Active investors** seeking to better understand their climate driven investment risk and positively influence low emissions outcomes
- **Companies** who rely on the support of long term institutional capital
- **Regulators**, as they expand requirements for additional corporate disclosure on climate risks, impacts and mitigation measures.

Together, AllianceBernstein and CEFC are targeting a new standard in evidence-based low carbon investing.

Investment rationale

The CEFC has a unique role to accelerate investment in Australia's transition to net zero emissions. Investing through managed investment products such as Green MVE enables the CEFC to be an early supporter of innovation in the investment management sector.

This in turn enables fund managers to "prove-up" an innovative investment strategy that actively manages climate change risk and opportunity. Products such as Green MVE enable investors to direct capital to companies that have a lower carbon footprint without compromising expected returns. Where capital markets price in carbon risk in this manner, companies react to this cost of capital signal and seek to lift their investor appeal by reducing their emissions.

Green MVE approach

Green MVE is investing in a portfolio of some 70 Australian-listed companies with low volatility and the potential for higher returns compared with the ASX300. The portfolio is constructed to achieve an emissions profile that is substantially lower than the relevant investment benchmark.

Green MVE is based on the highly successful AB Managed Volatility Equities Fund and brings a greater focus to exploiting the typically low carbon characteristics of many low volatility stocks.

The strategy starts by anchoring the portfolio in low volatility equities, which are typically low carbon sectors such as healthcare, consumer staples, IT, and then applies a carbon price during the stock selection process.

Low carbon investment principles

1
Redefine success as 'green alpha', representing the outperformance of a carbon neutral portfolio

2
Anchor the portfolio in low volatility equities as they are typically low carbon and have delivered attractive investment returns

3
Aim to efficiently reduce emissions associated with the portfolio holdings by applying a notional 'price on carbon'

4
Aim to make the portfolio carbon neutral by offsetting emissions associated with holdings through the retirement of carbon credits

5
Engage with companies on how green alpha impacts cost of capital and incentivises them to reduce emissions

"This investment unlocks new low carbon investment opportunities for investors focused on building increasingly sustainable investment portfolios, which is an emerging priority for institutional investors such as superannuation funds, family offices and insurers. Through the Green MVE portfolio we are aiming to connect this investor interest with companies which are increasingly focusing on lowering their carbon emissions."

Ian Learmonth
CEFC, CEO

Financial systems stability

The Australian Prudential Regulation Authority and the Reserve Bank of Australia are among more than 50 international members of the Network for Greening the Financial System.

These leading organisations have made public statements about the important role of central banks and financial regulators in mitigating the physical, transition and liability risks of climate change in the finance sector.

In a joint statement issued to coincide with the COP26 Glasgow climate conference, APRA and the RBA said: "The physical impact of climate change, and the global transition to a lower emissions economy, will affect economic output, prices and employment. Climate change will be a driver of change in the value of certain assets and income streams, and therefore poses a risk to financial institutions and financial stability."

Prudential guidance on disclosure

APRA has issued a draft Prudential Practice Guide CPG 229 to assist banks, insurers and superannuation trustees to manage the financial risks of climate change.

The guidance addresses governance, risk management, scenario analysis and disclosure, with a view to ensuring decisions are well-informed and appropriately consider both the risks and opportunities created by the transition to a low carbon economy. The draft guidance explicitly calls out climate scenario analysis and stress testing as important to risk identification in both the short and long term.

"One of the biggest challenges … is to shift from subjective judgements to data-driven analysis. The scientific link between rising carbon emissions and warming temperatures is clear, but the tools and methods for risk analysis are still in their relative infancy. Not only are the direct impacts difficult to assess, but so are the potential technological and policy responses. But that's no excuse for not trying."

Wayne Byres
APRA Chair, 2021

Climate reporting climbs agenda

Climate reporting and disclosure is an increasingly important issue for investors and regulators, both globally and in Australia.

The Taskforce on Climate-related Financial Disclosures (TCFD) recommends companies use climate scenario analysis to help them understand how they can adapt to different climate risks, economic and regulatory conditions.

According to KPMG analysis, 76 per cent of the world's largest 250 companies had established climate targets in 2020. In its 2020 analysis of the ASX 100, KPMG reported that:

78%
Recognised the financial risks of climate change

67%
Had established carbon and science-based targets

20%
Were using climate scenario analysis to quantify their risk exposure.

AllianceBernstein climate change scenarios

Climate change is a complex and challenging area of research for analysts and investors, requiring assessments that look multiple decades into the future, in the context of both technology and regulatory uncertainty.

Importantly, this means climate change scenario analysis is not a one-off "set and forget" task. The accelerating and non-linear nature of climate change means recent trends may not adequately indicate future impacts, pointing to the need for ongoing analysis and adjustment from investors.

Reflecting this complexity, Green MVE investment decisions are made against a framework of three proprietary climate scenarios. These enable an evaluation of the climate risks and opportunities for Australian equities while ensuring transparent and quantifiable measures are at the centre of the low carbon investment strategy below.

The scenarios draw on insights from a range of respected analysts, including the CSIRO and Bureau of Meteorology, as well as two leading US institutions, the Massachusetts Institute of Technology and Columbia University. Consideration is also given to the work of the International Energy Agency and the Intergovernmental Panel on Climate Change, the United Nations body which assesses the science related to climate change.

> "As investors you have to ask yourself two questions: What is the potential impact of climate change in each of these scenarios? And when do we think markets will start to price that in? Our general view on timing is that it is likely to be quicker than many investors expect, with markets putting an increasing focus on these questions."
>
> **Roy Maslen**
> AllianceBernstein Chief Investment Officer – Australian Equities

1. Low

Where the increase in global temperatures is kept to 1.5°C from 2019, in line with the Paris Agreement

2. Medium

A base case which assumes a 2.2°C increase in global temperatures from the mid-2020s

3. High

Which factors in delayed action on climate change, with global temperatures to increase by 3.2°C from the 2030s

Responsible investment market

The market for responsible investments in Australia grew to $1.2 trillion in 2020, at 15 times the rate of the total universe of Australian professionally managed investments, according to the Responsible Investment Association Australasia (RIAA).

In its Responsible Investment Benchmark Report 2021, RIAA said that while the majority of the mainstream investment market claimed to be responsibly invested, those funds engaging in leading practice responsible investment had seen assets under management grow 30 per cent in 2020.

RIAA reported that in 2020, 57 per cent of investment managers had at least 85 per cent of their assets under management covered by an explicit and systematic approach to ESG integration, compared to just 41 per cent in 2019.

However just one quarter of investment managers were practising a leading approach to responsible investment, highlighting a continuing gap between investment managers who claimed to be practising responsible investing and those who could demonstrate this.

Net zero asset managers

Signatories to the global Net Zero Asset Managers initiative represent almost half the entire asset management sector globally in terms of total funds managed.

Created in December 2020, the initiative will see investors work with clients to reach net zero emissions alignment across their portfolios by 2050 or sooner, as well as set interim 2030 emissions reduction targets.

Consumers back responsible investing:

- 80 per cent rate environmental issues as important regarding the investment of their money
- 79 per cent believe investment decisions can positively influence climate change
- 62 per cent believe ethical or responsible super funds perform better in the long term.

> “For a purpose-driven investor like the CEFC, we see working with asset managers as an important way to accelerate decarbonisation across our economy. Investors can commit to low or net zero portfolios and through their investment managers can engage with company management to achieve more ambitious sustainability outcomes and reduce climate risk.”

Rory Lonergan
Executive Director - Investment, CEFC

Assessing climate value at risk

The Green MVE approach to risk assessment estimates the percentage of a stock's current value at risk from climate change by 2050. Key elements of the approach include:

1. Evaluate climate value at risk for each scenario versus a theoretical steady state with no further climate change
2. Assess transition risks (such as a shift in the energy mix), physical risks (such as the weather) and opportunities (including 'green' consumer preferences)
3. Analyse a company's current and expected plans
4. Acknowledge there are material uncertainties, with ongoing top-down and bottom-up research required over time
5. Ultimately, seeks to evaluate share prices based on net present value of forecast free cash flow until 2050 for each scenario, including steady state

Share price impacts

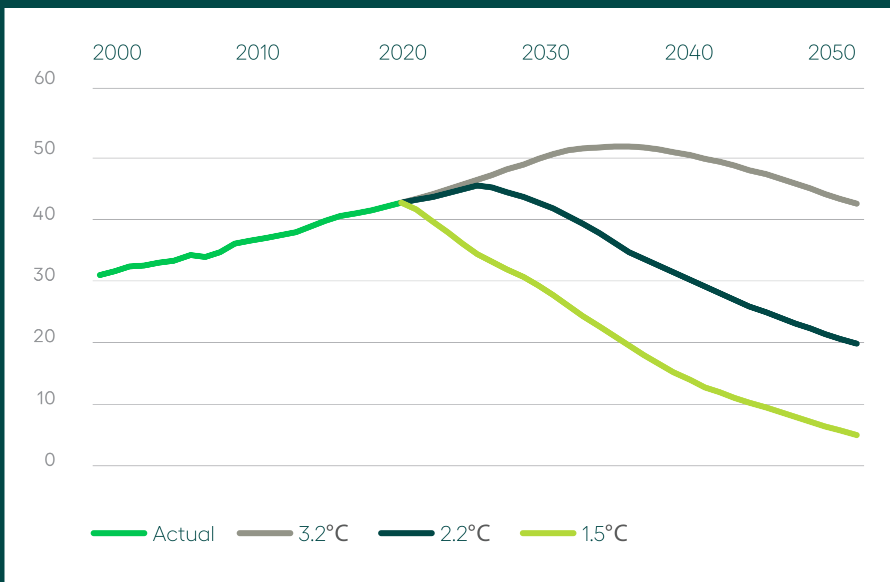
Multiple factors are expected to accelerate the impact of climate risk on share prices, particularly for transition risks and imminent physical risks. Key drivers include:

Governments	Evaluate climate value at risk for each scenario versus a theoretical steady state with no further climate change.
Corporates	Assess transition risks (such as a shift in the energy mix), physical risks (such as the weather) and opportunities (including 'green' consumer preferences).
Consumers	Analyse a company's current and expected plans.
Investors	Acknowledge there are material uncertainties, with ongoing top-down and bottom-up research required over time.

Green MVE portfolio

AllianceBernstein proprietary climate risk scenarios

CO_2 emissions in billion tonnes per year



1.5°C **Paris Aspiration** CO_2 falls from 2019

2.2°C **Base Case** CO_2 falls from mid 2020s

3.2°C **Delayed Action** CO_2 falls from mid 2030s

Green MVE value at risk equity framework

As an active investor, AllianceBernstein works closely with individual companies within the Green MVE portfolio, modelling the three scenarios against their particular fundamentals.

For each scenario AllianceBernstein develops 30-year stock models to quantify risks. The equity framework is structured around three broad market categories: businesses with high emissions and transition risks; those exposed to climate risks and opportunities, and those likely to be impacted by economic change, physical risks and green trends.

"There are trillions of dollars signed up to go carbon neutral by 2050 or looking to align with a lower carbon future. This is a really profound trend and is likely to move much faster than markets are thinking. In our view, the numbers will evolve and develop. In a low temperature scenario, the climate value at risk for the whole index is around three to six per cent. In the high temperature scenario, we see between 10 to 20 per cent of climate value at risk. For individual companies, within each of these scenarios, there will be very different outcomes."

Roy Maslen
AllianceBernstein Chief Investment Officer – Australian Equities

1. Businesses with high emissions and transition risks

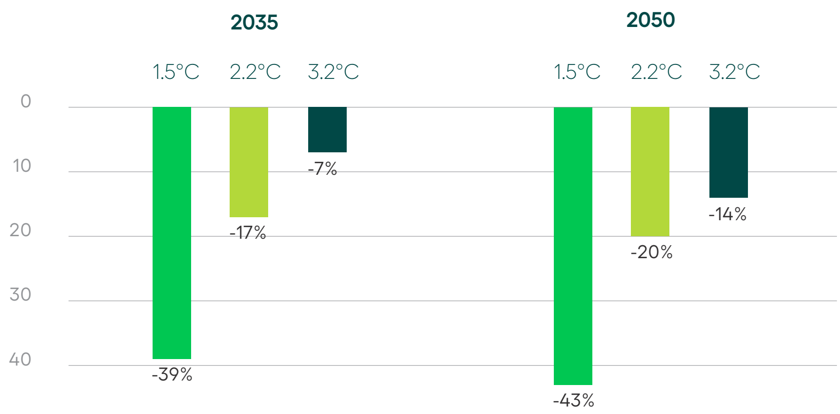
Considers: operations, supply chain, financial liabilities, business model risk

Includes: fossil fuels, heavy industry, transport, utilities

Description	Examples
Cost to reduce or offset emissions of own operations	Cutting scope 1 and 2 emissions from own business activities
Share of cost to reduce or offset supply chain emissions impact	Increased cost of food due to production-related emissions
Liability from a bad debt, insurance cost or other financial exposure	Financial exposure to companies impacted by decarbonisation transition
Impact of a transition to new business model(s) due to decarbonisation	Risk of presence of stranded assets within a portfolio

Green MVE insights

Climate value at risk: sample ASX300 company analysis



Indicative company analysis: comparison with steady state

Under 1.5°C scenario risk mostly realised by 2035

Under 2.2°C scenario coal freight cash generative in run off

2. Businesses exposed to climate risks and opportunities

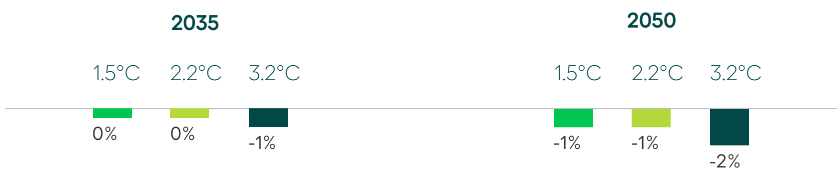
Considers: weather, oceans, health and biodiversity, economic growth

Includes: finance, food and agriculture, industrials, mining

Description	Examples
Increase in severe weather such as cyclones, drought, heatwaves	Drought impacts business operations due to lack of water
Rising sea levels, coastal damage and warming seas	Flood damage to property due to tidal surges
Impact on human, animal and plant life due to climate change	Impact on tourism if natural attractions are damaged by climate change
Impact on 'at risk' regions and broader implications	Slower economic growth impacting the demand for commodities

Green MVE insights

Climate value at risk: sample ASX300 company analysis



Indicative company analysis: comparison with steady state

The climate value at risk is lower than comparators because of lower growth and ROIC

3. Businesses impacted by economic change, physical risks and green trends

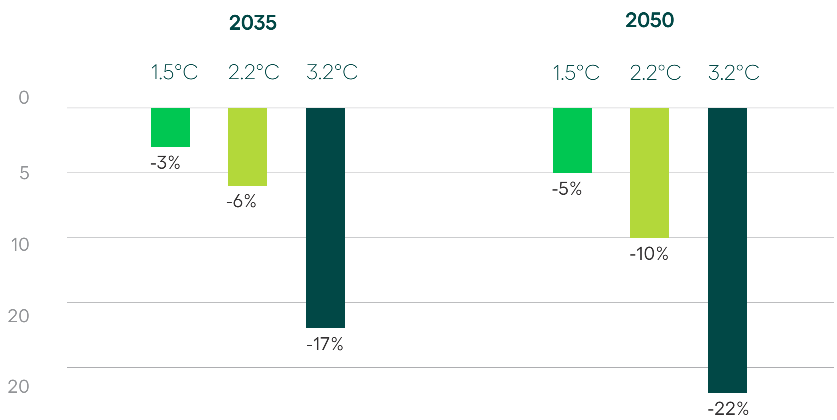
Considers: new products, new markets for existing products, enhanced competitive advantage, new branding

Includes: consumer, healthcare, property, technology

Description	Examples
Opportunities to launch new products and services	Electric cars and carbon neutral consumer goods
Existing products are more attractive or benefit from decarbonisation shifts	Increased demand for key metals, including nickel, lithium and platinum
Existing product or process realises a competitive advantage	Higher grade iron ore produces less emissions in a blast furnace
Brand benefits from action taken on climate change	Companies perceived to take a lead on climate friendly products

Green MVE insights

Climate value at risk: sample ASX300 company analysis



Indicative company analysis:

Reduction in high ROTE insurance business is a key driver of climate value at risk

Equity strategy to transform emissions

The CEFC equity investment strategy seeks to extend the influence of our finance across a larger range of investors and assets, including by shaping the emissions targets of investment funds across their broader portfolios.

These large-scale equity investments have had a particular impact in the agriculture, infrastructure and property sectors. As a part of these investments, the CEFC plays an active role in fund decarbonisation activities. Together with asset managers we help identify asset-specific opportunities for low carbon energy, enhanced energy efficiency and measures to reduce emissions.

These collaborative arrangements have additional benefits for the CEFC, providing us with practical insights into successful decarbonisation efforts that can be deployed more broadly.

Adamantem leads through private equity

$80m

CEFC cornerstone investment

The $795 million Adamantem Capital Fund II is Australia's first private equity fund to adopt a 'cradle to grave' approach to the emissions impact of its assets. It will drive ambitious emissions reduction targets across a diverse range of private equity owned, mid-market companies. The Fund targets mid-market companies with a focus on consumer staples, healthcare and business-to-business services. It will assess the likely emissions profile of target companies, and the companies that it acquires will be required to implement emissions reduction targets that aim to either eliminate or offset their emissions within a decade. Creation of the Fund reflects the Adamantem commitment to support long-term sustainable businesses.

Australian Climate Transition Index looks ahead

$60m

CEFC cornerstone investment

The Australian Climate Transition (ACT) Index will identify some 100 Australian companies from within the ASX 300 which are likely to perform well in a world undergoing a 2°C transition. It will use a methodology developed through a two-year collaboration between BNP Paribas, ClimateWorks Australia, sustainability analysts ISS-ESG and the Monash University Centre for Quantitative Finance and Investment Strategies. As the first forward-looking climate index in the Australian market, the ACT Index gives investors the capacity to analyse the climate risk profile of their ASX portfolios. It will also give emissions-focused ASX 300 companies a powerful incentive to accelerate their decarbonisation agenda.

About the CEFC

The CEFC has a unique mission to accelerate investment in Australia's transition to net zero emissions. We invest to lead the market, operating with commercial rigour to address some of Australia's toughest emissions challenges. We're working with our co-investors across renewable energy generation and energy storage, as well as agriculture, infrastructure, property, transport and waste. Through the Advancing Hydrogen Fund, we're supporting the growth of a clean, innovative, safe and competitive hydrogen industry. And as Australia's largest dedicated cleantech investor, we continue to back cleantech entrepreneurs through the Clean Energy Innovation Fund. With $10 billion to invest on behalf of the Australian Government, we work to deliver a positive return for taxpayers across our portfolio.