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Climate change in 5 simple points: The growing challenge and the opportunity in global decarbonisation

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Research & Insights

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Climate risk is perhaps the peak issue of our time. Yet understanding climate risk, its mitigation and decarbonisation from an investor's perspective is complex. As the world scrambles to make up for lost time in the race to decarbonise the planet, Måns Carlsson, OAM, Ausbil's Head of ESG and Co-Portfolio Manager of the Ausbil Active Sustainable Equity strategy, updates on what matters for investors on climate change in five simple points.

Måns Carlsson, OAM
Head of ESG

Key Points

- Climate change is a multifaceted problem which presents risks and opportunities for investors.
- The world needs to decarbonise to avoid the most destructive impacts of climate change. Yet while the world has committed to decarbonisation, it is not on track to meet the target of restricting global warming to 1.5 degrees Celsius by 2050.
- We are witnessing accelerating regulation and carbon pricing globally in a bid to catch up on decarbonization targets.
- Many companies have committed to net zero by 2050, but investors need to assess the credibility of each company's pathways to meet these targets.
- While carbon emissions intensity provides a quick snapshot of certain climate change risks of companies, climate risk needs to be assessed on a 'net risk' basis to account for all impacts of climate change, not just carbon emissions, on a company.
- Climate change 'scenario analysis', such as Ausbil's NCCR, is a powerful, forward-looking tool for investors to assess companies' climate progress and manage portfolio risk.

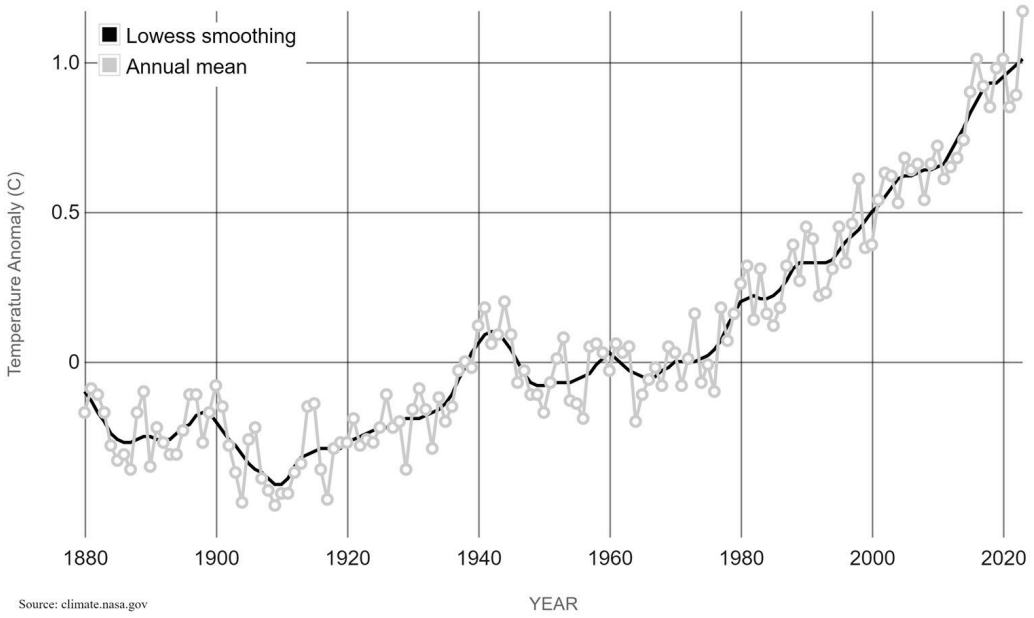
> "Climate change is a multifaceted problem which presents risks and opportunities for investors"

1: We must decarbonise, now

The science is very clear. The world needs to decarbonise to avoid a potential ecological disaster. The longer we wait, the costlier it will be for the economy, the environment and humankind. Climate change risk has increased as the global population growth surges. We are burning more fossil fuels and increasing food production, all of which generates carbon dioxide, methane and other outputs.

The impacts of rising temperatures (Figure 1) are compounded by further destructive events like bushfires, droughts, floods and, longer term, by rising sea levels. Global warming is also closely linked with deforestation and biodiversity loss (an area where investors, including Ausbil, will be more focused as company disclosure on this issue improves). The enormity of the climate change challenge has been described by some as akin to the moon landing. It is not just about today, but the very future of our existence.

Figure 1: The world is heating up: Global land-ocean temperature index



Source: NASA's Goddard Institute for Space Studies (GISS) to 2023.

Reducing global greenhouse gases, including carbon dioxide (CO2), is key to avoiding the destructive impacts of climate change. The Paris Agreement in 2015 formally recognised the need to decarbonise. The treaty covers climate change mitigation, adaptation and financing. It includes commitments from all countries to reduce their emissions, to work together to adapt to the impacts of climate change, and to strengthen their commitments over time. At the time of writing, all the major carbon emitters – including 194 individual states plus the EU – had ratified the agreement.

The Paris Agreement's target is to limit global temperature rises to well below 2 degrees Celsius above pre-industrial levels, and to pursue efforts to limit the temperature increase to 1.5 degrees. Countries have targets, known as nationally determined contributions (NDCs), to reduce greenhouse gas emissions. Australia, for example, has legislated a target by 2030 to cut emissions by 43% below 2005 levels.

But despite these commitments, the world is not on track to reach the 1.5 degrees Celsius global warming target. Based on the current trajectory, the world is on track for a temperature rise in this century far beyond the agreed climate goals (UNEP, 2023). The rapid roll-out of artificial intelligence (AI) and data centres will likely further increase energy demand, adding significant pressure to the challenge.

The world has a finite 'carbon budget' that limits how much carbon can be emitted by 2050. The budget is essentially how much can be emitted to have a 50% likelihood of limiting warming to 1.5 degrees Celsius. The IPCC (Intergovernmental Panel on Climate Change) estimated the global carbon budget was 500 Gt (gigatonnes) of CO2 from the start of 2020. That budget, however, has been lowered to 200 Gt of CO2 from the start of 2024 (Climate Change Tracker, 2024).

About Ausbil Investment Management

Ausbil is a leading Australian based investment manager. Established in April 1997, Ausbil's core business is the management of Australian and global equities for major superannuation funds, institutional investors, master trust and retail clients. Ausbil is owned by its employees and New York Life Investment Management Holdings LLC, a wholly-owned subsidiary of New York Life Insurance Company. As at 30 June 2024, Ausbil manage over $18.6 billion in funds under management.

2: Companies face increasing decarbonisation risk and regulation

The world is already 'off track' to meeting the Paris Agreement's 2050 target. We need new and better policy commitments from governments and companies alike. And technology must increase the efficiency of everything in the decarbonisation cycle. As a result, investors need to understand which companies are at risk, and for which companies global decarbonisation is an opportunity.

Over 60% of the S&P/ASX 200 by market cap have committed to net zero carbon emissions or carbon neutrality by 2050. But it is up to investors to assess the credibility of each company's road to decarbonisation. This means scrutinising the cost-effectiveness of decarbonisation technologies, the limitations of approaches, and understanding the timeframes. Simply reviewing a company's carbon footprint is not the answer. It is backward looking. You need to be forward-looking to understand the real risks. These risks are increasingly prevalent in a world with a price on carbon and in a world with major regulatory changes.

In Australia, for instance, the reformed Safeguard Mechanism effectively acts as a price on carbon for large emitters. The Safeguard Mechanism covers scope 1 emissions for 215 industrial facilities. These facilities account for ~28% of Australia's carbon emissions (industrial emissions are the second-biggest source of carbon after the electricity sector). Each facility covered by the Safeguard Mechanism (those with at least 100,000 tonnes of carbon emissions per year) has a carbon emissions baseline. Those who exceed their baselines need to buy carbon credits.

The reformed version of the Safeguard Mechanism took effect on 1 July 2023. It targets the abatement of 205 million tonnes of carbon emissions from 2023 to 2030 (part of the government's official goal for a 43% reduction by 2030 based on 2005 levels). To achieve the targets, facilities will need to cut emissions by 4.9% per year until 2030, with some exceptions for hard-to-abate sectors, or so-called EITEs (Emissions-intensive Trade-Exposed Entities). After that, decline rates will be set in 5-year blocks in alignment with Australia's NDCs (nationally determined contribution) under the Paris Agreement.

Furthermore, in 2024 the Australian government announced the 'Future Made in Australia' agenda, which includes elements of climate change policy. The policy aims to revitalise manufacturing in Australia by turbocharging clean manufacturing, industry and energy such as solar and wind.

The Australian government has also initiated a review into the potential establishment of a carbon border adjustment mechanism (CBAM). A CBAM effectively places a price on certain greenhouse gases ('GHG') emitted in the production of selected imports, preventing 'carbon leakage' and leveling the playing field for domestic and foreign producers. The EU has introduced a CBAM as part of its 'Green Deal' which targets carbon neutrality by 2050. The EU already has an emissions trading scheme (ETS), a cap-and-trade scheme to limit the quantity of emissions (by setting a cap). The ETS distributes the right to emit through a system of tradable permits, although it has been seen as a failure due to the oversupply of CO2 permits in the European market.

In the US, the Inflation Reduction Act (IRA) in 2022 was the single largest investment in climate and energy in US history. It aims to lower economy-wide CO2 emissions, including electricity generation and use, by 35-43% by 2030 from 2005 levels. The pre-IRA target was 26-33% (US EPA, 2023). In the UK, the Climate Change Act commits the UK government by law to reduce greenhouse gas emissions by at least 100% from 1990 levels (net zero) by 2050.

There are plenty of other key regulatory changes too, but the direction is clear: the world is increasingly regulating to support decarbonisation, although it is unlikely that stated policy changes to date will be enough.

Underpinning the above-mentioned examples of national regulatory change are the annual global UN climate change conferences, also called the 'COPs' (United Nations Climate Change Conference or Conference of the Parties of the UNFCCC). For instance, the COP26 in late 2021 saw 197 countries agree to the 'Glasgow Climate Pact'. The Pact supports the Paris Agreement goals. But it called for countries to revisit and strengthen their 2030 national action plans by late 2022. This brought forward the originally planned date of 2025.

> "The world is already 'off track' to meeting the Paris Agreement's 2050 target. We need new and better policy commitments from governments and companies alike"

However, at COP27 in 2022, of the almost 200 countries that had signed the Glasgow Climate Pact, only 24 had presented 'tightened national plans' since COP26. At around the same time, the UN released a climate report noting that the pledges of 193 Parties under the Paris Agreement could put the world on track for around 2.5 degrees Celsius of warming by the end of the century.

COP28 in Dubai closed with an agreement that signalled the 'beginning of the end' of the fossil fuel era by laying the ground for a swift, just and equitable transition, underpinned by deep emissions cuts and scaled-up finance. But despite the various commitments by companies and governments alike globally, the reality is more nuanced and there are various practical challenges. It is a monumental task to steer economies away from fossil fuel dependency and towards a decarbonisation process.

In Australia, the Integrated System Plan (ISP) announced in 2022 locates the new transmission, generation and storage needed across the National Electricity Market (NEM). It outlines the investments needed to ensure Australians have access to reliable, secure and affordable electricity – while meeting Australia's emissions reduction targets. The draft 2024 ISP confirms that urgent investment is needed in new renewable energy generation, transmission, storage and flexible gas generation if Australia is to continue to deliver secure, reliable and affordable energy, as well as reach the renewable electricity generation targets of NEM jurisdictions (AEMO, 2024).

Technologies and advances, such as green hydrogen and green steel, have been touted as potential step changes in reducing global emissions. Yet they have not been commercialised at the pace that global leaders had hoped. Renewable energy, such as wind and solar, is a key component. But while costs have reduced in the last decade, the world still needs to find ways to use economically viable large-scale battery technologies to accelerate the roll-out of renewable energy.

Decarbonisation can also be achieved by using resources and energy more efficiently. Technology, for example, can reduce the power drawn from the grid, increase the efficiency of the transmission and storage of energy, and increase the efficiency in renewables generation. As part of the transformation of the energy sector, there are new technologies like carbon capture and direct air capture that are also helping reduce the emissions that reach the atmosphere. Some of these technologies, however, are long-dated and, in some cases, are yet to become economically viable.

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3: Investors should favour forward-looking approaches, such as 'scenario analysis', to properly assess climate risk

From an investor's perspective, analysing the risks and opportunities associated with climate change is challenging because of its multi-faceted nature, and its many moving parts. The best way is to assess climate risks through a 'scenario analysis' approach. This approach's flexibility allows you to update assumptions as information evolves. We perform this analysis annually through Net Climate Change Risk (NCCR), a proprietary research tool developed by Ausbil's ESG Team. NCCR is effectively a quantitative model to assess, score and rank climate change risks.

NCCR does not fall into the traps of carbon measurement and estimation that typically arise when using the 'carbon footprint' approach. With the carbon footprint approach, intensity is measured by a company's carbon emissions divided by its revenue. This gives investors a snapshot of the carbon intensity of a portfolio. It does not, however, tell the full story of climate risk. Firstly, data quality on carbon emissions can be poor. Secondly, carbon emissions are only observable on an historical basis. To properly assess a company's climate change risk, investors need to understand future emission trajectories. Carbon footprint analysis is limited to looking at the cost side. We think it would be dangerous to simply assume a price on carbon and multiply that by a company's carbon emissions. There are other moving parts in the climate change risk equation. For example, physical risk and revenue impacts. One also needs to consider

financial assistance/exceptions made to emissions-intensive trade-exposed entities EITEs, and a company's ability to pass-through the price of carbon to their customers in the form of higher prices, or whether the costs can be absorbed in their general cost structure.

The NCCR assesses all aspects of climate change to a company's business model. The model scores companies on climate change risk across a 7-point Likert scale, ranging from -3 (terminal risk) to +3 (significant benefit), with zero being neutral. We analyse three climate change scenarios: 1.5-degree global warming (B2DS); a 2-degree warming scenario (2DS); and warming above 2 degrees (2DS). The analysis is anchored on IEA (International Energy Agency) scenarios for total energy demand and energy mix. It is complimented by other data and forecasts to ensure that our analysis is meaningful in the broader debate on climate change. To look at the future risk profile of sectors and companies across the three climate risk scenarios, we look out over three timeframes: 12 months; 5 years; and to 2050, so we can tie into the Paris Agreement net-zero targets.

Importantly, Ausbil's NCCR approach assesses the credibility of each company's decarbonisation targets. High-emitting companies displaying little credibility around their climate change targets are assumed to face increased costs from a price on carbon (a key assumption in all the IEA scenarios) and/or costs from purchasing carbon offsets. We expect there will be increased scrutiny into the credibility of offsets too, and we generally assume the price of offsets will increase over time.

The benefits of Ausbil's approach are in the holistic assessment of all things climate related, both risks and opportunities. The approach helps prioritise our engagements. And we can have a proprietary risk assessment on portfolio climate change risk for any company, which adds to the overall risk profile assessment in our decision-making. Importantly, Ausbil's equity analysts are party to the climate risk analysis. The NCCR is not just something that the ESG team develops and uses in isolation. We can therefore look at all aspects of each company's business model and market, and how they are impacted by climate change. Our NCCR assessment also impacts our sustainability scoring and can determine if a company is investable or not.

Our NCCR tool is an excellent way to assess climate risk. Given its uniqueness, it is hard to compare it to other analytical approaches in terms of benchmarking. It also relies on subjective opinions on the momentum and change for each company under the three climate change scenarios. However, as discussed above, we believe there is no way around the fact that investors need to make a subjective assessment on companies and their ability to achieve decarbonisation.

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4: Engagement remains a vital tool in holding companies to a climate plan

In terms of engagement, climate change is a systemic risk, not a company-specific risk. It therefore makes sense for investors to collaborate – such as through Climate Action 100+ – to encourage companies to create robust governance frameworks around climate change risk; to set emissions reduction goals, including long-term and short-term targets; and to align these with executive remuneration.

As part of Climate Action 100+, as well as through our engagements, we initially encourage companies to report against the Task Force on Climate-Related Financial Disclosure (TCFD) standard. This provides meaningful disclosure, particularly through scenario analysis. More recently, engagements have focused on encouraging companies to set credible and meaningful decarbonisation targets and linking these to executive remuneration.

Ausbil engages with companies for three key reasons. Firstly, we believe we can have a more positive impact on companies that are in dialogue with us, rather than if we simply exclude them as pariahs. Secondly, we want all companies to become more sustainable in their journey and increase the universe of where we can invest. And, finally, we need to understand the full distribution of ESG behaviours and outcomes to form a complete picture of both ends of the curve, from those in which we would never invest, to those we believe are exemplary on an ESG basis. Table 1 outlines some common areas of engagement on climate change.

Table 1: Some ongoing engagement activities on climate change

Activity	Rationale	Target	Progress
TCFD (Taskforce on Climate-related Financial Disclosure) reporting, including scenario analysis	We believe the TCFD standard, which includes scenario analysis, is the most holistic approach to reporting on climate change and enables investors to make better-informed investment decisions.	Encourage more companies to report against the TCFD standard.	Wide adoption of TCFD standards by companies we engaged. Subsequent engagements have focused on understanding and discussing the assumptions made in scenario analyses.
Adoption of voluntary say-on-climate resolutions	Say-on-climate resolutions enable investors to give feedback on and discuss a company's climate change approach in a more holistic way than individual shareholder resolutions.	Adoption of voluntary resolutions for relevant energy companies and some mining companies.	Companies have responded favourably by adopting these resolutions and Ausbil has continued its discussions with companies on their climate change approaches.
Proxy voting	In addition to engagement, Ausbil's escalation strategy is to vote against individual AGM resolutions.	We have no specific targets. Resolutions are assessed on individual merit.	Ausbil has voted against voluntary say-on-climate climate reports, and we have supported shareholder resolutions as appropriate.
Adoption of credible scope 1, 2 and 3 targets	*Climate change targets add credibility to a company's climate change strategy. This is implicitly part of the TCFD reporting engagement.*	*Relevant companies (typically high emitters) are the targets for these approaches.*	*More companies are adopting these targets, including increasingly setting scope 3 emissions targets.*
Linking climate disclosures and targets to executive remuneration	*Adding links to executive remuneration adds credibility and accountability.*	*Relevant companies (typically high emitters) are the targets for these approaches.*	*Companies are increasingly altering their executive remuneration structures.*

Source: Ausbil.

> "Ausbil considers the companies' approach to climate change and decarbonisation in our voting, and where it is wanting or absent, we are likely to vote accordingly"

When we form a holistic view of a company against the spectrum of ESG risks, we can then score and rank them on how they are today, and what direction and momentum they are taking looking forward. With a more complete picture, we can see which companies are not just generating sustainable earnings outcomes, but are also generating sustainable ESG and climate change outcomes.

5: Investors (even small) can drive change using the power of capital

In terms of corporate governance, proxy voting is another crucial 'pinch point' where Ausbil can influence companies to improve their performance across ESG issues, including climate change. Ausbil takes an active approach during the annual proxy voting season. Ultimately, our key consideration is the alignment between shareholders and company performance. We achieve that by demanding: performance hurdles; a remuneration framework that rewards the right behaviours; and a framework where management is not immune from the negative impact that shareholders might feel from bad performance.

Ausbil considers the companies' approach to climate change and decarbonisation in our voting, and where it is wanting or absent, we are likely to vote accordingly. Balancing engagement and advocacy with the power to exercise voting is an effective two-way approach to achieving change. We have helped many companies adopt climate reporting and targets, but we are keen to convince even more through our collaboration with other investors, and our own engagement and active voting.

Moving towards a cleaner world

The story is simple. Decarbonisation will be a big task, with both risk and opportunity for investors. It will take a concerted effort by companies and governments to achieve the Paris Agreement's goals. In general, Ausbil prefers engagement over divestment. We believe that by having a seat at the table, we have a better opportunity to encourage energy companies. This does not mean, necessarily, that we will invest in these companies. But it ensures we can help them on their journey towards climate neutrality.

There is significant complexity in the path to net zero, particularly for resource economies like Australia and Canada. But decarbonisation plans are now formally accelerated. While it is still too early to assess the outcomes (many policies must pass through national legislatures before they can be enacted), the wheels are in motion for major change. Ausbil will continue to advocate and engage for change. We want to see all companies adopt positive and committed climate policies and net zero targets so we can move towards a cleaner world.

"Decarbonisation will be a big task, with both risk and opportunity for investors. It will take a concerted effort by companies and governments to achieve the Paris Agreement's goals"

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