



# Making the climate transition bloom

Developing an impact-driven,  
Paris Agreement alignment and transition investment  
strategy in Latin America

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**About PACTA:** PACTA is an approach and toolset designed to support financial sector actors to make scenario alignment measurements. It compares what needs to happen in climate-relevant sectors in order to minimize global temperature rises with financial institutions' exposure to companies in these sectors. It uses a dynamic, forward-looking approach, based on the 5-year production plans of companies in a financial institution's portfolio. PACTA has been used by over 1,500 financial institutions worldwide, as well as by supervisors and central banks to assess their regulated entities (e.g. European Insurance and Occupational Pensions Authority (EIOPA), California Department of Insurance, Bank of England, and more). On average, more than 600 portfolios are tested every month using PACTA.

PACTA was originally developed by 2° Investing Initiative (2DII) with backing from UN Principles for Responsible Investment. In June 2022, 2DII transferred stewardship of PACTA to RMI, formerly the Rocky Mountain Institute. Under RMI's stewardship, PACTA will remain a free, independent, open-source methodology and tool, and will continue to provide the financial and supervisory community with forward-looking, science-based scenario analysis to help users make climate-aligned financing decisions.

**About 2 Degrees Investing Initiative:** Founded in 2012, the 2° Investing Initiative (2DII) is an international, non-profit think tank working to align financial markets and regulations with the Paris Agreement goals. Working globally with offices in Paris, New York, Berlin, and London, we coordinate the world's largest research projects on climate metrics in financial markets. In order to ensure our independence and the intellectual integrity of our work, we have a multi-stakeholder governance and funding structure, with representatives from a diverse array of financial institutions, regulators, policymakers, universities, and NGOs.

**About SURA Investment Management:** SURA Investment Management, a company from financial holding Grupo SURA, is a leading Latin American asset manager that offers investment solutions for institutional and corporate clients across six countries in the region. With an in-depth knowledge of the Latin American context and financial markets, SURA Investment Management manages over USD 12 billion in strategies across asset classes, including fixed income, private debt, equity, real estate and infrastructure. As part of its purpose of contributing to the sustainable development and wellbeing of the region, SURA Investment Management has a strong

commitment with the incorporation of environmental, social and governance criteria as an integral part of its investment processes and, in recent years, it has sought to become a regional leader in ESG and climate orientated investment strategies.

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# Foreword

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**Maarten Vleeschhouwer**

*Head of PACTA*

*RMI*

**Over the past decade, climate considerations have increasingly become part and parcel of mainstream finance.** As meeting our climate goals requires significant investment from both the public and the private sector, this is perhaps no surprise. Nevertheless, the pace at which climate has become mainstream, as well as the reach, from Latin America to Asia and from the Pacific to North America, is impressive. Climate considerations are at the forefront of the financial sector throughout the globe.

**This trend is clearly visible in the (i) rise of asset owners and asset managers that are setting net-zero portfolio targets and (ii) the vast increase of green financial products.** Over the past few years, more than 80 asset owners joined the Net-Zero Asset Owner Alliance, of which 44 have now set targets. More than 300 asset managers have joined the Net-Zero Asset Manager Initiative. The latter initiative even requires signatories to create investment products aligned with net zero emissions by 2050 and facilitate increased investment in climate solutions. According to PWC, ESG-related assets under management is expected to increase from US \$18.4tn in 2021 to US \$33.9tn by 2026.

**While this is a hopeful trend, there is little evidence that this trend is actually leading to a change in capital flows in a greener direction and leading to lower greenhouse gas emissions.** First, most green financial products focus on lowering overall portfolio emissions. As a result, many green funds simply avoid hard-to-abate sectors all together. While this leads to a lower carbon footprint, it does not lead to any real-world change. Moreover, these are exactly the sectors where the investment needs to decarbonize are highest. Second, the products tend to focus on an economy-wide carbon reduction rate approach to measuring alignment, as promoted by the EU, instead of looking sector by sector at what needs to happen and at what rate. These products focus on lowering the overall carbon footprint 7% year on year, but this is problematic as some sectors need to decarbonize much faster than others. A final problem is that for many green products it is actually unclear how the methodologies work in practice beyond these high-level explanations, and how these portfolio constraints play a role in the construction of the products.

**With time running out on keeping global warming to below 1.5°C, the time has now come to take the trend of integrating climate considerations in finance one step further, and pursue the development of better green financial products.** This paper puts forward an impact-driven Paris-Aligned transition investment strategy approach outlined, together with leading Latin American asset manager SURA Investment Management. The report puts the spotlight on the decision-usefulness of the different climate performance metrics available to asset managers – lining up past emissions data and science-based targets next to forward looking alignment – and on the credibility of companies’ future transition planning when held up to the light against business intelligence on their real plans.

**It is a first step towards integrating climate performance into the fundamentals of investment decision making, opening up the black box of portfolio construction in order to work out how climate performance can/should be factored into capital allocations.** It shows how PACTA’s forward looking climate alignment approach can be a powerful complement to the financial information currently used to make capital allocation decisions, getting to the heart of what investors need to know in order determine whether companies will expose investors to transition risk and whether those same companies are planning a credible path to transition. It also starts to show how in practice forward climate alignment results can inform strategies of engagement with investees designed to step away from divestment and drive a transition, providing a complementary tool that provides a tangible basis for high level discussions and objective measurement of companies’ progress.

With this report, the PACTA team continues to push the envelope on what it means to be Paris or net-zero aligned and on the missing link between integrating climate considerations in finance and lower greenhouse gas emissions in the real world. By partnering with SURA Investment Management, this report provides not only cutting-edge research, but analytics and approaches that are directly relevant and applicable for asset managers. All of this hopefully timely as well, because we have no time to lose in the fight against climate change.

# Foreword

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**María Ruiz Sierra**

*Head of Sustainable Investment  
SURA Investment Management*

**Climate change is one of the central issues of our times, and arguably the biggest challenge that we face as humanity.** The effects of rising temperatures are far reaching and already manifesting rapidly, with expected impacts on food security, livelihoods of vulnerable communities and infrastructure. Latin America is particularly exposed to the irreversible consequences of climate change, with the region's vulnerability exacerbated by social and economic factors such as high levels of poverty and inequality, as it was highlighted by one of the IPCC's most recent reports <sup>1</sup>.

**The imperative for collaborative and collective action is clearer than ever and, as a Latin American asset manager, we understand that we have the opportunity to contribute to climate objectives from our role, working together with institutional investors to progressively align their capital with a below 2°C pathway.** This, in turn, is an essential element of our sustainable investment strategy. We are convinced that developing capabilities on climate analysis strengthens our investment processes, as well as our ability to better assess investment risks and opportunities and navigate a changing environment.

**Since 2020, we have advanced in our climate strategy, and although we are aware that this requires long-term ambition and a sustained effort in the coming years, we have already made relevant steps.** For instance, we began the measurement of our portfolios' financed emissions in line with the PCAF global standard, which is the starting point to set credible decarbonization targets. Additionally, we have determined that we will not invest in coal-fuel power plants in our equity infrastructure strategy, and we have increased our exposure to assets with

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<sup>1</sup> Intergovernmental Panel on Climate Change, *Climate change 2022 – Mitigation of climate change: Sixth assessment report*, October 2021, <https://www.ipcc.ch/report/sixth-assessment-report-working-group-ii/>

positive climate impact, such as projects funded by green bonds and green certified buildings with a better performance in terms of energy efficiency.

**Assessing the alignment of our investments with different global temperature trajectories is fundamental to evaluate the portfolios' exposure to climate transition risks, as well as their contribution to climate goals.** This study, which has been funded by the German Government's International Climate Initiative (IKI) and undertaken as a partnership with the 2° investing initiative and RMI, has been instrumental in this purpose.

**Through a programme of action research, we sought to explore whether it was possible to create an investment strategy with securities from Latin American issuers that are leading the climate transition, and how that strategy could come about.** With the study, we evaluated the climate performance of over 200 companies from the region, we examined two alternatives to construct institutional fixed income and equity portfolios with the companies with the highest performance, and we explored mechanisms to promote CO<sub>2</sub> emission reductions and drive an energy transition in the real economy.

**We are excited to share the results of this journey in this report, through which we hope to nurture a critical regional and global discussion around portfolio climate alignment, and to give insights from the Latin American perspective that could be meaningful for the applicability of these type of strategies in emerging economies.** We would like this study to contribute to a deeper understanding of the climate investment landscape in the region seen through the lens of institutional and private capital, and that it will further the development of a more ambitious climate agenda within the investment community.



# Executive summary

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Since the Paris Agreement referred in 2015 to making financial flows consistent with the objective of managing climate change, there has been an increasing imperative for asset managers to consider as part of their fiduciary duty the need to 1) manage climate change risks and 2) play a more active role in fulfilling the Paris Agreement objectives of making capital flows consistent with a pathway towards stabilizing global temperatures to well below 2°C. The latter has come to be referred to as alignment with Paris Agreement objectives.

The alignment of capital allocations with the Paris Agreement objectives is particularly challenging in emerging markets, where economies are still heavily coupled with the use and export of fossil fuels, and capital markets are more concentrated and offer more limited investible universes. Likewise, ESG and thematic investing to contribute to environmental objectives is still at an earlier stage of development. To address this challenge in a Latin American context, the 2 Degrees Investing Initiative and RMI, with funding from IKI, worked with leading Latin American asset manager SURA Investment Management to develop and test a Paris-aligned transition investment fund concept.

Whilst there have been many public statements by investors of their commitment to ‘align’ their investments with 2030 and 2050 climate targets, there has been very limited analysis of what it means in practice to try and align a diversified portfolio allocation. The EU’s Climate and Paris Aligned Benchmark Regulation of 2020 was a first attempt to answer that question, setting economy-wide decarbonization targets accompanied by exclusions for high CO<sub>2</sub>-emitting activities. The approach taken by the EU raises fundamental questions about how to measure alignment at portfolio level and across industrial sectors with very different decarbonization pathways, technological transitions and investment needs, as well as the extent to which this information can lead to changes at company level that have an impact in the real economy. This study has sought to address the same question that this Regulation sought to address, but by developing an approach based on the measurement of climate performance across sectors and by addressing the related implications for portfolio construction, financial performance and investee relations.

The fund concept explored by this study would seek to contribute to the decarbonization of investment portfolios for institutional investors, as well as to promote the decarbonization of key industrial sectors by allocating capital to companies that are aligned with below 2°C sectoral decarbonization pathways. In the context of this study alignment is measured using the PACTA methodology, which uses 5-year forward-looking data on the capital commitments of companies. This forward looking, sectoral approach to evaluate alignment has a number of potential advantages for investors, including an improved ability to track and objectively evaluate investee performance as well as the management of potential value at risk from a disruptive future transition to a low carbon economy.

However, a fund that is composed only by a small number of companies that are already aligned in their capital investments or that are pure players in green technologies most probably would not be diversified enough or have the size to be viable for an institutional investor investment strategy. This is why it becomes necessary to explore different possible approaches to the fund's portfolio construction, grounded in the reality of the Latin American public capital markets. Additionally, it is necessary for investors to take an active role in driving the transition of existing industries, especially in the context of emerging markets where the decarbonization of the economy should be understood from a different perspective recognizing, for example, the dependence of some countries on fossil fuels as a source of public income and exports.

To address these challenges, a pilot study was carried out by RMI, 2DII and SURA IM to design prototype listed equity and bond portfolios with an active and forward-looking perspective on the climate performance of issuers and investee companies. The study is based on an evaluation of over 200 Latin American issuers, where possible, according to their alignment with below 2°C climate scenarios, and supplemented by their decarbonization commitments, plans and emission trajectories.

## Key results and messages from the study

- 1. Sector coverage and data gaps:** In seeking to measure the alignment of a diversified portfolio, there continue to be significant gaps in sectoral coverage and data disclosure.
- 2. The market trails on ambition:** although there are some companies with ambitious plans and leading practices, the broader market still trails and has significant potential to improve data availability and to advance on their transition.
- 3. A core of aligned holdings within a diversified, transition portfolio:** it is possible to build equity and corporate bonds portfolios with issuers that are aligned with below 2°C climate scenario pathways or that have set targets to achieve alignment with climate scenarios, but the portfolios would also need to include companies that may only currently have targets to be aligned and, for diversification reasons, that are from sectors that are less significant in terms of their absolute CO<sub>2</sub> emissions but that are nonetheless relevant in the Latin American markets and its main indices. With this approach, the focus of the fund would be placed on the advance in the transition, rather than on pure alignment.
- 4. The financial risk and return profile is viable:** for each portfolio tested the financial risk-return performance that can be achieved based on a back-testing analysis is consistent to the selected market benchmark (MSCI Latam and CEMBI Latam), demonstrated by tracking error ranging from +0.98 percent (fixed income) to +10.5 percent (listed equity) in the period analyzed (2016–2021). Both portfolios showed a return above the market benchmarks (2.6 percent for fixed income and 11.8 percent for listed equity) although this could respond to particular market conditions in the period analyzed and might not be caused by the climate alignment of the issuers.

5. **Engagement to drive transition and alignment:** there should also be a focus on engagement with companies to contribute to a low carbon transition of the economy, working together with the most relevant players in the region to drive the creation of credible transition plans and to make tangible, aligned capital commitments.
6. **Objective assessment of climate performance:** Forward-looking alignment measurement can provide an objective measurement of the outcomes of engagement and the performance of a fund product. This in turn contributes to an understanding of the credibility of issuers transition plans and targets based on the alignment of their underlying capital commitments.

The fund concept arising from the study has two main elements:

1. The asset manager role in contributing to driving a low carbon transition in Latin America by using their **portfolio allocation** decisions to incentivize issuers into alignment, and
2. By **engaging directly with high emitting companies** to request credible transition plans and an increase in their capital commitments so as to move towards low carbon technology in line with relevant scenarios.

Whilst the aim of a climate investment strategy would be to work with companies to ensure they are contributing on an active basis to the low carbon transition, certain issuer activities that are damaging to both climate and biodiversity in the Latam context, such as deforestation, are also proposed to be excluded or subject to monitoring, taking into account that deforestation and land-use changes are central issues for the decarbonization of the region.

By actively engaging with investee companies and bond issuers to align their climate performance and capital commitments with below 2°C decarbonization pathways, in addition to a portfolio construction based on the issuers' climate performance evaluation, **the fund concept would seek to contribute to CO<sub>2</sub> emissions reductions in the real economy over time.**

The outcomes from the study can therefore be seen to represent a first step in the process of integrating climate performance into the standard investment evaluation and portfolio construction process of an asset manager. Two key milestones in this direction can be highlighted from the study:

1. The integration of climate performance into security selection and portfolio weighting steps, with the resulting adjustments in issuer selection and capital allocations.
2. The use of company-level forward capital commitments as the basis for new metrics to evaluate the potential future performance of issuers, evaluated on a sectoral basis.

Taken together, their implementation as standard practice would represent a significant step towards placing climate performance at the core of investment decisions if applied across the sector.

The next logical step for potential further research would be the integration of climate analytics on the fundamentals of companies into investment decisions, for example considering how commercial exposure to transition risk might impact on their credit risk profile. This would be of particular relevance to the construction of bond portfolios.

# 1. Setting the scene – the climate alignment landscape

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This chapter sets the scene for the development of a Paris-Aligned transition fund in Latin America, reflecting on the current political and market landscape into which such a product would be launched. The background and motivations for designing such a fund concept are briefly set out, together with the rationale for basing a fund strategy on the use of climate scenario alignment measurement.

The study has been developed from the perspective of an asset manager operating in Latin America, in order to explore the particular elements that should be taken into account while implementing these types of investment strategies in emerging markets, as well as to highlight the relevance of the region in reaching global climate objectives.

## 1.1 The role of investors in mitigating climate change

It has been estimated that over the next three decades USD 6.9 trillion per year will be required to meet climate and development objectives, from which around half is needed for the transition of the energy sector alone (USD 3.5 trillion per year)<sup>2</sup>. Awareness of the role that private investors will need to take in mobilising this scale of capital to mitigate climate change has risen significantly in the last few years. This increased awareness can be seen to stem from the emphasis placed on sustainable finance in 2015's Paris Agreement on climate change, in which it was highlighted that multilateral and development finance alone would not be enough. Following the agreement, there have been other relevant milestones that have pushed forward the momentum, including:

- The 2017 Task Force on Climate-related Financial Disclosures (TCFD) recommendations for managing and disclosing systemic climate risk, which led to mainstream acceptance by financial regulators of the need to evaluate the risks and opportunities associated with climate change using tools like scenario analysis.
- The messages from successive scientific reports of the IPCC have driven home the need for urgent action to stabilize temperatures, with a focus since 2018 on the goal of 1.5°C;
- The 2018 Sustainable Finance action plan of the European Union has prompted significant activity (and demand) in the market for climate change-oriented investment products.
- The Covid-19 pandemic from 2020, which further strengthened the case for a new mainstream environmental awareness and gave rise to reflections on the fiduciary duty of investors to act with due diligence. This in turn has led to:
  - A significant increase in demand for thematic environmental funds as well as in the range of metrics offered by ESG (Environmental, Social and Governance) data providers.

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<sup>2</sup> OECD (2018) *Financing Climate Futures - Rethinking Infrastructure*



- A rise in the use of exclusionary screening, ESG integration and proxy voting rights by investors, and in particular by pension funds, in order to address high emitting assets such as coal fired power generation and oil & gas production.
- The establishment in the run up to COP26 in 2021 of a task force on finance together with a series of net zero initiatives in the financial sector, encompassing the insurance (NZIA), investment (NZAOA) and banking (NZBA), and culminating in the Glasgow Finance Alliance for Net Zero (GFANZ).

Above all, there is now a broad recognition by the financial community that we are at a point of inflexion for the global climate and that urgent action is required this decade in order to reduce the impacts of the imminent effects of climate change.

## 1.2 The Latin American market context

Latin America has also witnessed in recent years a growing momentum in the climate agenda, accompanied by a greater awareness of the connection between private capital flows and climate mitigation and adaptation objectives. Some countries have demonstrated ambitious commitments in their updated Nationally Determined Contributions (NDCs) that include, for instance, reaching peak emissions in 2025 in the case of Chile, and a reduction of 51% of CO<sub>2</sub> emissions by 2030 compared to a business-as-usual scenario in the case of Colombia. Central banks in Mexico and Colombia have carried out studies on the economic and financial impact of climate change risks, shedding light on the high materiality of this issue across sectors and locations, and providing financial regulators with more arguments to align their policies with climate objectives.

In the past three years new regulations have been adopted to promote greater environmental, social and governance (ESG) disclosure from issuers as part of their annual reports, as well as to establish requirements for pension funds and insurance companies to integrate ESG and climate-related risks into their asset and investment management. Furthermore, Colombia was the first country in the region to develop a Green Taxonomy, a tool that creates a common language to help with the identification and classification of activities that are in line with the country's environmental and climate commitments, and in this way promote more transparency in the growing green finance markets. This effort was followed by Mexico, who published its Sustainable Taxonomy in early 2023.

The issuance of thematic bonds in the region has also grown significantly, now reaching over USD 48,6 billion. Green bonds represent more than 60% of the total issuance, having doubled from USD 13,6 billion in 2019 to USD 30,2 billion by mid-2021<sup>3</sup>. These instruments have been mostly issued by corporates, but also include sovereign bonds from Chile, Mexico and Colombia.

The integration of ESG and climate criteria into investment decision-making has also expanded within Latin American institutional investors and asset managers. By September 2022 there were 126 PRI signatories in the region (excluding Brazil), having multiplied by four since 2019, and representing over USD 650 billion in assets under management. A group of investors seeking to place climate change as a central theme in the sustainable investing agenda of the region co-founded and participate in the PRI-led initiative ICIL (Climate Initiative for Latin American Investors), with the purpose of gaining specific knowledge in climate

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<sup>3</sup> Climate Bonds Initiative, *Latin America & Caribbean: Sustainable Finance State of the Market 2021*

analysis in different investment processes and exchanging perspectives on how decarbonization should be understood in the region.

With around 60% of the electricity generation capacity produced by renewable sources, Latin America is already well positioned to advance the energy transition, and has great potential to expand its wind and solar capacity <sup>4</sup>. This contrasts, however, with the relevance that fossil fuels continue to have in the region's exports, as well as being a source of tax revenue and therefore of public budget for social spending. This backdrop, combined with issues like deforestation and changes in land-use in key ecosystems like the Amazon rainforest, make Latin America an interesting and distinct context to analyse the feasibility of investment strategies with climate mitigation objectives.

### **1.3 Background and motivations for developing a 'Paris aligned' fund**

This study forms part of a research programme that was initiated by 2DII and is funded by the International Climate Initiative (IKI), which is focused on the Latam region. Germany's Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) supports IKI on the basis of a decision adopted by the German Bundestag. The study programme has been taken forward by the PACTA (Paris Agreement Capital Transition Assessment) team, starting in 2020 within 2DII and then continuing in 2022 with RMI, as a demonstration of the potential for the applied use of PACTA as a tool by investors in portfolio construction.

PACTA is a free to end users, open-source climate scenario analysis methodology and investor tool, with a focus on enabling the financial community to directly contribute to the goals of the Paris Agreement. To achieve this, measurement is made based on the forward-looking production plans of companies, built up from granular data at asset-level on their production facilities. This data is used to measure the alignment of their production – for example, their power stations, oil wells and car production plant – and the scale and rate of technological change and investment anticipated by climate scenarios.

A specific work package within the research programme set out the aim of developing an index-based climate fund concept that contributes to achieving the objectives of the Paris Agreement on climate change by focussing on assets in Latin American listed securities markets. Fund development is intended to focus on creating a solution that can catalyse private institutional investment and to analyse what it would entail in terms of asset evaluation and allocation, and whether or not it is feasible considering the reality of the current investible universe and market structure. The research has analysed listed equities and bonds of companies from the Latam region, seeking to incorporate a logic for integrating decarbonisation in the real economy into the investment strategy. In the future, other Paris-aligned products could be envisaged based on other assets classes and that follow a similar logic in terms of being designed to drive impact in the real economy.

SURA Investment Management is a leading Latin American asset manager with a presence in six countries of the region and over USD 12 billion in assets under management <sup>5</sup>. Its main clients are institutional investors including pension funds, insurance companies, wealth managers and corporates; and it offers a range of investment solutions in multiple asset classes, including fixed income, equity, private debt, real estate, and infrastructure. SURA Investment Management is part of Grupo SURA <sup>6</sup>, one of the largest

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<sup>4</sup> IEA, *Central and South America region*, profile, <https://www.iea.org/regions/central-south-america>

<sup>5</sup> SURA Investment Management, <https://im.sura-am.com/es>

<sup>6</sup> Grupo SURA, <https://www.gruposura.com/>

financial conglomerates in the region, with investments in the banking, insurance, pension and asset management sectors.

Grupo SURA has been included in the Dow Jones Sustainability Index since 2011, being ranked as the sixth most sustainable in the diversified financial services sector globally, and being the only one from the region to participate in the index. Sustainable investing, in turn, is central for SURA Investment Management's strategy, and the company has a strong commitment to advance in the integration of ESG criteria in its investment processes. More recently, SURA Investment Management has been developing its focus on climate alignment and the reduction of GHG emissions. This, in addition to its thorough understanding of the investment context in Latin America, makes SURA Investment Management a good fit as a partner to design and prototype a climate investment strategy.

## **1.4 Measuring portfolio alignment with the transition to a low carbon economy**

There is growing consensus that forward-looking alignment measurement based on scenario analysis is likely to have a significant role to play in supporting the transition to a low carbon economy. This is because the unprecedented scale of technological change, investment and regulation will require anticipation of whether transitions are taking place and the different pathways it could follow. The concept of measuring the 'alignment' of investment portfolios with climate change mitigation objectives was proposed by the 2 Degrees Investing Initiative (2DII) at the time of the Paris summit of 2015 at which the landmark agreement on climate change was signed. The resulting agreement enshrined the aims of:

*'Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels'*

Notably, it also implicated the financial community in achieving these aims by seeking in Article 2.1(c) to:

*"[make] finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development."*

The term 'alignment' with the Paris Agreement and associated climate goals has since then come to have a range of possible meanings as the number of climate thematic investment funds and, more generally, commitments to alignment with net-zero objectives and targets have increased (see Box 1.1).

Alignment is usually based on the use of scenario analysis as a tool. The use of scenario analysis in the financial sector is relatively new. A major driver for its use has been the identified need to manage the risks to the financial system posed by climate change. In 2017 the Task Force on Climate-Related Disclosures (TCFD) published its landmark report on the management of climate risks, giving a central role to scenario analysis as a tool to analyse on a forward-looking basis physical and transition-related future risks to the financial system, financial institutions and their investee companies. Transition risk may impact directly on the performance of investments in the medium to long term, particularly for investee companies in high emitting sectors for which scenarios anticipate rapid transformation of technologies and markets.

This focus on scenario analysis has since led to the start-up of a wide range of initiatives targeted at and involving the financial sector, with the intention of measuring the alignment of portfolios with climate scenarios and their trajectories. These range from target setting initiatives - such as the Science-based Target Initiative (SBTi) and the Net Zero Asset Owners Alliance (NZAOA) – to the development of scenario

tools and guidance – such as by the Network for Greening of the Financial System (NGFS) and the Inevitable Policy Response (IPR) as supported by the UN PRI.

The way in which alignment measurement is used to inform decision-making on capital allocation by investors poses a challenge to the designers of target setting frameworks, methodologies and metrics aimed at supporting ‘alignment’. For scenario analysis to play an effective role, it will need to provide actionable information on transitions that can inform decision-making, particularly in engagements with investee companies on their transition plans and investments.

#### Box 1.1

##### **What do we mean by ‘alignment’?**

In the context of this study the term *alignment* is understood to refer to a quantitative comparison, based on forward-looking metrics, of the performance of a company or portfolio of company investments, as expressed in terms of CO<sub>2</sub> emissions, an emissions intensity or production units compared to that anticipated by a climate change scenario for an economic activity.

To understand how this concept can apply to financial portfolios, the TCFD Portfolio Alignment Team report of October 2021 provided a further definition of ‘portfolio alignment’ as being:

*‘...the action of assessing the net-zero transition progress of the individual counterparties that make up a given financial portfolio, and determining whether or not, at an aggregate level, that group of counterparties are collectively Paris-aligned.*

*Achieving and maintaining portfolio alignment is necessary for a financial institution to be compliant with the goals of the Paris Agreement.’*

Moreover, BIS suggest that alignment measurement is intended to answer the following questions <sup>7</sup>:

*‘How does a portfolio compare with a climate goal and what needs to happen to ensure they align in the future?’*

In order to measure the alignment between financial flows and sectoral decarbonisation pathways, a consistent point of reference is need. This point of reference can be understood as a “climate indicator”. In the context of this study, the focus for alignment measurement are the underlying technology transitions required to achieve a climate goal – expressed in terms of production capacity changes or reductions in emissions intensity.

Throughout this study the lead climate indicator used is therefore a **forward-looking production unit**, defined at the asset level and allocated to companies owning the said assets. **Units of emissions intensity** are also used for sectors for which production-based metrics are not possible to use. The methodology that has been used to measure alignment is the Paris Agreement Capital Transition Assessment (PACTA) methodology which is further detailed in section 2.3.

In the PACTA alignment methodology, the decarbonisation efforts required by companies in each sector are derived from climate scenarios. These scenarios contain sectoral decarbonisation pathways on

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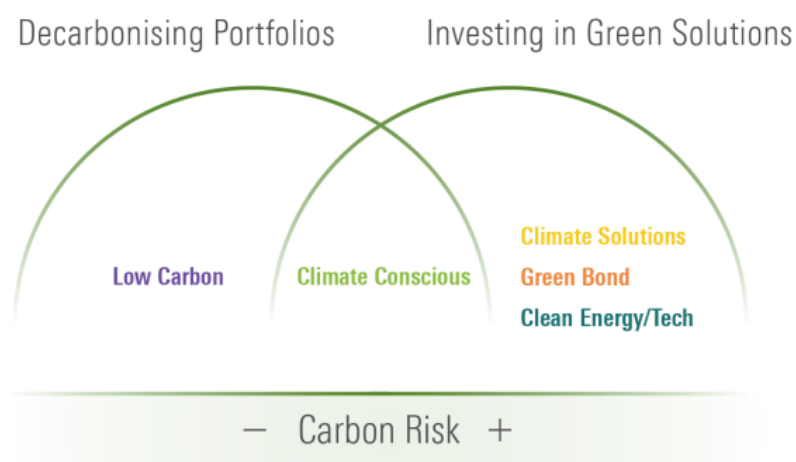
<sup>7</sup> BIS, *Climate-related financial risks – measurement methodologies*, April 2021

production trajectories that can then be allocated to the companies operating in these sectors and can, in turn, be used to measure alignment.

## 1.5 The market for climate change orientated investment fund products

A comprehensive recent market analysis of the evolution of climate orientated fund products is offered by Morningstar<sup>8</sup>. Growth has been particularly notable from 2020 onwards, reflecting a significant focus on environmental issues prompted by the global Covid-19 pandemic. The market now offers investors a relatively wide range of choices in terms of the fund aims and objectives, investment strategies and risk profiles. Their broad categorization of funds in the market is visualized in Figure 1.1. As will be explored further in section 2, the Paris Aligned transition fund concept is most closely aligned with a ‘low carbon’ strategy with the objective to offering a specific strategy designed to decarbonise a portfolio, but without excluding climate critical sectors; this means, a portfolio with a low-carbon forward-looking trajectory, rather than a low-carbon portfolio today.

Figure 1.1. Climate strategies of products in the fund universe



Source: Morningstar (2021)

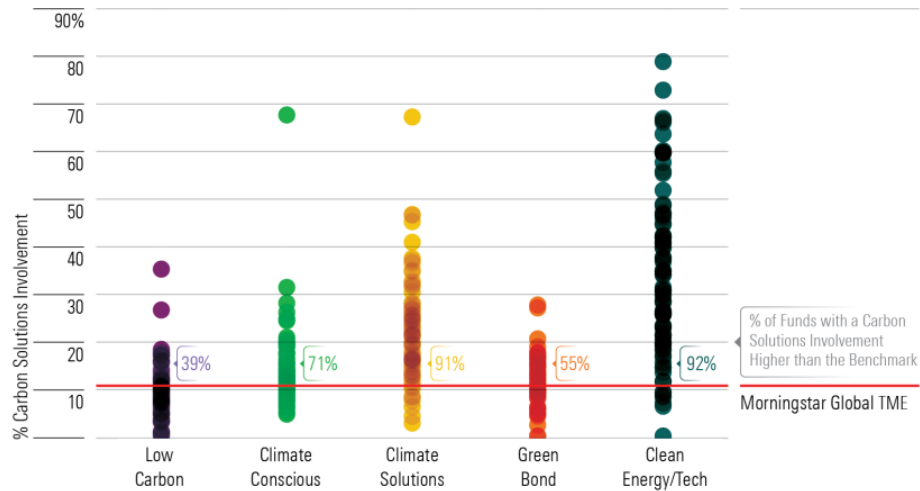
The majority of growth and capital allocation into climate orientated investment has occurred in Europe and the USA, accounting for over 85% of assets under management. Of these total assets under management the largest proportion are allocated to ‘clean energy/technology’ funds (31%), followed by ‘climate solutions’ (26%) and ‘low carbon’ (17%). Amongst these fund products a specific type of fund designed to comply with

<sup>8</sup> Morningstar, *Investing in Times of Climate Change: A Global View of the Expanding Choice Available to Climate-Aware Investors*, April 2021



2020 European rules on 'climate transition' and 'climate-aligned' funds has emerged. These are identified as falling into the 'low carbon' category.

Figure 1.2. Asset-weighted exposure of portfolios to 'carbon solutions'



Source: Morningstar (2021)

Whilst Morningstar provide some analysis of the financed emissions intensity of each fund in the market and also exposure to climate solutions (see Figure 1.2), there is very limited evidence available on which to evaluate the effectiveness of these different fund types in achieving real economy reductions in CO<sub>2</sub> emissions.

## 2. Defining what a ‘Paris-aligned fund’ is

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In this chapter we seek to define our understanding of what the investment strategy for a Paris Aligned transition fund should be, as well as the questions that should be answered in the research process to design such as fund portfolio. The existing EU definitions and benchmarks for such a fund are briefly explored and their implications for fund design discussed. The core concepts that will be used to design and test the fund concept - namely decarbonization pathway alignment and real economy impact management – are also briefly introduced.

### 2.1 Why not use existing ‘Climate transition’ and ‘Paris aligned benchmarks’?

One of the main drivers for this study is to respond to the approach laid down in the European Union’s Benchmark Regulation (EU) 2020/1818 that was introduced in July of 2020<sup>9</sup>. The Regulation responded to recommendations made by the Technical Expert Group (TEG) and forms one of the planned outcomes of the European Commission’s 2019 Sustainable Finance Action Plan. It was intended to define the legal framework for Climate Transition and Paris Aligned index funds.

At the time of its adoption, 2DII provided robust criticism of its likelihood of achieving its intended outcomes and also what the unintended outcomes may actually be, in terms of the potential for the way it is designed to achieve real reductions in CO<sub>2</sub> emissions of investee companies<sup>10</sup>. Box 2.1 sets out the main criticisms and weaknesses identified with the current benchmark framework.

One of the main criticisms is that different sectors will need to decarbonise at different rates and that this information is in turn needed in order to engage with companies in those sectors in order to orientate investment. The use of a single decarbonisation rate also takes no regard of how portfolio decarbonisation is to be achieved. Moreover, it does not answer the question as to how efforts to decarbonisation should be allocated between different companies in each sector.

Another area which the EU benchmarks do not touch on at all is the ‘impact’ of investment strategies. According to the benchmarks, the success of investment strategies will be measured by the ability of financial institutions to decarbonize their portfolios or align their portfolios with climate goals – independent of the extent to which this leads to or contributes to decarbonization in the economy more generally. There is no provision for the tracking of the underlying change achieved by a given investment strategy.

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<sup>9</sup> Commission Delegated Regulation (EU) 2020/1818 of 17 July 2020 supplementing Regulation (EU) 2016/1011 of the European Parliament and of the Council as regards minimum standards for EU Climate Transition Benchmarks and EU Paris-aligned Benchmarks, C/2020/4757, OJ L 406, 3.12.2020, p. 17–25

<sup>10</sup> 2 Degrees Investing Initiative, EU Climate Benchmarks Factsheet: Technical analysis of key elements of the climate benchmark standards & potential solutions, May 2020

Box 2.1.

### **Analysis of the current ‘Climate transition’ and ‘Paris aligned’ benchmarks**

The minimum standards for both the EU Climate Transitions Benchmark and EU Paris-aligned Benchmark involve two core components, which can be understood to derive from different investment objectives:

- 7% reduction of Greenhouse Gas (GHG) intensity year on year: This would be consistent with an impact objective (assuming that emissions reductions are real and not related to the trading of shares);
- Exclusionary filters: These are linked to do no harm objectives and/or certain risk strategies (specific to the EU Paris-aligned Benchmark)

The weaknesses in this approach can be identified by taking the case of an investor seeking to choose an index with the objective of contributing to real world emissions reduction:

- Benchmarking of emissions reductions: By starting with a lower GHG intensity as a prerequisite, the economy wide 7% annual reduction implies that index constituents, when they do reduce 7% year on year, reduce less emissions in absolute terms than an index that does not require lower GHG intensity as a starting point.
- Portfolio reallocation: This may render the 7% year on year portfolio reduction meaningless as a proxy for real world emissions reduction. Since there is no way to control for ‘emissions leakage’, the index design could incentivize investee companies to sell high-carbon assets rather than make a meaningful reduction to taking carbon out of the atmosphere.
- Use of an economy wide target: The 7% economy wide decarbonization target is an aggregate target in an economic scenario taking into account the entire economy. Sectors that are critical to reduce CO<sub>2</sub> emissions are underweighted within indices and so the target will not necessarily reflect the scale and rate of reductions required in those sectors. For example, the industrial sector is responsible for around 18% of global CO<sub>2</sub> emissions, but only represents ~7% of Scope 1 and 2 emissions in stock markets.

*Source: 2 Degrees Investing Initiative (2020)*

Two of 2DII’s key recommendations are directly relevant to a more impactful fund product design, and were as follows:

- Emissions trajectories should be sector specific and calculated using real economic outputs as denominators or using absolute pathways and be sector specific – in line with leading initiatives.
- Data quality and uncertainty should not be simply “estimated away” using imprecise emissions estimates, instead “technology indicators” should be considered where possible, which are less prone to data uncertainty.

These recommendations will be used to inform the key premises behind the Paris Aligned transition fund design, including the alignment measurement methodology to be used.

## 2.2 Designing and testing a Paris-aligned fund product

### 2.2.1 Key premises for a Paris-aligned fund

Development of such a fund starts from the overall goal of an investor contributing towards achievement of CO<sub>2</sub> emissions reductions in the real economy that are aligned with the Paris Agreement. The analysis and critique of Paris-aligned benchmarks in section 2.1 suggests that the concept of ‘Paris-alignment’ investment requires rethinking from a sectoral transition perspective rather than a financial markets perspective.

In order to realise the overall goal, a number of design premises have therefore been defined for such a fund product. The thinking behind these design premises is briefly discussed below:

- **A funds’ investment strategy would need to focus sector by sector on the ongoing achievement of scenario aligned reductions in emissions in line with expected transitions.**
  - This progress can potentially be measured using various metrics, with the important principle being the measurement of alignment relative to a future trajectory required to achieve the climate goal.
  - The decarbonisation trajectories and rates of reduction for the sectors in the portfolio should be based on pathways that have been developed based on the energy transitions required to contribute to achievement of a scenarios overall climate goal.
  - Whilst CO<sub>2</sub> or GHG emissions metrics could still be used, there is also the scope to use ‘technology indicators’ where possible, as these use the same units of measurement as the real economy changes that needs to happen e.g. the phase down of coal power capacity or the build-out of renewables capacity.
- **A further challenge that has come into focus, and which was highlighted in Chapter 1, is that the impact of different types of investment strategies on greenhouse gas (GHG) emissions reductions in the real economy is rarely tested.**
  - Given the imperative to ensure investment decisions are being translated into action, the concept of the *impact* that a fund product has in terms of real economy change and CO<sub>2</sub> emissions reductions is therefore critical.
  - A combination of performance measurement at investee company level and the use of ‘technology indicators’ would reduce the incentive for the investor to make improvements by portfolio re-allocation, instead focussing on forward capital allocation to technology transitions.
  - Instead of excluding companies from high emitting sectors, including fossil fuel production, the investor would engage with the companies to influence their strategic direction and investment plans.

Taken together, the premises in Box 2.2 imply a fund design and investment strategy that is potentially very different from current thematic climate and ESG funds.

Box 2.2.

### **Key premises of a 'Paris-aligned fund'**

In order for a fund to achieve and maintain Paris Agreement alignment over time, the portfolio design and management should seek to:

1. **Focus attention on the alignment and transition status of issuers in sectors that are critical in seeking to reduce CO<sub>2</sub> emissions.** This implies a specific focus on assets in high emitting sectors, including fossil fuel production, electricity generation, automotive, real estate, steel and cement. This will entail using sector decarbonization pathways in order to measure alignment. A sectoral focus will also provide a basis for the asset managers' analysts to engage with investees and build-up knowledge of their transition status over time.
2. **Measure performance of the underlying assets of its investee companies based on their forward-looking alignment with Paris agreement goals.** Other investment analysis can then be selected to complement alignment measurement. The underlying climate performance of companies shall be used to both screen the investible universe for the purpose of portfolio construction and to track the performance of investee companies in the portfolio.
3. **Maximise the impact of the investment decisions on company plans and the real economy.** The fund design shall take into account the state of the art in seeking to manage the impact of a financial product. This shall include an understanding of which mechanisms can be used to greatest effect by the asset manager and how the impact of their investment strategy on company decision-making and investments can be evidenced.
4. **Monitor year on year the alignment and transition status of each investee company.** The fund analytics and disclosures will be geared to ongoing tracking of the status of each investee company. This is with the aim of seeking outcomes from the active management of the fund.

### **2.2.2 Research questions for the design and testing**

This study has aimed to design the investment strategy and evaluation criteria for constructing a Paris Aligned transition fund, so as to address the issues and challenges we have identified. Then, working in conjunction with SURA Investment Management to identify how consideration of climate alignment can be integrated into equity or fixed income portfolio construction alongside financial considerations in the context of an emerging market. In order to guide this process, we set ourselves a number of key questions:

- How can the decarbonisation pathway alignment performance of companies be taken into account in the portfolio construction process?
  - How can technology indicators be used to measure the decarbonisation pathway alignment of investee companies and in which sectors?
  - How can the ongoing alignment of investee companies and real economy outcomes from active fund management be tracked over time?



- How can the overall impact of the fund be quantified and reported on?
  - What mechanisms can be used to achieve an impact on the production plans and investment strategies of the funds' investee companies?
  - How can the outcomes and impact of using these mechanisms be tracked and quantified over time?
- To what extent are different fund design options financially viable from a mainstream and thematic climate investor's perspective?
- What special considerations should be taken into account in emerging markets, given the characteristics of the investible universe and positioning in the transition?

## 2.3 The state of the art in fund design and investment strategy

In order to design and test the fund, the study has brought together two state-of-the-art alignment measurement and impact management methodologies developed by 2DII:

- **PACTA scenario alignment methodology:** The Paris Agreement Capital Transition Assessment (PACTA) methodology was launched in 2018. It is a methodology to assess the climate change scenario alignment of investor and bank lending portfolios. It enables the alignment of equities, bonds, and lending with decarbonization pathways, using 5-year forward-looking production plans of companies in climate critical sectors, to measure their alignment based the technological change anticipated in decarbonization scenarios. Since 2018 over 3,000 financial institutions have run portfolio analyses on the online investor tool.
- **CIMS management system:** The Climate Impact Management System (CIMS) was launched in pilot form in 2021. It is intended to focus attention on the selection of climate actions for which there is empirical evidence of impact in the real economy. It is designed to enable financial institutions to measure, assess and report on the impact of their capital allocation decisions. The CIMS has reached the end of a pilot stage that has involved major banks and investors. As a follow-up a new Impact Potential Assessment framework (IPAF) has been designed and launched in 2023 <sup>11</sup>.

Each methodology is the outcome of deep analysis of how investors can measure and track contributions to CO<sub>2</sub> emissions in the real economy. At each stage of the study, we have also sought to review and, where relevant, bring into the fund design broader thinking on investor climate strategies – for example, on the definition of company transition plans.

### 2.3.1 Climate change scenario alignment measurement – PACTA as an investment strategy component

Transition risk may directly impact the performance of investments in the medium to long term, particularly for investee companies in high-emitting sectors for which scenarios anticipate a rapid transformation of

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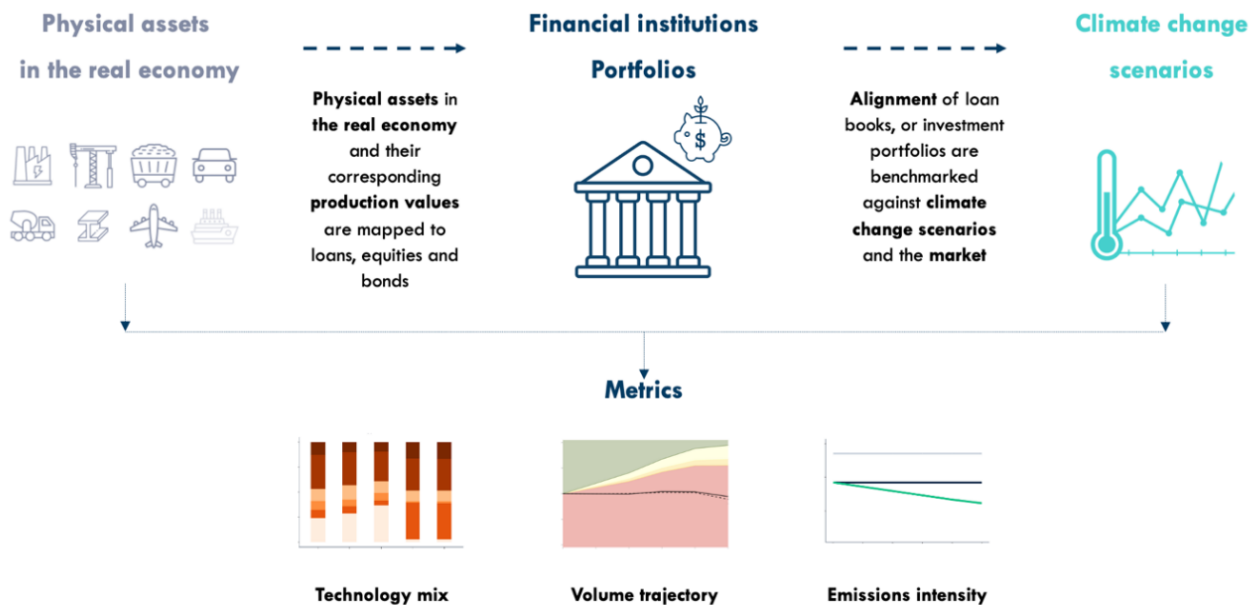
<sup>11</sup> 2 Degrees Investing Initiative, *Impact Potential Assessment Framework (IPAF)*, <https://2degrees-investing.org/resource/the-impact-potential-assessment-framework-ipaf-for-financial-products/>

technologies and markets. In this context, the use of alignment measurement has become an important tool to inform decision-making on capital allocation at both supervisory and investor level.

The 2DII sought to address this challenge in 2018, when it launched the free to end users, open source PACTA (Paris Agreement Capital Transition Assessment) climate scenario analysis methodology and investor tool, with a focus on enabling the financial community to directly contribute to the goals of the Paris Agreement. In June 2022, 2DII transferred stewardship of PACTA to RMI, formerly Rocky Mountain Institute, where it will now be further developed and scaled as both a methodology and set of tools to support financial sector actors.

PACTA is designed to support actionable alignment measurement. To achieve this, measurement is made based on the forward-looking production plans of companies, built up from granular data at asset-level on their production facilities. This data is used to measure the alignment of their production – for example, their power stations, oil wells and car production plant – and the scale and rate of technological change and investment anticipated by climate scenarios. PACTA has been used in this study to measure the scenario alignment of companies in SURA Investment Management’s investible universe on a 5-year forward looking basis. Figure 2.1 illustrates the overall PACTA methodology.

Figure 2.1. Overview of how the PACTA methodology works



### 2.3.2 Investor impact management - CIMS as an investment strategy component

An increasing focus amongst the financial community on ESG outcomes has led to the establishment of initiatives such as the Impact Management Project, which has brought together a large number of investors with the aim of mainstreaming practices to ‘*measure, assess and report*’ on the impact of capital allocation<sup>12</sup>.

<sup>12</sup> The IMP is now carried forward by Impact Frontiers, <https://impactfrontiers.org/norms/investor-contribution/>

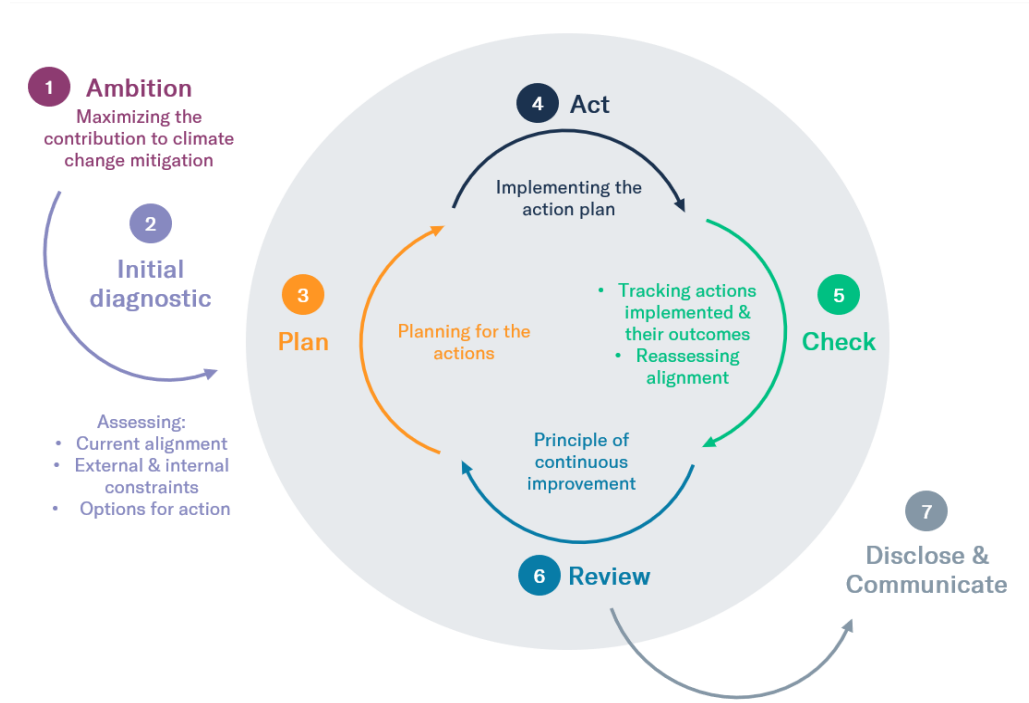
The Climate Impact Management System (CIMS) is 2DII’s response to this need and is designed to support financial institutions to:

- define the contribution that they can make to climate change mitigation,
- identify effective mitigation actions based on available scientific evidence and their specific constraints,
- plan for how to implement these actions and continuously improve,
- communicate accurately about it.

The management system approach can be particularly helpful for financial institutions with long-term climate change commitments that want to set up short-term plans to actively start to contribute to these commitments. The framework can be applied at the product, business line, or institutional level.

The Impact Management System builds on the plan > act > check > review cycle of existing standards and framework, such as ISO 14097 and 14001, the Eco Management and Audit Scheme (EMAS), as well as the Impact Management Project’s (IMP) framework (see Figure 2.2). It also references various tools and guidance documents that can assist financial institutions in the process of setting up impact-based climate strategies. CIMS has been used in this study to design survey materials on the implementation of potentially impactful climate actions that are introduced later in this report.

Figure 2.2. An impact management system for financial institutions



Source: 2Degrees Investing Initiative (2021)

Box 2.3.

### What do we mean by ‘impact’?

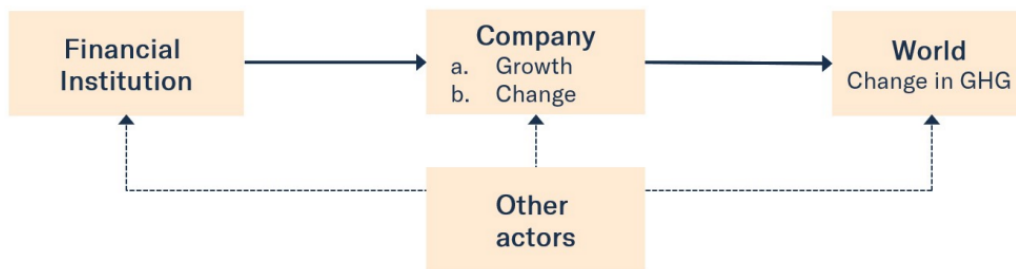
The impact of a financial institution (FI) and its portfolio investment strategies on climate change can be defined, in line with academic literature, as:

*‘the change that the portfolio manager causes in the activities of real-economy actors (most often companies) and how the change in those activities directly or indirectly reduces GHG emissions’.*

In effect, measuring impact requires analysis of the causal chain linking climate actions, change and outcomes from that change.

If we apply this definition to climate change, this change can either take the form of growth in a company’s activities (e.g. a growth of its green power production) or of a change in the quality of a company’s activities (e.g. an increase in the energy efficiency of a plant), as illustrated by Figure 2.3. It should be noted that this definition can be applied not only to positive impacts of the FI on climate change, but also to negative impacts. An example could for example be a growth in the activities of a coal extractor enabled by a banks’ loan.

Figure 2.3. A synthetic definition of Financial Institution impact



Source: Kölbel et al., 2018

‘Impact’ thus designates a causal, demonstrable relationship between a financial institution’s action and a real-world change – in the case of climate change, a change in GHG emissions. Many other factors, beyond the FI’s actions, can affect the activities of companies (e.g. consumer pressure, regulations, etc.). The FI’s impact is the share of the observed change that was caused by the FI’s actions.

Whilst empirical evidence for the impact of different investment strategies is unfortunately currently relatively limited, the literature suggests that the most effective action holders of corporate bonds and equities can take is corporate engagement, whereas exclusionary strategies are only effective when applied by a large number of financial institutions and where the threat of exclusion (divestment) drives specific improvements to be asked of companies.

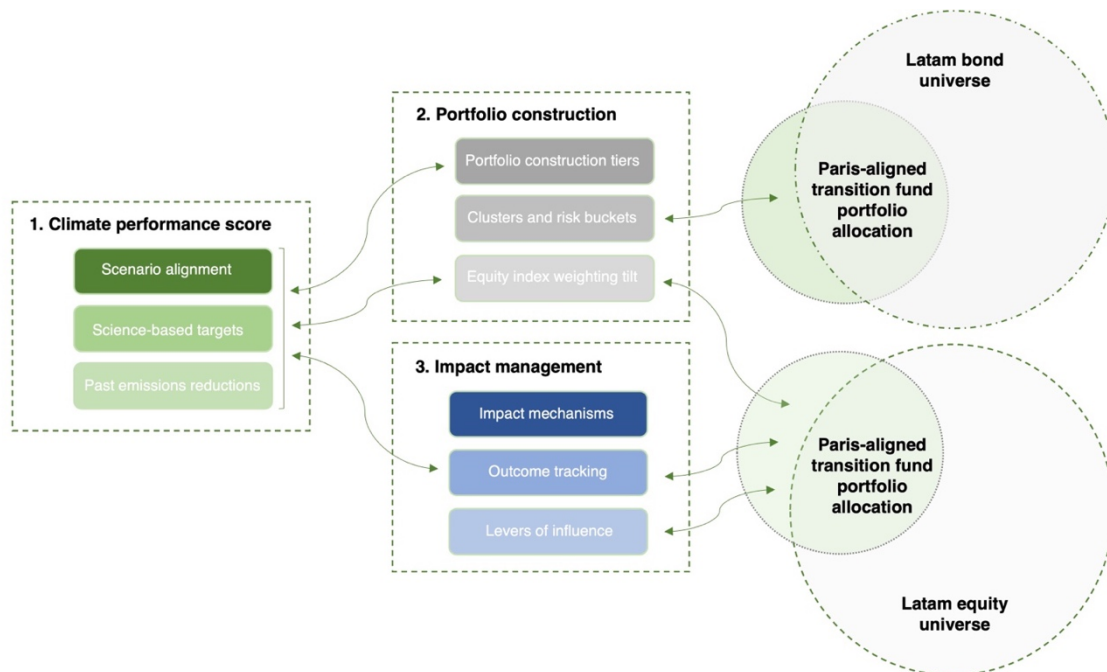
# 3. Design methodology for a ‘Paris-aligned’ transition fund

This chapter describes how the methodologies to design a Paris-aligned transition fund were developed and tested by 2DII, RMI and SURA Investment Management. This was very much an exploratory and iterative process, as no clear precedents are documented in the public domain. The three main components of the fund design (and the study) are described:

- **Sectoral climate performance evaluation (chapter 3.2-3.3):** An evaluation of companies from the Latam investible universe had to be designed. The evaluation combined a PACTA alignment measurement with supplementary climate performance metrics from third-party data providers.
- **Portfolio construction and financial analysis (chapter 3.4-3.6):** An approach to the construction of portfolios of equities and bonds required development, using a combination of climate performance, past financial performance and risk profile of investees, and companies’ market size.
- **Impact mechanism scoping and survey (chapter 3.7):** A process to scope relevant impact mechanisms and design an internal survey in order to tailor the impact management strategy

The interaction between these three core components and portfolio allocation for the equity and fixed income fund concepts is illustrated in Figure 3.1. Together, these components form an integrated fund design methodology. The results from applying it to SURA Investment Management’s investible universe are reported in Chapters 4 and 5.

Figure 3.1. Core components of the fund design methodology





### 3.1 Defining the investible universe

In this section we describe the methodology used to evaluate and shortlist companies from the Latam investible universe available to SURA Investment Management. The potential role for exclusionary policies in such a fund construction is also briefly discussed.

#### 3.1.1 The Latam investible universe of SURA Investment Management

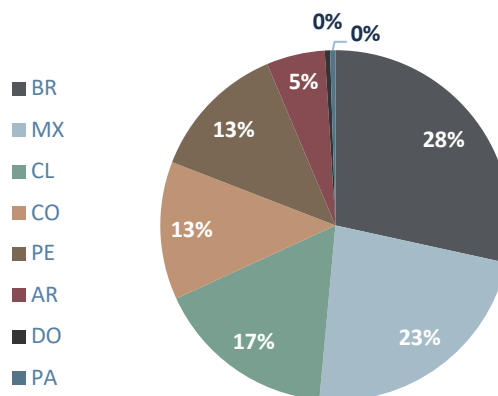
The investible universe consists of listed equity and corporate debt issuers, headquartered or operating in Latin American countries including Mexico, Colombia, Peru, Chile, and Brazil, and with physical assets largely located in those same countries. The criteria used to select the companies for the study are that they are:

- Constituents of a relevant regional index (MSCI Latam for equity <sup>13</sup> and CEMBI Latam <sup>14</sup> for fixed income) or the main national index of each country, and
- Issuers that already form part of SURA Investment Management’s coverage, meaning that they are subject to bottom-up in depth analysis by SURA’s equity and fixed income teams.

The investible universe used for the study is composed of 204 companies. No sectoral or ESG screening was performed ex-ante, as the aim was to compile a broad list of companies that are representative of the Latin American equity and corporate debt capital markets. Tables 3.1 and 3.2 provide an overview of the resulting country and sectoral distribution. From a sectoral perspective it can be seen in Table 3.2 that 30% of the issuers operate within sectors covered by PACTA.

Table 3.1. Country distribution of the investible universe

Country	Issuers	%
Brazil	58	28%
Mexico	47	23%
Chile	34	17%
Colombia	26	13%
Peru	26	13%
Argentina	11	5%
Dominican Rep.	1	0.5%
Panama	1	0.5%
	<b>204</b>	<b>100%</b>

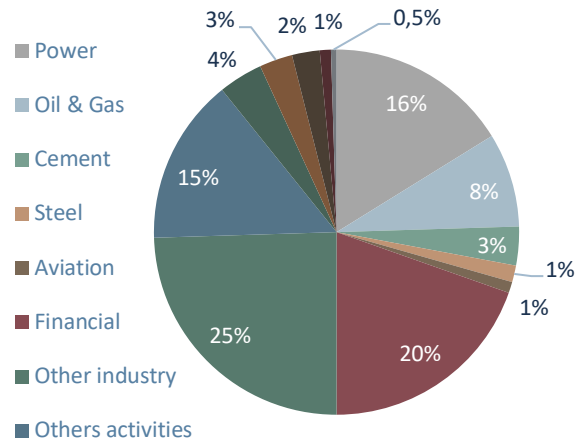


<sup>13</sup> MSCI Emerging Markets (EM) Latin America Index, <https://www.msci.com/research-and-insights/global-investing-trends/sectors-in-latin-america>

<sup>14</sup> J.P.Morgan, CEMBI Latam index

Table 3.2. Sectoral distribution of the investible universe

Sector		Issuers	%
Covered by PACTA <b>30%</b>	Power	33	16%
	Oil & Gas	17	8%
	Cement	7	3%
	Steel	3	1%
	Aviation	2	1%
Not covered by PACTA <b>70%</b>	Financial	40	20%
	Other industry <sup>15</sup>	50	25%
	Other activities <sup>16</sup>	30	15%
	Chemicals	8	4%
	Paper industry	6	3%
	Building construction	5	2%
	Other transport	2	1%
	Shipping	1	0.5%
		<b>204</b>	<b>100%</b>



As can be seen from this breakdown of the investible universe, the sectoral coverage of a portfolio reflecting the regional economy would be much wider than that currently possible to evaluate using PACTA, which is presently focused on the power, automotive, fossil fuel, steel, cement and aviation sectors.

In total, of the companies in the regional investible universe, 13 sectoral economic activities were identified using GICS classification codes. Whilst the fund strategy is intended to prioritise inclusion of holdings in high emitting sectors, as reflected by the scope of PACTA, it is still considered important from both an emissions reduction and an investment perspective to allow for the inclusion of other sectors that are addressed by climate scenarios such as buildings and paper manufacturing, as well as retaining the option for inclusion of some service sectors like financials, given the relevance they have in the Latin American capital markets. And the objective of developing a viable investment strategy for institutional investors. The study also tests and benchmarks the climate performance of the investible universe, so this could further narrow the range of companies.

Companies that operate in multiple sectors – referred to as conglomerates – are a specific case. These companies were assessed on a case-by-case basis to identify which sectors were of relevance for scoring. The decision making was based on two main criteria:

- The climate relevance of the sector/subsector activity; and
- A minimum 20% share of that activity in the company’s total revenues or it is the main activity of the company.

<sup>15</sup> Other industry includes food and beverages, materials, and infrastructure.

<sup>16</sup> Other activities include the information technology, communication, health services and retail.

### 3.1.2 Matching of company securities from the investible universe

Performing an analysis of the companies in the Latam investible universe requires a matching process to be run. This requires the following data points in order to identify the sector:

- Security identified for the equity or bond issuance (e.g. ISIN, CUSIP, SEDOL)
- Company Name (ultimate legal parent)
- Sector classification code (e.g. NAICS, BICS, GICS, NACE, ISICS)

Performance data is then matched from the library of data points by sector for each level in the scoring system described on section 3.2, and each company is checked for compliance at each level.

To obtain alignment results for PACTA sectors this process requires further steps to match a company with the underlying assets that it owns – for example, the power plants it operates and their capacities. Each potential investee is then identified amongst the companies in the asset-level data, in order to retrieve their production and technology profiles. This record-linkage process is referred to as ‘matching’.

Whenever unique identifiers - Legal Entity Identifiers, Bloomberg Global IDs, or the tickers for securities issued by these counterparties (ISINs, Financial Instrument Global Identifiers, Stock Exchange Daily Official List (UK), CUSIPs (USA)) – are available, they can be used for matching. The coverage result obtained for securities is provided in Section 4.1. When no or few unique identifiers are recorded, this matching process is performed using company names.

The purpose at this stage is to analyse the compliance at each level and the maximum score attained by each company. The further step of attributing the equity or bond holding of SURA Investment Management to the portfolio is not carried out until the last step when portfolio level alignment is measured for PACTA sectors. This step requires data on the market value of each holding, which will be taken from the results of the portfolio construction process. Depending on the attribution methodology, the total value of the free float of equity shares of each company and the total value of equity and bond assets under management are used.

### 3.1.3 Considerations for possible exclusions from the fund

As discussed in chapter 2, one of the principles of the fund design is to seek to maximise real economy impact. Evidence suggests that engagement with companies to improve their performance should take priority over exclusion from a portfolio. In this way it may be possible to move high emitting companies onto a path of transition.

This approach rules out applying the type of general exclusionary approach required by the EU Benchmark Regulation 2020/1818 (see Box 3.1). However, a number of special cases were identified which could warrant the careful use of conditional exclusions in order to send a signal to the market in the region:

- Phase down requirements for high emitting assets – conditionality: For specific high emitting activities inclusion in the fund could be made conditional on fulfilling a phase down requirement for specific assets e.g. a phase down in the production of coal from mining, a closure plan for coal fire power generating assets.
- Controversies relating to carbon sink damage - screening: For activities that may create the risk of irreversible environmental damage to critical natural carbon sinks, such as tropical forests, inclusion in the fund may be made conditional on fulfilment of responsible care requirements.

A conditional approach, as well a structured reaction to ESG controversies, will be examined in more detail as part of development of the impact management system (see chapter 5).

Box 3.1.

### **Exclusionary thresholds based on the EU Benchmark Regulation rules**

Article 17 of the Benchmark Regulation states that 'EU Paris-aligned Benchmarks shall exclude all of the following companies from those benchmarks:

- companies that derive 1% or more of their revenues from exploration, mining, extraction, distribution or refining of hard coal and lignite;
- companies that derive 10% or more of their revenues from the exploration, extraction, distribution or refining of oil fuels;
- companies that derive 50% or more of their revenues from the exploration, extraction, manufacturing or distribution of gaseous fuels;
- companies that derive 50% or more of their revenues from electricity generation with a GHG intensity of more than 100 g CO<sub>2</sub> e/kWh.

## **3.2 Sectoral climate performance evaluation methodology**

In this section the design of the climate performance evaluation is described, together with the metrics identified. This includes the distinct approaches to be used for both PACTA and non-PACTA sectors, as well as the options for sectors where alignment measurement is not currently possible.

During the process, the potential to request companies to develop a transition plan was also identified as an important action. Research was therefore undertaken to identify a model transition plan as the basis for scoring efforts by companies.

### **3.2.1 Design options for the evaluation of company climate actions**

The aim was to develop a method for evaluating the climate performance of companies in SURA's investible universe, to which scores would eventually be assigned. The priority was to be able to identify companies that are aligned with climate scenarios for sectors with decarbonization pathways. The evaluation therefore focused on the need to test how many companies would be able to meet this requirement and if the resulting fund composition would be sufficiently diversified to build an institutional investment strategy.

In order to develop a broad evaluation, it was decided to benchmark the performance of companies by establishing scoring that reflected a spectrum of climate ambition – from those that can demonstrate some limited past progress to those that have committed to major investments in low carbon technology and that are already aligned with climate scenarios for sectors with decarbonization pathways. The process is presented as a series of design decisions:

**Design option 1:** Award the highest levels of performance to companies that can demonstrate forward looking alignment with a climate scenario.

- Alignment of a company with a 2°C or better scenario pathway will be the main tool to determine whether investee companies and bond issuers are ‘Paris Aligned’. Alignment can either be measured for each technology that a company uses or produces – for example, coal power, renewable power – or a company level based on the aggregate performance for the different technologies.
- This would mainly focus on PACTA sectors, but it was identified that some non-PACTA sectors have decarbonization pathways defined in climate scenarios – for example, the paper sector. Alignment measurement would need to be made based on company reported production data and emissions intensities normalised to production values, as asset-based company data from PACTA is not available.
- The lead scenarios used within PACTA are those of the IEA. The two scenarios that would best correspond to Paris Agreement alignment would be the Sustainable Development Scenario (SDS) with a 1.65°C climate goal and the Beyond 2 Degrees Scenario (B2DS) with a 1.75°C climate goal. An additional 1.5°C scenario of the European Commission’s Joint Research Centre (JRC) could be used as well.

*Outcome:* Four possible scoring levels could be used, reflecting alignment with one or two scenarios (depending on sector coverage) at either technology or company aggregate level.

**Design option 2:** Award secondary levels of performance to companies for which alignment cannot be measured using PACTA and that can demonstrate the scenario alignment of their short/near term targets for decarbonisation.

- For both PACTA and non-PACTA sectors initiatives exist whereby companies can set forward-looking targets for decarbonization based on rates of reduction read from climate scenarios. An example is the Science-based Target Initiative (SBTI), which provides both a methodology, albeit for a limited number of sectors, and a third-party verification route. This is also possible on an unverified basis using target values taken from the scenarios, such as those produced by the IEA or the JRC.

*Outcome:* Three possible scoring levels could be used, reflecting the third party verified or unverified alignment of company decarbonisation targets with either a 1.5°C or 2.0°C scenarios.

**Design option 3:** Award tertiary levels of performance to companies that can demonstrate some present-day action and commitment to emissions reduction, which could be aligned with a scenario decarbonisation rate.

- For both PACTA and non-PACTA sectors datasets exist that enable a present-day rate of CO<sub>2</sub> emissions reductions, or the rate of reduction achieved in the recent past to be calculated and compared with a rate obtained from a scenario.
- Potential options for sectors where climate scenarios cannot be identified and for which there is no benchmark value include a simple overall decarbonisation rate and reported recent decreases in either absolute CO<sub>2</sub> emissions (scope 1-3)<sup>17</sup> or CO<sub>2</sub> emissions intensity normalised to a unit of production.

*Outcome:* Three possible scoring levels could be used, reflecting a recent decrease in CO<sub>2</sub> emissions that is aligned with a decarbonisation rate taken from a pathway or, for less points, a recent decrease which has

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<sup>17</sup> According to the Greenhouse Gas Protocol, scope 1 GHG emissions are from sources a company owns or controls, scope 2 from the generation of purchased electricity that is consumed in its owned or controlled equipment or operations and scope 3 from indirect GHG emissions outside of the organizational boundaries.

not reference pathway to benchmark it against. The setting of a decarbonisation target without any reference to a pathway can also be scored.

#### Discussion of the design options

A series of options were identified that can enable the climate performance and ambition of a company to be evaluated in units of production or emissions. The different options differ fundamentally based on whether they focus on past, present or future performance, as well as the extent to which they are measured based on:

- Announced future company commitments (design option 1),
- Potential future company performance based on the fulfilment of targets (design option 2), or
- Actual recent company performance data (design option 3).

Design option 1 was considered to be the most accurate one to evaluate Paris alignment, given that it would maintain a forward-looking element of measurement, whilst the second would only reflect targets set rather than actual capital commitments. The third option was considered to be the weakest as it only provides a look back evaluation of the decarbonization rate achieved by a company, usually on a 3–5-year time horizon.

Taken on their own, it was judged that options 2 and 3 should be rated lower than options which include an element of scenario alignment (1). But given that they can also provide evidence of a company's intent, they could also increase their performance evaluation – for example, if a company has made a commitment to a forward-looking decarbonisation rate and can, at the same time, show that in the recent past it has reduced its CO<sub>2</sub> emissions at the same rate.

### **3.2.2 Generic evaluation framework design and points allocation**

Taking the different options identified in Section 3.2.1, an evaluation framework was designed. The framework is structured into a series of levels with points allocations (see Table 3.3). The points allocation is designed to reflect the additional value of different items of data to the fund manager in seeking to evaluate a company's likelihood of making a forward-looking contribution to reducing CO<sub>2</sub> emissions in the real economy. The points are awarded on a pass or fail basis at each level.

Table 3.3. Generic evaluation framework and climate performance points allocation

	Evaluation level	Timeframe	Points
Level 1	PACTA B2DS scenario alignment, all technologies	Forward, 5 yr production forecast	130
Level 3	PACTA B2DS scenario alignment, aggregate	Forward, 5 yr production forecast	120
Level 2	PACTA SDS scenario alignment, all technologies	Forward, 5 yr production forecast	110
Level 4	PACTA SDS scenario alignment, aggregate	Forward, 5 yr production forecast	100
Level 5	Verified Science Based Target (SBTi or equivalent)	Forward, 5-15 yr trajectory	70
Level 6	Decarbonisation target set, aligned with 1.5°C decarbonisation rates	Forward, no timeframe	50
Level 7	Decarbonisation target set, aligned with 2.0°C decarbonisation rates	Forward, no timeframe	40
Level 8	Decrease in CO <sub>2</sub> emissions intensity aligned with 2.0°C decarbonisation rates	Lookback 2-3 yrs	30
Level 9	Decarbonisation target set, no alignment reference point	Forward, no timeframe	20
Level 10	Decrease in absolute CO <sub>2</sub> emissions	Lookback 2-3 yrs	10
Level 11	Decrease in CO <sub>2</sub> emissions intensity	Lookback 2-3 yrs	5

Minimum points requirement	50
Maximum possible points	160

**Levels 1-4** are scored significantly higher, reflecting the higher credibility of:

- Alignment measurement made using sectoral pathways,
- The potential in some sectors for technology alignment measurement,
- Company data that reflects announced future production commitments.

**Levels 5-7** are given intermediate weightings, as they are not based on forward-looking company data, but on the other hand do have a basis in target setting with reference to alignment with a scenario pathway. Performance can mainly be assessed at company level.

**Levels 8-11** are given the lowest weightings, as they only provide information on the current and past performance of the company, in some cases without reference to any benchmark or trajectory that can indicate how the company performance relative to a sectoral pathway or its peers. Performance can mainly be assessed at company level.

The scoring has been designed so that points from levels 5-7 can be combined with points from level 8 or levels 10 and 11 that are based on past achievements, as this can provide evidence to back up a target commitment. This can potentially take a company score up to a notional minimum threshold of 50 points.

Based on this broad approach, tailored hierarchies of criteria were developed for 12 individual categories of economic activities where a decarbonization scenario provided by a third party could be identified and where performance can mainly be evaluated at company level (see Tables 3.4 and 3.5). For some sectors very specific criteria – for example in the real estate sector – or criteria based on reference to technology taxonomies or specific industry practices were also considered. In sectors where no decarbonization specific scenario exists, for example financials, the number of levels that can be used to score was more limited.



Table 3.4. Sector coverage and example sectoral criteria hierarchies used for scoring

PACTA sector criteria	Non-PACTA sector criteria
<p>Sectors in scope:</p> <ul style="list-style-type: none"> <li>• Upstream oil &amp; gas production</li> <li>• Power generation</li> <li>• Steel production</li> <li>• Cement production</li> <li>• Aviation (passenger and freight)</li> </ul>	<p>Sectors in scope:</p> <ul style="list-style-type: none"> <li>• Real estate</li> <li>• Paper production</li> <li>• Chemicals production</li> <li>• Shipping</li> <li>• Telecommunications</li> <li>• Financials</li> <li>• Other industry</li> <li>• Other activities (general criteria) <sup>18</sup></li> </ul>
Examples of sectoral criteria	
<p><b>Power generation</b></p> <ol style="list-style-type: none"> <li>1. the PACTA analysis shows the company is aligned with the IEA below 2°C scenario (B2DS) in each technology from 2020 to 2025.</li> <li>2. the PACTA analysis shows the company is aligned with the IEA 2°C scenario (SDS) in each technology from 2020 to 2025.</li> <li>3. the PACTA analysis shows the company is aligned with the IEA below 2°C scenario (B2DS) in the technologies aggregate in 2025</li> <li>4. the PACTA analysis shows the company is aligned with the IEA 2°C scenario (SDS) in the technologies aggregate in 2025.</li> <li>5. The company has a verified Science Based Target that is aligned with 2°C or below scenario.</li> <li>6. <i>(no equivalent performance level for the sector)</i></li> <li>7. <i>(no equivalent performance level for the sector)</i></li> <li>8. The company has a decarbonization target (scope 1 and 2) that is aligned with the decarbonization rates in annex 1.</li> <li>9. The company has a decarbonization target.</li> <li>10. The absolute emissions of the company (scope 1 and 2) have decreased over the past years.</li> </ol>	<p><b>Chemicals manufacturing</b></p> <ol style="list-style-type: none"> <li>1. The energy intensity of the company is aligned with the IEA SDS scenario in 2025.</li> <li>2. <i>(no equivalent scenario alignment performance level)</i></li> <li>3. <i>(no equivalent scenario alignment performance level)</i></li> <li>4. <i>(no equivalent scenario alignment performance level)</i></li> <li>5. The company has a confirmed Science Based Target that is aligned with a below or a 2°C scenario</li> <li>6. The company has a decarbonization target that is aligned with the decarbonization rate in annex 1.</li> <li>7. <i>(no equivalent performance level for the sector)</i></li> <li>8. The company is following the decarbonization rate described in annex 1 over the past 3-5 years.</li> <li>9. The company has a decarbonization target</li> <li>10. The absolute emissions (including scope 1, 2 and 3) of the company has decreased over the past years.</li> </ol>

<sup>18</sup> This category includes important sectors in the investible universe such as telecommunications, consumer staples, food, and beverages.

11. The emissions intensity of the company (scope 1 and 2) has decreased over the past years.

11. The emissions intensity (including scope 1, 2 and 3) of the company has decreased over the past years.

Table 3.5. Overview of the level criteria and data sources

Industry group	GICS Sector	PACTA sector	Level 1	Level 2	Level 3	Level 4	Level 5
Power	Utilities	x	PACTA -all technologies B2DS 2025	PACTA - technology aggregate B2DS 2025 and respecting carbon budget	PACTA - all technology SDS 2025	PACTA - technology aggregate SDS 2025 or respecting carbon budget	Science Based Targets Initiative (SBTI)
Cement	Materials	x	PACTA - emission intensity B2DS 2025				Science Based Targets Initiative (SBTI)
Aviation	Industrials	x	PACTA - emission intensity GECO 1.5°C 2025		PACTA - emission intensity GECO 2.0°C 2020		Science Based Targets Initiative (SBTI)
Oil & Gas	Energy	x	PACTA – oil & gas B2DS 2025	PACTA - aggregate technology B2DS 2025	PACTA – oil & gas SDS 2025	PACTA - aggregate technologies SDS 2025	Science Based Targets Initiative (SBTI)
Paper industry	Materials		Recycled fibre use in line with SDS level annex 1 - Refinitiv				Science Based Targets Initiative (SBTI)
Chemicals	Materials		Energy intensity in line with SDS 2025 - CDP				Science Based Targets Initiative (SBTI)
Building construction	Industrials		Emissions intensity in line with ETP 2DS in 2025	For new build: NZEB performance as a target	For existing stock: renovation rate to decrease energy consumption		Science Based Targets Initiative (SBTI)
Shipping	Industrials		Emission intensity GECO 1.5°C 2025 - CDP				Science Based Targets Initiative (SBTI)
Other transport	Industrials		Energy intensity in line with SDS 2025 - Refinitiv				Science Based Targets Initiative (SBTI)
Financial	Financials						Science Based Targets Initiative (SBTI)
<b>Climate score</b>			<b>130</b>	<b>120</b>	<b>110</b>	<b>100</b>	<b>70</b>

Industry group	GICS Sector	Level 6	Level 7	Level 8	Level 9	Level 10	Level 11
Power	Utilities	Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (CDP, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)	Decrease in emission intensity with 2.0°C decarbonization rates (MSCI)	Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2) - MSCI
Cement	Materials	Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)	Decrease in emission intensity with 2.0°C decarbonization rates (MSCI)	Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2) - MSCI
Aviation	Industrials	Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (CDP, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)	Decrease in emission intensity with 2.0°C decarbonization rates (MSCI)	Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2) - MSCI
Oil & Gas	Energy	Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (CDP, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)		Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2+3) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2+3) - MSCI
Paper industry	Materials	Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (CDP, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)	Decrease in emission intensity with 2.0°C decarbonization rates (MSCI)	Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2) - MSCI
Chemicals	Materials	Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (CDP, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)	Decrease in emission intensity with 2.0°C decarbonization rates (MSCI)	Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2+3) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2+3) - MSCI
Building construction	Industrials	Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (Annex 1 - CDP, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)	Decrease in emission intensity with 2.0°C decarbonization rates (MSCI)	Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2) - MSCI

Industry group	GICS Sector	Level 6	Level 7	Level 8	Level 9	Level 10	Level 11
Shipping	Industrials	Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (CDP, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)	Decrease in emission intensity with 2.0°C decarbonization rates (MSCI)	Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2) - MSCI
Other transport	Industrials	Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (CDP, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)	Decrease in energy intensity with 2.0°C decarbonization rates (MSCI)	Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2) - MSCI
Financial	Financials	Improvement on the indicators in annex 2 (Net zero)	Improvement on the indicators in annex 2 (2°C)	Decarbonization targets and commitments on its investments/lending		Decrease in absolute emissions (scope 1+2+3) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2+3) - MSCI
Other activities		Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (CDP, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)	Decrease in emission intensity with 2.0°C decarbonization rates (MSCI)	Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2+3) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2+3) - MSCI
Other industry		Decarbonization target (scope 1+2) aligned with 1.5°C decarbonization rates (CDP, Refinitiv, MSCI)	Wide decarbonization target (scope 1+2) aligned with 2.0°C decarbonization rates (CDP, Refinitiv, MSCI)	Decrease in emission intensity with 2.0°C decarbonization rates (MSCI)	Decarbonization target - CDP, MSCI, Refinitiv	Decrease in absolute emissions (scope 1+2+3) - MSCI, Refinitiv	Decrease in emission intensity (scope1+2+3) - MSCI

<b>Climate score</b>	<b>50</b>	<b>40</b>	<b>30</b>	<b>20</b>	<b>10</b>	<b>5</b>
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### 3.2.3 Climate performance tiers for portfolio construction

In order to support the portfolio construction process, a simplified version of the levels described in Section 3.2.2 was deemed necessary. Seeking to categorise and select potential investee companies to include in the Paris-aligned transition funds, climate score thresholds were defined for different groups of companies in tiers:

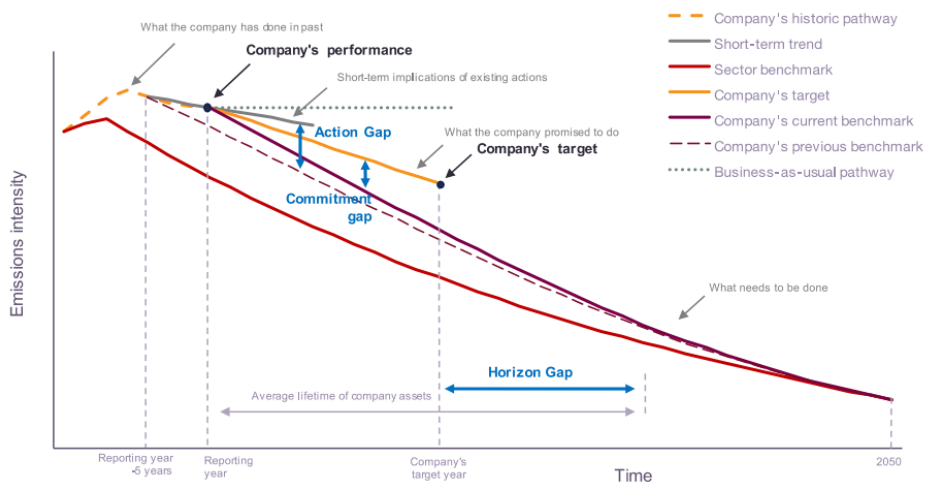
- Tier 1.** Companies whose 5-year forward looking capital commitments are aligned with below 2°C scenarios (threshold 100 points)
- Tier 2.** Companies whose 5 or 10-year forward looking target setting is aligned with below 2°C scenarios (threshold: 50 points)
- Tier 3.** Companies whose present-day CO<sub>2</sub> emissions are aligned with decarbonisation trajectories or who have reduced their emissions in the last 2-3 years (threshold: *calculated based on peer comparison*)

Elements of this categorisation are reflected in current best practice, such as the commitment gap philosophy used by the ACT initiative<sup>19</sup>, which is used to assess the transition status of companies (see Figure 3.2) and, more recently, the target credibility weighting method proposed by GFANZ<sup>20</sup>. In order to assess a company's transition status evidence from three different parameters is analysed:

- The '**commitment gap**' implied by targets and forecasted alignment, which is reflected in the first tier based on forward looking alignment and science base targets
- The '**action gap**' implied by current performance, which is reflected in the second tier and short-term targets
- **Recent past performance**, which is reflected in the third tier we have identified.

Forward looking targets and commitments are weighted the highest, followed by current actions and past performance.

Figure 3.2. ACT transition assessment action and commitment gap identification



Source: ACT (2019)

<sup>19</sup> ACT framework, *Assessing low carbon transition*, March 2019

<sup>20</sup> GFANZ, *Measuring portfolio alignment: driving enhancement, convergence and adoption*, November 2022

## 3.3 Climate performance methodologies and data points

### 3.3.1 PACTA sector climate performance evaluations

Use of PACTA supports points allocation at levels 1-4 in the climate performance hierarchy developed. This section provides a description of how the PACTA methodology has been used to measure climate scenario alignment, for which sectors and using which scenarios. First at company level and then, following portfolio construction, at portfolio level. In addition, the choice of methodology to aggregate PACTA results for a company is described.

In summary, the analysis using the PACTA methodology consists of the following main steps:

- **Matching** of company securities to the asset-based company dataset (ABCD) using ISIN codes which are unique to each equity and bond issuance by a company.
- **Selection of climate scenarios** with sectoral pathways that can be used for the purpose of alignment measurement, and which reflect the requirement level of ambition for the fund.
- **Alignment measurement** of each company's 5-year production forecast using either a production volume trajectory (for power, automotive, oil, gas and coal) or an emissions intensity metric (steel, cement and aviation).
- **Aggregation** at company level of technology alignment measurements in the power, fossil fuel and automotive sectors, for which alignment is measured for each individual technology.

The alignment measurements are made using two principal scenarios, chosen to represent Paris Agreement climate change temperature goals. The main two scenarios used are the International Energy Agency (IEA) Sustainable Development Scenario (SDS) and Below 2 Degrees Scenario (B2DS). In addition, the Joint Research Centre's (JRC) Global Energy & Climate Outlook (GECO) 2019 1.5°C scenario is used for the shipping sector.

#### 3.3.1.1 Selection of the climate scenarios

Scenarios from two developers are used for the evaluations – the IEA and the European Commission. The main scenarios used are the IEA's Sustainable Development Scenario (SDS), taken from the World Energy Outlook (WEO) 2020 edition <sup>21</sup> and the IEA's Beyond 2 Degrees Scenario (B2DS), taken from the Energy Technology Perspectives (ETP) 2017 edition <sup>22</sup>. These two scenarios are used because of their broad sector coverage, their data granularity and because both provide sector pathways aimed at achieving a below 2°C Paris Aligned world:

- **Sustainable Development Scenario (SDS):** This scenario aims to meet stricter sustainable development goals. This requires rapid and widespread changes across all parts of the energy system. It is aligned with the goals set out in the Paris Agreement, with a 50% chance of limiting global temperature rise to below 1.65°C by the end of the century, as well as objectives related to universal energy access and cleaner air. These efforts are shared amongst multiple fuels and technologies. (IEA, 2020)

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<sup>21</sup> IEA, World Energy Outlook (2020)

<sup>22</sup> IEA, Energy Technology Perspective (2017)



- **The Beyond 2 Degrees Scenario (B2DS):** This scenario aims to limit with a 50% chance global temperature rise to 1.75°C above pre-industrial levels. This scenario does not necessarily follow the most economically efficient pathway. However, it does not depend on the breakthrough of unforeseen technologies. i.e. all technologies included in the ETP are already commercially available or will be within the time frame of the scenario.<sup>23</sup> Energy sector emissions are anticipated to reach net zero around 2060, achieved through a heavy reliance on bioenergy with carbon capture and storage. (IEA, 2017)

One European Commission scenario is used in order to provide coverage for sectors not fully covered by the IEA. The 1.5°C scenario taken from the Global Energy & Climate Outlook (GECO) 2019 edition <sup>24</sup> is used:

- **1.5° Scenario:** The 1.5°C scenario was designed assuming a global GHG trajectory consistent with the probability of achieving the long-term goal (2100) of a temperature increase below 1.5°C above pre-industrial times. To meet this target, the scenario proposes an 84% reduction in GHGs by 2050 compared to 2018 levels, achieving a net-zero emissions level around 2060. Electrification plays a key role in decarbonization to reach the target. This will require an increase in end-use energy efficiency, the transition from fossil fuels in mobility to electric vehicles and derived fuels (green hydrogen, e-fuels), and the mobilization of new energy solutions and the production of low-carbon synthetic fuels.

### 3.3.1.2 Measurement of alignment for high-carbon-emitting sectors using scenarios

The climate alignment of each company in a PACTA sector is calculated differently depending on whether a clearly identified technology roadmaps and decarbonization pathways exist for these sectors (see Box 3.2).

For power, fossil fuels and automotive, there are clear transitions between low- or zero-carbon technologies and a data time series for the transition of each technology is available. For example, in the power sector, power generation has to transition from fossil fuels to renewables. In these sectors, **production volume trajectory** alignment metrics are used, and results is obtained for each technology.

For the steel, cement, and aviation sectors technology decarbonization pathways are not so well defined. A different approach is therefore needed. For these sectors, climate change scenarios do not currently prescribe production trajectories for specific technologies producing the economic units of output. They do however provide absolute values for production and carbon emissions. In these sectors **emissions intensity** alignment metrics are used and a result is obtained for each company.

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<sup>23</sup> Note that this is what the authors (i.e. the IEA) define as being breakthrough or unforeseen technologies. This is of course subjective so it should be noted as an assumption.

<sup>24</sup> European Comission (2019) *Global Energy and Climate Outlook (GECO)*, DG Joint Research Centre

Box 3.2.

### **PACTA scenario alignment measurement formulas**

Two different formulas are used to calculate the decline or increase in the production required for PACTA sector fuels and technologies. These formulas are used to ‘read’ what the scenario anticipates at a macro-economic scale for each sector and allocate it to each micro-economic actor (i.e. company). These formulas can be found in Annex D of ISO 14097 <sup>25</sup>.

- **Production Volume Trajectory** - this measures the alignment of company’s production volume per technology/fuel against trends prescribed in climate change scenarios. For technologies for which production must in the future decline, the PACTA ‘technology market share rate’ (TMSR) formula is used to calculate the scenario target for companies against which alignment is measured. For technologies for which production must in the future increase, the PACTA ‘sector market share percentage’ (SMSPP) formula is used to calculate the scenario target for companies against which alignment is measured.
- **Emission Intensity convergence** - this metric compares the current and projected emission intensity of a company to an emission intensity prescribed by climate change scenarios. The latter is calculated for each company based on the convergence of the company’s emissions intensity with the scenario value in 2050. The emission intensity of the company is calculated by normalizing the CO<sub>2</sub> emissions in a given year to the production output in the same year. This metric is an adaptation of the Sectoral Decarbonization Approach (SDA) designed by the Science Based Targets Initiative (SBTI).

For each metric, the alignment measurement is made by comparing the production trajectory or emissions intensity trajectory of the scenario with a 5-year production forecast for the company.

#### **3.3.1.3 Technology aggregation to give a company alignment**

The production trajectory method measures alignment for individual technologies and fuels. However, for purpose of this climate performance evaluation it was deemed important to also be able to derive an aggregate company level performance. To do so, a methodology developed by InfluenceMap<sup>26</sup> was adapted in order to weight and aggregate the alignment results for each individual technology. The steps in obtaining an aggregate score are briefly described below.

The first step is to measure an alignment in a technology. The InfluenceMap methodology uses a different approach to PACTA. It measures alignment using the technology build out – which basically describes what percentage of the phase out or buildout of technologies prescribed by a scenario are forecast to be fulfilled.

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<sup>25</sup> International Standards Organisation, *ISO 14097: Greenhouse gas management and related activities — Framework including principles and requirements for assessing and reporting investments and financing activities related to climate change*, 1<sup>st</sup> Edition May 2021.

<sup>26</sup> FinanceMap is an initiative of InfluenceMap for which a technology aggregate was developed. <https://financemap.org/>

The formula is presented below:

$$build - out\ alignment = \begin{cases} \frac{production(final\ year) - scenario(final\ year)}{scenario(final\ year) - production(first\ year)} & \text{for green tech} \\ \frac{scenario(final\ year) - production(final\ year)}{scenario(final\ year) - production(first\ year)} & \text{for brown tech} \end{cases}$$

Next step is to weight the alignment results for each technology. To do this, two parameters judged important to aggregate PACTA results are combined:

- The importance of the technology in the transition: to take this into consideration, we weight based on how much CO<sub>2</sub> increase or decreases between a Business-As-Usual scenario and a Paris Aligned scenario.
- The importance of the technology in the company portfolio: to take this into account, we used the technology mix planned by the scenario in the last year of the analysis for a company.

As a result, the technology aggregate score at a company level will then be:

$$company\ score = \sum_{technology} \frac{W_{tech} * TechMix(scenario, t5) * build - out\ alignment}{\sum_{technology} W_{tech} * TechMix(scenario, t5)}$$

T5 is the technology mix in year 5 of the forward-looking company data.

$W_{tech}$  is the weight of avoided emissions by technology,

The weighting factors used in the formula were calculated by InfluenceMap and are based on the CO<sub>2</sub> emissions savings to be achieved by technology by 2050 in the IEA B2DS scenario (see Table 3.6 below).

Table 3.6. Weighting factors for avoided emissions by sector

Sector	Technology	Technology Weight ( $W_{tech}$ )
Power	Coal	0,25
	Gas	0,06
	Oil	0,02
	Hydro	0,09
	Nuclear	0,11
	Renewable	0,46
Oil and Gas	Gas	0,34
	Oil	0,66

### 3.3.2 Non-PACTA sector climate performance evaluations

This section provides a brief description of how the climate performance evaluation was designed for non-PACTA sectors, which are:

- Real estate
- Paper production
- Chemicals production
- Shipping
- Telecommunications
- Finance
- Other (general criteria) <sup>27</sup>

Table 3.5 already provided an overview of the metrics and data sources considered for each sector. This section comments further on the design of the points scoring for the climate performance evaluation of each company. These sectors were for the most part possible to score performance based on:

- target setting (validated and unvalidated),
- decarbonisation rates, and
- recent reductions in either emissions intensities and/or absolute emissions.

This was achieved using a combination of data from SBTi, Refinitiv, MSCI and CDP. Only for some sectors such as buildings, paper production, chemicals production and shipping was it possible to make a simplified alignment measurement based on either emissions or energy intensities. For some sectors such as buildings, it was considered that more data may need to be obtained by the direct survey of issuers.

Annex 2 provides the decarbonization indicators for each sector. The scope of the emissions as they relate to upstream and downstream activities are specified for each sector.

### **3.3.2.1 The setting of science-based targets**

An intermediate climate performance score of between 40 and 70 points can be achieved by setting company level decarbonisation targets on a 5-year or 10-year time horizon. At a simple level such a target can be set based on the trajectory for the specific sector. The highest points are proposed as being awarded to companies setting their targets according to the guidance and processes of the Science Base Target initiative (SBTi).

SBTi supports companies to set targets based on sectoral pathways taken from IEA scenarios <sup>28</sup>. Guidance is currently provided for companies in heavy industry, including steel, aluminium, cement and chemicals, as well diverse sectors such as aviation, buildings, and oil & gas. The guidance for each sector provides rules for how to use the scenario pathways to set targets. In turn those companies that follow the SBTi process can seek to have their target setting process second party verified.

### **3.3.2.2 Data sources for target commitments and emissions reductions**

Levels 5 to 11 required the sourcing of data from third-party providers in order to evaluate compliance of a company with the benchmarks set using these metrics. Data to identify target commitments and measure the second and third options can currently be sourced from providers such as the CDP.

Datasets of the type provided by CDP, Refinitiv and MSCI entail the use of both companies' reported emissions data and estimated values using emissions factor models. Although not used in this study, it is

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<sup>27</sup> This category includes important sectors in the investible universe such as consumer staples, food and beverages, materials.

<sup>28</sup> The Science Based Targets Initiative is a partnership between CDP, the United Nations Global Compact, World Resources Institute (WRI) and the World Wildlife Fund for Nature (WWF), <https://sciencebasedtargets.org/>

worth noting that some data providers like ISS, who make use of data from CDP, provide an additional data quality assessment to provide transparency on the data sources used.

### **3.3.2.3 The use of proxies for decarbonisation**

For some sectors the lack of quantifiable metrics led to proxies being explored, some of which relate to implementation of specific technologies that are identified as important in scenarios. This could include early-stage development of technologies identified as important in scenarios. Examples included:

- The use of recycled feedstock to manufacture paper and steel,
- The diversification of oil & gas companies into sectors such as biofuels, and
- Research & development by cement companies into new cement mixes and binders.

Other options for proxies of alignment with a scenario included EU taxonomy alignment for certain sectors and technologies. This option allows for verification based on specific technologies identified as being aligned with a net-zero technology roadmap.

In the end the use of such proxies was omitted from the evaluation framework as there were limitations to data availability in the region and it was considered that a strict focus should be maintained on quantifiable metrics. Complementary to this, a horizontal requirement for a company transition plan could then include considerations of investments in both mature and pre-commercialisation stage low carbon technologies.

## **3.4 Design of requirements for a company transition plan**

Horizontal to the climate performance evaluation framework, the need was identified for companies to mitigate transition risk by developing a transition plan that establishes decarbonisation as a core business objective. This type of plan has come to be identified by various high-level initiatives, including those of the European Commission (EFRAG) <sup>29</sup> and GFANZ <sup>30</sup>, as well as NGO-led initiatives such as ACT <sup>31</sup> and CBI <sup>32</sup> as an important element in understanding the forward commitments of companies.

The concept of a 'transition plan' is a relatively new one. Emerging definitions were therefore reviewed in order to develop a generic transition plan structure which could be used to monitor companies' progress on the decarbonization of their activities, complementary to the climate performance score described previously. The aim of having this as part of the overall climate evaluation and engagement strategy, is to provide SURA Investment Management's investment team with a thorough understanding of a company's commitments and preparedness to make a business transition, even when companies do not comply with the milestones evaluated by the score. This also complements the tracking of PACTA alignment measurements, which are based on production forecasts.

The need for investors to have visibility on the transition plans of companies has recently come to the fore, with diverse initiatives to:

- Develop disclosure guidance for company transition plans (TCFD 2021)

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<sup>29</sup> EFRAG, *Draft European Sustainability Reporting Standards (ESRS) 1:Climate change*, November 2022.

<sup>30</sup> GFANZ, *Expectations for real economy transition plans*, September 2022

<sup>31</sup> ACT framework, *Assessing low carbon transition*, March 2019

<sup>32</sup> Climate Bonds Initiative, *Transition finance for transforming companies Avoiding greenwashing when financing company decarbonisation*, discussion paper, 10<sup>th</sup> September 2021

- Create a system to assess and rate company transitions including transition plans (ACT 2020)
- Create hallmarks and criteria to certify the transition plans of companies issuing transition or sustainability linked bonds (CBI 2021)
- Guidance for companies in the real economy when building transition plans and disclosing progress against them (GFANZ 2022)
- Guidance on disclosures for company transition plans and its compatibility with limiting global warming to 1.5°C (EFRAG 2022)

This need for visibility is linked to concepts such as the management of transition risk (TCFD 2017) and the development of new business models to achieve a transition <sup>33</sup>.

In order to mitigate climate change, companies in high emissions sectors will need to make a transition to low-carbon production technologies and services, as anticipated in energy scenarios. Business and organizational research has highlighted the fact that whilst this transition will need to be underpinned by technological change, the management of this change by organisations will also be important (Bidmon and Knab, 2018).

All the current concepts of ‘transition’ also imply that the financial viability of a company under future technological scenarios is likely to be materially affected unless there is a process of adaptation and change so that it can continue to create value for shareholders in the new business environment. There is therefore a new imperative on asset managers to evaluate the adaptive capacity of high-emitting companies to manage a planned transition and to capitalize on new opportunities.

The definitions, scope and criterion for transition plans proposed by TCFD, ACT, ESRS and CBI were reviewed. Although very different in their aims and objectives, the three examples all share commonalities in terms of their definitions of what a transition plan should consist of. They can be broadly classified according to the following broad criteria coverage:

- Governance and internal capacity,
- Organisational strategy,
- Investment strategy,
- Alignment and impact measurement,
- Monitoring and tracking,
- External reporting.

### 3.5 Portfolio construction methodology

In this section we provide a description of the methodologies developed to incorporate the results from the climate performance evaluation into the construction of two hypothetical investment portfolios – one consisting of equities and one of corporate bonds from Latin American issuers- and evaluate their consistency with broad market benchmarks in terms of risk and return. The aim is to explore if a portfolio that is constructed by integrating the key premises of a Paris aligned transition fund is financially feasible in the Latin American context. After having assessed the climate performance of the issuers in the investible

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<sup>33</sup> Bidmon, C.M. and S.F. Knab, *The three roles of business models in societal transitions: New linkages between business model and transition research*, Journal of Cleaner Production, Volume 178, 20 March 2018, p-903-916

universe, with a specific focus on their alignment with the Paris Agreement objectives, the study then focuses on how a resulting climate performance score can be used as a key variable for a portfolio construction process.

This section describes the main steps in this process, including the considerations that inform the selection and weighting of the issuers’ equity and bond holdings, as well as the metrics used to evaluate the overall fund viability. The objective is to explore:

1. If it is possible to build a sufficiently diversified equity or corporate bond portfolios with Latin American issuers that could be considered as Paris-aligned or supportive of the climate transition,
2. If the resulting portfolio performs consistently with a broad market benchmark in terms of risk and return.

For this purpose, two separate portfolio construction exercises were carried out, one for equity and one for corporate fixed income. The methodologies use elements from the quantitative analysis of securities’ price behaviour and related risk factors (i.e. maturity or credit rating in the case of bonds), combining them with the results of the climate performance assessment in order to determine a final portfolio composition.

It is important to note that there are multiple approaches that could be followed to design a portfolio, the aim of the study is to propose one alternative for each asset class to provide a basis input for the analysis, as well as to open the debate about the implications of incorporating a climate variable into the investment process.

### 3.5.1 Equity portfolio construction

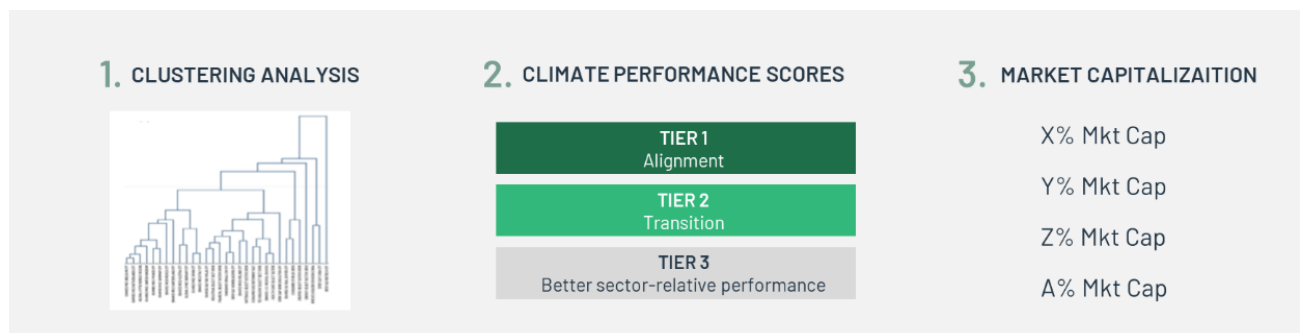
#### 3.5.1.1 Equity portfolio construction inputs

The equity portfolio construction is based on **three inputs**:

1. A cluster analysis of the investible universe that groups stocks according to their historical price behaviour,
2. the results of the climate assessment, and
3. the market capitalization of the issuers adjusted for free float.

These inputs are illustrated in Figure 3.3 and described in turn in the following sections.

*Figure 3.3. Equity portfolio construction inputs*





### **Input 1: Cluster analysis**

A cluster analysis was conducted on the investible universe based on historical returns for securities. The method computes distances between pairs of data points, which allows for an assessment of the degree of similarity between an observation and any other point in the dataset. The clustering pipeline implemented for this study performs a transformation to reduce the noise in the dataset and relies on an algorithm that prompts the optimal number of clusters.

In this application, each cluster comprises a group of assets that exhibit a similar behaviour under different market conditions. This is the starting point for the equity portfolio construction. The **resulting clusters of securities provide information about the different factors that can contribute to the construction of a more robust and diversified investment strategy.**

### **Input 2: Climate performance score**

The results of the climate performance evaluation are a central input for the portfolio construction, and the starting point for integrating the alignment with climate goals into the investment strategy overall. **The objective is to maximize the exposure of the portfolio to companies that are aligned with a 2°C pathway or that stand out for their efforts to be aligned.**

For the purpose of screening and selecting the securities, the methodology establishes the criteria to categorize companies as aligned with the climate goals or advancing in their low carbon transition in two tiers (as introduced in section 3.2.3), defined based on the scores assigned to them:

- **Tier 1 - Alignment (PACTA sectors)**

Companies that belong to one of the PACTA sectors and have a climate score of 100 or above. This means that they demonstrate alignment with a 1.5°C or 2°C scenario according to their projected production or emission trajectory, using the PACTA tool.

- **Tier 2 – Transitioning (all sectors)**

Companies that are taking actions to advance in a decarbonization pathway but are not aligned yet. This includes companies from both PACTA and Non-PACTA sectors that have a minimum climate score of 50, which is equivalent to at least having a decreasing emission trajectory in the past three years in line with a 2°C pathway and having set a decarbonization target.

Considering the geographical scope of the study, one possible outcome that needed to be considered is that very few companies may currently comply with the required thresholds to be Tier 1 or Tier 2 issuers. This, in turn, could hinder the portfolio construction process if there are not enough securities to build a diversified investment strategy. It is also a key premise of the fund strategy that it should aim to encourage the transition of investee companies. With this in mind, it was decided to define a third tier of issuers that allows for an increase in the number of eligible companies and the sectors in case this is needed for the purpose of diversification in the portfolio construction:

- **Tier 3 – Best amongst peers (non-PACTA sectors)**

This tier is defined by companies from Non-PACTA sectors that show that they are advancing more on their climate actions and commitments compared to their peers in the same sector, even though they do not comply with the minimum score to be considered Tier 2 issuers. This relative performance is evaluated through the calculation of a **normalized score**, and the required minimum

score will depend on the results of the climate performance assessment and the resulting number of Tier 1 and Tier 2 issuers.

It is important to note that the portfolio will seek to maximize the exposure to Tier 1 and Tier 2 issuers. Tier 3 companies will mainly be included if needed for diversification and portfolio construction purposes, and will only be applicable for non-PACTA sectors, looking to ensure more ambitious requirements for the highest emitting sectors and to open a portion of the portfolio allocation for sectors like food and beverages, retail, or financials, that are relevant for the Latin American market and benchmarks.

An overview of the tiers used to categorize the companies' climate performance is illustrated in Figure 3.4.

Figure 3.4. Categorization of companies' climate performance by tiers

CLIMATE PERFORMANCE CATEGORIES		CLIMATE SCORE
<b>TIER 1</b> Alignment	<b>PACTA</b> Alignment with a 1.5°C or 2°C scenario	> 100
<b>TIER 2</b> Transition	Decrease in emissions trajectory in line with with a below 2°C pathway and having a decarbonization target.	> 50
<b>TIER 3</b> Sector-relative performance	Climate performance above that of sector peers	<b>Normalized score:</b> Threshold will depend on sector results

### Input 3: Market capitalization

The historic market capitalization of each issuer is used in combination with the other two inputs when determining the weight of each company in the portfolio <sup>34</sup>. **The objective is to ensure that the weight of each company is normalized according to its relative size and value in the market.** The scaling of each issuer's weight according to their market capitalization is used in the construction of the base portfolio, seeking to emulate the construction of a cap-weighted broad market index that, in this case, also considers a climate variable. This provides a base allocation for analysis.

#### 3.5.1.2 Design of the equity portfolio construction process

Drawing upon the three inputs previously described, the next stage is to determine the portfolio constituents and the weight of each security within it. The objective is to achieve an allocation that:

- tilts towards those issuers that have a better climate performance,
- has representatives of as many clusters as possible to ensure diversification, and
- considers an adjustment on the issuers' weights according to the size of their shares on the market.

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<sup>34</sup> The market capitalization data used in the study is adjusted using the free float, which means that it is based on the value of the shares available for trading in the market instead of the total shares.

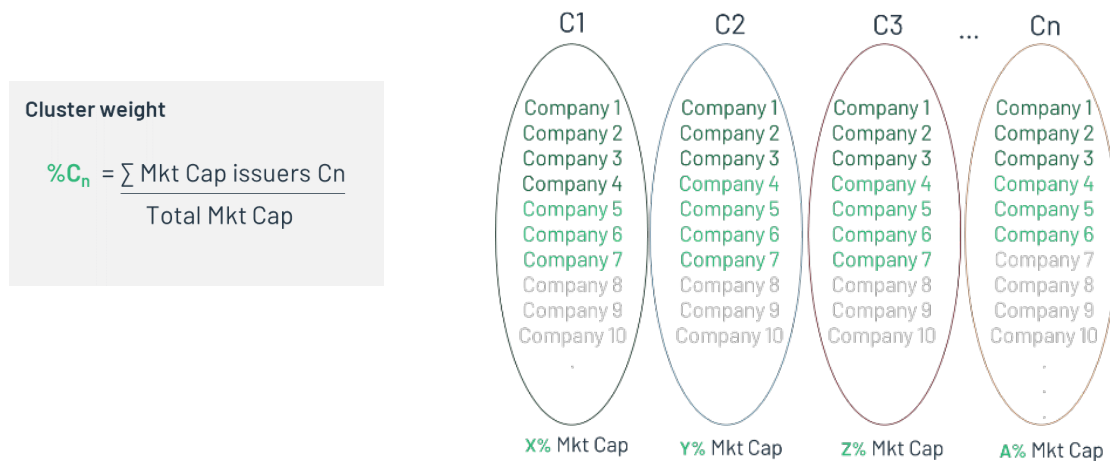
The workflow followed by the methodology developed for the purpose of the equity portfolio construction consists of:

1. **Determination of the cluster weights:** By categorizing the investible universe in clusters of assets with a comparable performance behaviour to understand and take into consideration the different factors needed for diversification. This step also entails selecting and prioritizing the companies that comply with tier 1 and tier 2 requirements by cluster,
2. **Determination of the company weights in the portfolio:** This is based on their climate performance score and market cap, looking to give more weight to those companies with higher climate scores and then normalizing it by their market capitalization, and
3. **Constructing the final portfolio:** The process can be finalised following a review of the resulting portfolio for diversification among sectors, countries, and clusters and, if necessary, by adding tier 3 issuers to the allocation.

### Step 1: Determination of cluster weights

Once the investible universe has been categorized into clusters, **the first step for the portfolio construction is to determine the weight of each cluster across the total investible universe.** This is calculated by adding the market capitalization of the representatives of each cluster and dividing it by the total market capitalization of the investible universe used in the study.

Figure 3.5. Determination of cluster weights by market capitalization



### Step 2: Determination of company weights

The weight of each company in the portfolio is determined by distributing the weight of each cluster among its tier 1 and tier 2 representatives, following two perspectives: first, according to each issuers' **climate score**, and second according to each issuers' **market capitalization** – as summarized by the notation in Figure 3.6 below. This is carried out for tier 1 and tier 2 issuers separately.

Figure 3.6. Determination of company weights by climate score and market capitalization

Company weight by climate score:

Cluster n

Tier 1

$$\% \text{ Issuer } i = A\% C_n \times \frac{\text{Climate score issuer } i}{\sum \text{Climate score tier 1 issuers from } C_n}$$

Tier 2

$$\% \text{ Issuer } i = A\% C_n \times \frac{\text{Climate score issuer } i}{\sum \text{Climate score tier 2 issuers from } C_n}$$

Company weight by market capitalisation:

Cluster n

Tier 1

$$\% \text{ Issuer } i = A\% C_n \times \frac{\text{Mkt cap issuer } i}{\sum \text{Mkt cap. tier 1 issuers from } C_n}$$

Tier 2

$$\% \text{ Issuer } i = A\% C_n \times \frac{\text{Mkt cap issuer } i}{\sum \text{Mkt cap. tier 2 issuers from } C_n}$$

As a result, there will be a set of two weights for each company that falls into either Tier 1 and Tier 2. The next step is to aggregate them into a unified weight for each company, and this is done by calculating the average of the weight by climate score and the weight by market cap.

### Step 3: Constructing the final portfolio composition

The next step is then to combine the Tier 1 and Tier 2 portfolios according to the following overall portfolio rules:

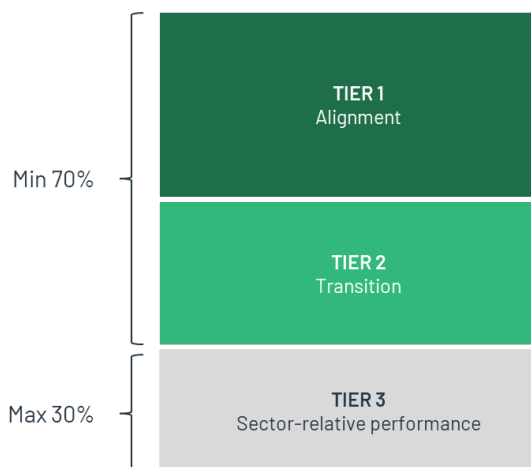
- **Number of issuers:** The final portfolio should have at least 25 names.
- **Issuer weighting limit:** Individual company weight should be a maximum of 10% of the total portfolio allocation. In case of breaching this limit, the excess weight should be re-distributed on a pro-rata basis to the rest of the total portfolio components.
- **Diversification:** Although it is based on a high-conviction strategy, the portfolio should ensure minimum levels of diversification in terms of sectors, countries, and clusters.
- **Use of tier 3 companies:** In case tier 1 and tier 2 companies do not fulfil the diversification conditions, tier 3 companies could be included in the portfolio allocation following the same methodology used for tier 1 and tier 2 companies (steps 1 and 2).

- **Portfolio allocation by tier:** The maximum weight of tier 3 companies on the overall portfolio allocation is 30%. This is equivalent to an allocation of minimum 70% for tier 1 and tier 2 companies. This is depicted in Figure 3.7.

The weight of each company obtained in step 2 is therefore then recalculated based on the rule on portfolio allocation by tier. The base equity portfolio, resulting from a process that can have some similarities to that used in the construction of a market index, provides a theoretical basis for analysing the comparative performance of a climate investment strategy against a market benchmark, as well as the viability of its implementation.

The methodological approach used for the portfolio construction described previously aims to provide a general set of portfolio construction rules using a climate variable. It does not integrate a fundamental analysis of the issuers or the macroeconomic and socio-political view, which will have to be incorporated by asset managers as part of their investment process when implementing a strategy of this type.

*Figure 3.7. target portfolio allocation weight for tier 1, 2 and 3 sub-portfolios*



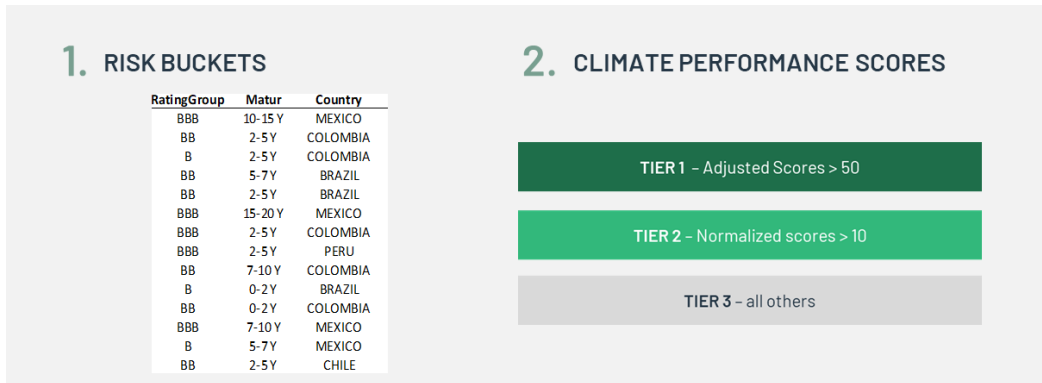
## 3.5.2 Fixed income portfolio construction

### 3.5.2.1 Fixed income portfolio construction inputs

The portfolio construction for fixed income is based on two main inputs (illustrated in Figure 3.8):

1. A categorization of the constituents of the market benchmark (CEMBI Broad Diversified Core Latam) into risk buckets, according to a series of factors that reflect their risk profile and price behaviour, and
2. the results of the climate performance assessment for each issuer.

Figure 3.8. Fixed income portfolio construction inputs



### Input 1: Risk buckets

As a starting point, the bonds that constitute the market benchmark (CEMBI Broad Diversified Core Latam) are categorized into different risk buckets according to their maturity date, credit rating and country of issuance. The objective, comparable to the clustering analysis performed for the equity portfolio construction, is to identify groups of assets with a similar risk and behavioural profile that can demonstrate a distinct behaviour under different market conditions, and that, therefore, can constitute the building blocks of a diversified portfolio. For instance, when inflation rises, some bonds can have a lower price and others a higher price, so the risk buckets aim to capture this behaviour and then group the bonds that respond similarly under different market conditions.

The categories defined for the purpose of the study combine the three aforementioned variables:

- maturity of the bonds expressed in time ranges 0-2, 2-5, 5-7, 7-10, 10-15 and 15-20 years,
- credit ratings of the bonds in the following scale: AAA, AA, A, BBB, BB, B, and
- the corresponding country of issuance.

Bonds with a credit rating lower than B were not considered, as they have a higher risk of default, are less liquid and do not have enough historical information for the analysis.

### Input 2: Climate performance score

The results of the climate performance evaluation are used to screen and select the securities following the criteria described previously in Section 3.5.1. on portfolio construction in equity, which consists of classifying companies into three tiers.

#### 3.5.2.2 Design of the fixed income portfolio construction process

The objective of the portfolio construction is to achieve an allocation that, while including only the bonds issued by companies with a better climate score (i.e. in tiers 1-3), has a performance that keeps general consistency with that of the market benchmark.

The steps in the workflow proposed by the methodology are the following:

1. Categorisation of bonds from tier 1, 2 and 3 issuers into risk buckets - this comprises:

- a. categorizing the benchmark in risk buckets according to their maturity, credit rating and country,
  - b. selecting and prioritizing the companies that comply with tier 1, 2 and 3 requirements,
  - c. grouping the bonds issued by tier 1, 2 and 3 companies according to the applicable risk bucket,
2. Checking the consistency of the behaviour of a portfolio: This is analysed for:
- a portfolio composed only by the selected risk buckets with that of the market benchmark,
  - bonds from tier 1, 2 and 3 issuers with that of their respective risk bucket, and
3. Climate portfolio optimisation: The construction of an optimal portfolio with the selected bonds that demonstrates a low deviation from the benchmark (in terms of tracking error).

### **Step 1: Categorizing bonds from tier 1, 2 and 3 issuers into risk buckets:**

Having selected the companies that comply with the minimum climate score to be considered as tier 1, 2 and 3 issuers, the first step is to identify which of their bonds fall into the risk buckets in which the benchmark is categorized. This results in a list of *selected risk buckets* with representatives from tier 1, 2 and 3 companies. In order to be included in the portfolio construction exercise, each selected risk bucket must contain at least two bonds.

### **Step 2: Checking consistency:**

With a reduced number of risk factors - represented by the short list of selected risk buckets - the following step is to perform an initial consistency assessment in order to understand how the selected bonds behave in relation to the general market, both across the risk buckets and within each risk bucket. This is carried out in two ways:

1. First, the methodology proposes the construction of a portfolio composed by all bonds from the selected risk buckets (not just the bonds of tier 1, 2 and 3 issuers). The weight of each bucket in the portfolio is assigned as an output of a portfolio optimization that seeks to limit the tracking error of 100 basis points, and the weight of each bond within each bucket is distributed according to its market value.
2. Second, a similar analysis is carried out for each selected risk bucket. This time the objective is to compare the performance of bonds from tier 1, 2 and 3 issuers that belong to a determined risk bucket with that of all bonds from that same bucket.

In each case, the performance of the resulting portfolio is compared to that of the general market benchmark by conducting a back-testing and by evaluating absolute and relative risk indicators.

### **Step 3: Climate portfolio optimisation:**

Lastly, a climate portfolio is constructed by incorporating all bonds from tier 1, 2 and 3 issuers from the selected risks buckets, and then by optimizing the portfolio to determine the optimal weight of each risk bucket in a way that minimizes the tracking error of the portfolio compared to the market benchmark. In this way, the weight of each selected bucket will be an output of the optimisation, and will be distributed amongst its tier 1, 2 and 3 bonds according to their market outstanding value.



### 3.6 Financial analysis of the resulting portfolios

After the base portfolios are constructed, a back-testing on their financial performance is conducted. The financial performance analysis of each portfolio is designed to compare its theoretical performance against that of the equity index (MSCI Emerging Markets Latin America) and fixed income index (CEMBI Broad Diversified Core Latam) respectively. The analysis seeks to answer the question of whether the portfolio meets/exceeds the benchmark’s performance and if it shares the behavioural characteristics of the asset class or not. The indicators of risk and return used are summarized in Table 3.7.

The back-testing analysis is performed on the portfolio using historical data for the assets’ prices from the past five-year period (2016-2022) and assumes a constant climate score. For the case of equity, a bi-annual market capitalization rebalance is used. This means that for the purpose of the study it was presumed that the tier 1, 2 and 3 composition was stable during that period, and that the data used to evaluate the issuers’ climate performance was available.

Table 3.7. Indicators of portfolio risk and return performance used for evaluation purposes

Metric	Definition
<b>Total return</b>	Rate of return of the investment over the entire period of analysis including capital gains and dividends
<b>Annual average return</b>	Annualized monthly average rate of return of the portfolio
<b>Annual volatility</b>	Measure of dispersion of the portfolio monthly returns with respect to their mean
<b>Sharpe Ratio</b>	Measure of the performance of the portfolio compared to a risk-free asset per unit of risk measured by volatility
<b>Tracking error</b>	Measure of dispersion of the portfolio monthly active returns (returns compared to the benchmark) with respect to the mean [a higher figure shows a higher deviation from the benchmark]
<b>Information ratio</b>	Measurement of portfolio returns compared to the returns of a benchmark per unit of relative risk measured by tracking error

### 3.7 Impact management strategy design methodology

This section describes the methodology used to develop the fund’s impact strategy. Several impact mechanisms, with different levels of evidence of effectiveness, were identified from the literature and previous work by 2DII. The capacity of SURA Investment Management to implement different possible impact mechanisms was then surveyed based on how they operate and invest.

#### 3.7.1 General approach to the design of an impact strategy

As was introduced in chapter 1, the concept of ‘impact’ relates to a causal, demonstrable relationship between a financial institution’s action and a real-world change – in this case aligned with the Paris Agreement goals and based on the premise that *“it is within the capacity of financial institutions to influence the real economy”* (RMI, 2020). In the context of the creation of a fund that contributes to the Paris Agreement, an approach has therefore been followed to building a product that maximizes its likelihood of being impactful.

Because impact management is a relatively new area of strategy for fund managers, it was considered important to map possible climate actions onto existing investment strategies and capabilities. The aim has therefore been to assess:

- The current situation: from amongst those actions and mechanisms identified as being potentially relevant by 2DII, to identify those with which SURA Investment Management teams have operational experience and capabilities with the scope of their mandate to use them.
- Internal and external constraints: to understand the internal and external constraints that SURA Investment Management has in seeking to use the mechanisms and implement the climate actions 2DII has identified as being potentially relevant and/or feasible for a fund.

Based on discussions of the response of SURA Investment Management’s team to a survey, realistic options for action were then identified and integrated into a proposal for the fund’s strategy and impact management system.

### 3.7.2 Identification of impact mechanisms and related climate actions

A financial institution can have an impact on the behaviour of its investee companies through two broad mechanisms <sup>35 36</sup>:

- By providing **financial support for the transitioning or growth of a company**, or
- By **supporting companies to transition or grow by using non-financial levers**.

The challenge is to adapt impact mechanisms and related climate actions to each individual financial institution and the asset classes the invest in and-or finance. The mechanisms for maximizing the impact of an investor in listed equity compared to a bank providing credit will be different because the opportunities and constraints are very different. For example, secondary markets for equity do not represent an injection of new capital into companies, so the ‘financial support’ mechanisms are less relevant.

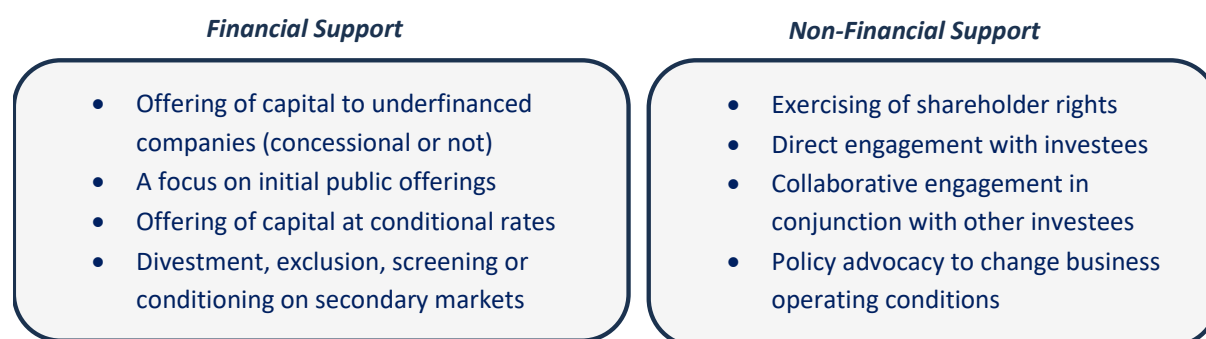
Figure 3.9 below provides some examples of climate actions that fall under these two broad impact mechanisms. These have been identified both from literature and knowledge of market practice. Other distinct actions exist such as holdings in infrastructure and real estate funds which manage illiquid assets, but their selection will be specific to the investment strategy of an institution.

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<sup>35</sup> Kölbel, J. F., Heeb, F., Paetzold, F., & Busch, T. (2020). *Can Sustainable Investing Save the World? Reviewing the Mechanisms of Investor Impact*. *Organization & Environment*, 33(4), 554–574.

<sup>36</sup> Caldecott, B.L., Clark, A., Harnett, E., Koskelo, K., Wilson, C., & Liu, F. (2022), *Sustainable Finance and Transmission Mechanisms to the Real Economy*, University of Oxford Smith School of Enterprise and the Environment Working Paper 22-04

Figure 3.9. Example climate actions that can be undertaken by a financial institution



According to previous research by 2DII, actions classified under these two categories do not all have the same level of evidence of effectiveness<sup>37</sup>. Direct engagement with companies, the allocation of conditional capital, and the provision of capital at concessional rates are associated with the most evidence of effectiveness when it comes to impacting the behaviour of companies. On the other hand, actions such as divestment, exclusion or screening on secondary markets are associated with limited evidence of effectiveness and more recent studies refer to their effectiveness under specific conditions, for example where divestment is a co-ordinated action by critical mass of institutional investors<sup>38</sup>.

In the context of a Paris Aligned transition fund design, the climate actions selected for further exploration are the ones considered to have the highest chances of succeeding based on 1) the academic research and 2) an investment strategy based solely on listed equities and corporate bonds:

- **New or undersupplied capital allocation (additional or concessional capital):** This climate action consists of investing in/lending to profitable companies whose business models contribute to solving the world’s problems (e.g. by developing technologies earmarked in climate change decarbonisation pathways and scenarios), but whose growth is constrained by barriers to access to external financing. Amongst listed securities, options include Initial Public Offerings (IPOs), project-based/SPV bonds.
- **Conditional capital allocation (setting climate conditions):** This climate action is about conditioning the investment or the terms of the investment to an improvement in the climate performance of the company. This approach is used by some thematic fund managers when allocating capital to listed equity. It can also take the form of Sustainability Linked Bonds. It could be best targeted at those companies with the greatest potential for improvement, which in this case may be those currently misaligned or for those in high-emissions sectors but which do not currently have clear near-term targets or strategies for transition.
- **Engagement with investees (requesting improvements):** Engagement actions are all financial institutions’ actions undertaken to influence the behaviour of the company they are invested in. There are various forms of engagement, ranging from voting or putting forward resolutions at

<sup>37</sup> See 2DII’s Climate Impact Management System for further discussion and tracking of existing evidence.

<sup>38</sup> Rohleder.M, Wilkens.M & j.Zink, *The effects of mutual fund decarbonization on stock prices and carbon emissions*, Journal of Banking & Finance, Volume 134, January 2022

shareholder meetings, to dialogue with management, to activist strategies such as exerting public pressure and taking board seats.

The second of these actions has been identified based on market practices and is postulated as an action that, when used in conjunction with climate alignment measurement based on underlying assets and investment plans, can be used to track fulfilment of company targets for real economy change. For example, a condition of inclusion in the fund could be to align the company’s technology share of renewable power generation by a target date. Whilst this latter approach has been used in some thematic funds, there is as yet no evidence of its effectiveness in secondary markets.

### 3.7.3 Design of an internal survey

To explore the potential to implement climate actions, three short surveys were designed and circulated within SURA Investment Management, with a focus on the sustainable investment team and investment analysts. The aim of the surveys was to better understand the opportunities and in particular the constraints to implementation and in the case of the latter, how they could be overcome.

Each survey consisted of some short background on the climate action with examples of how it could be implemented and then questions to explore the following:

- The current experience with the climate action targeted in the survey, if any.
- What current internal capacity is available to implement such action.
- The potential constraints faced or that may be faced in order to implement the action.
- What would help to lift the barriers to implementation of the action.

Figure 3.10 below illustrates some of these potential constraints.

*Figure 3.10. Potential internal and external constraints on climate action*

External	Internal
Regulations Fiduciary duty Liquidity requirements ...	HR resources Internal capabilities (skills) Financial resources Short term incentive scheme ...
Market conditions Clients' appetite for risk Limited offer of sustainable products ...	

The survey results were collated and analysed by 2DII and the summary results are presented in Section 5.1. Based on these results a strategy for the climate actions taken forward was then developed is presented in Sections 5.2 and 5.3.

## 4. Company and portfolio-level results

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This chapter describes the results of the fund development and testing process run by 2DII and SURA Investment Management. This was very much an exploratory and iterative process, as no clear precedents are documented in the public domain. Results are presented for three main elements of the fund design:

- **Issuer climate performance (chapter 4.1):** The results from an evaluation of companies from the Latin American investible universe, including the assignment of company climate performance scores.
- **Portfolio construction (chapters 4.2 and 4.3):** The results obtained from the portfolio construction process and the financial evaluation of the risk and return, as well as the alignment assessment with different climate scenarios at the portfolio level. This includes an analysis of the influence of the climate performance score weighting on fund composition and performance compared to the benchmark in terms of risk, return and climate alignment.
- **Portfolio level climate performance (chapter 4.4):** The resulting compositions of the equity and bond portfolios were assessed for their alignment using PACTA. The scope of sectoral coverage was limited to PACTA sectors.

### 4.1 Issuer climate performance results

#### 4.1.1 The overall climate performance of companies in the investible universe

As was outlined in section 3.2 a range of data sources have been used to determine the climate performance of companies in the Latam investible universe. PACTA assessments were made using asset-backed company data for four main sectors – power, oil & gas, cement and aviation - as supplied by Asset Resolution. For non-PACTA sectors the study used third-party data providers from MSCI ESG, Refinitiv and CDP.

In terms of data coverage, at least one data point was found for 131 issuers, which is equivalent to 64% of the total investible universe (see Table 4.1). Note that the total number of issuers (204) is not equal because there some that have issued both listed equity and bonds. In terms of the matching of securities issued by companies in the investible universe, this was possible for 281 out of 287, a 98% matching rate. Of the 281, 14 were not possible to classify, leaving 267 ISINs that were then analysed. Out of those 267, there were 74 issuers in PACTA sectors and assets could be identified for 56 of them, giving a 76% coverage rate.

Table 4.1. Data coverage assessment by asset class

	Total issuers	Data	No data	Coverage
Equity	176	105	71	60%
Fixed income	170	112	58	66%
<b>Total investible universe</b>	<b>204</b>	<b>131</b>	<b>73</b>	<b>64%</b>

The distribution of the results by evaluation level for issuers in PACTA and non-PACTA sectors is presented in Figures 4.1 and 4.2. In the PACTA sectors it can be seen that a number of power, oil & gas and aviation

companies were able to achieve PACTA alignment at one or more of levels 1-4. The majority of the rest of the results are clustered around level 9 (decarbonization targets) and level 11 (a decrease in emissions intensity).

Amongst the 34 power companies:

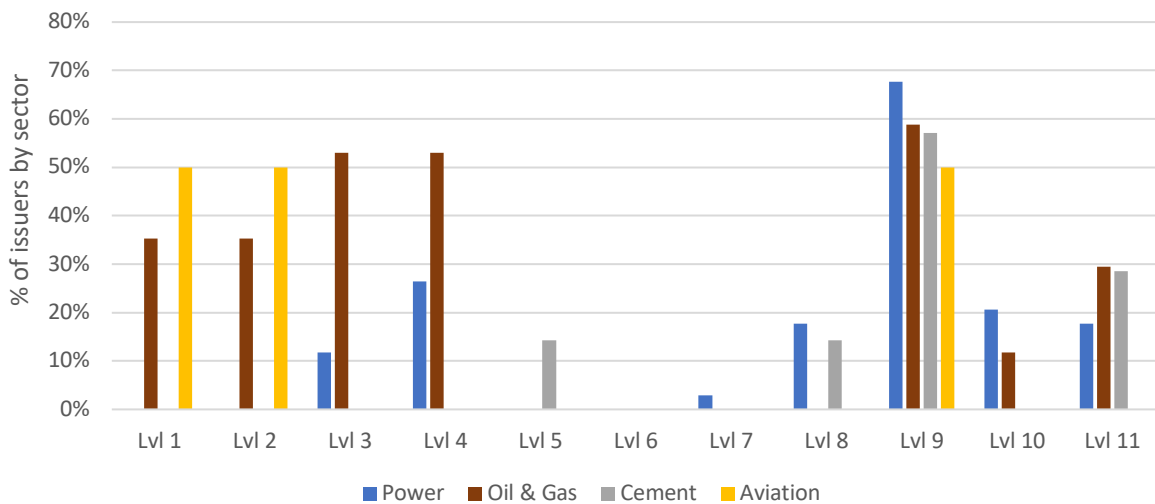
- 26% were aligned at PACTA level 4
- 68% have a decarbonisation target.

Amongst the 17 oil & gas companies:

- 53% were aligned at PACTA level 4
- 59% have a decarbonization target.

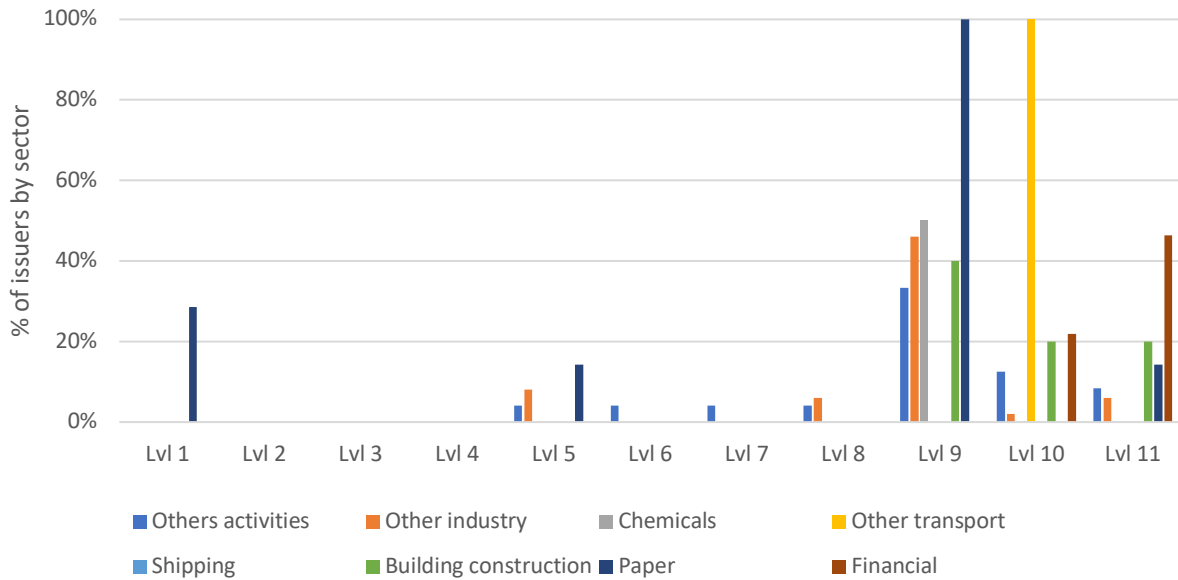
Cement companies (7) and aviation companies (2) were less numerous. The best performance for cement companies was a level 5 science-based target (14%) trailed by a level 9 decarbonisation target. Aviation companies were aligned at the most ambitious level 1.

*Figure 4.1. Distribution of issuers' climate performance by PACTA sector*



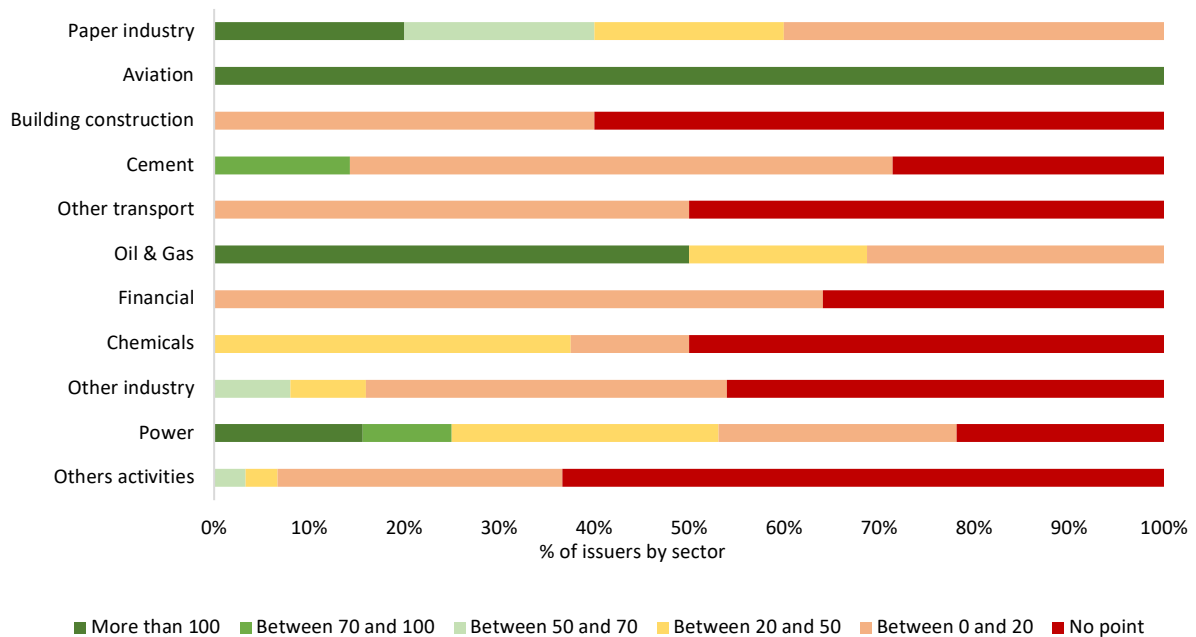
In non-PACTA sectors it can be seen that the majority of the results are clustered around levels 9-11. A proportion of companies were not assigned to any level (36%). For some sectors this was in part due to a lack of data to score higher levels, for example in the case of real estate. Of the energy intensive industrial sectors, 2 of the 7 paper companies were notable for achieving non-PACTA alignment. The majority of the non-PACTA sector companies are in the 'other industry', 'other activities' or 'financial' categories. These companies largely fall into level 9 (74) or level 11 (19). The number of companies achieving levels 9-11 offers a large number of issuers to benchmark if tier 3 needs to be considered in order to meet the portfolio construction rules.

Figure 4.2. Distribution of issuers' climate performance by non-PACTA sector



The scoring for PACTA and non-PACTA sectors was then standardised in order to enable a comparison between the two sets of companies. The results can be seen in Figure 4.3 and show that, with the exception of aviation and oil & gas, those issuers with less than 50 points account for between 60% and 100% of the total issuers.

Figure 4.3. Distribution of all issuers' climate performance by normalized score





Overall, in terms of climate alignment performance, the following results were obtained:

- 8 issuers (6%) have a production or emissions intensity trajectory aligned with a below 2°C scenario according to PACTA. These issuers are in the power, oil & gas and aviation sectors.
- 11 issuers (8%) have reduced their absolute emissions or emissions intensities at a rate that is aligned with that needed to be aligned with a 2°C or below pathway.
- 7 issuers (5%) have validated science-based targets that are aligned with a 2°C or below pathway.
- 2 issuers (2%) have decarbonization targets that are aligned with a 2°C pathway.

#### 4.1.2 Allocation of issuers to climate performance tiers 1 and 2

Upon allocation to tier 1 and tier 2, the distribution of issuers by sector shows a high concentration in PACTA sectors (57%), and in the power sector in particular (33%). This could be the case because higher-emitting industries have a greater scrutiny as well as disclosure demands regarding their emissions and decarbonization plans both by governments and consumers.

*Table 4.2 Distribution of tier 1 and tier 2 companies by sector*

Sector		Tier 1	Tier 2	Total	
PACTA 57%	Power	7	0	7	33%
	Oil & Gas	3	0	3	14%
	Cement	1	0	1	5%
	Aviation	1	0	1	5%
Non-PACTA 43%	Paper industry	0	1	1	5%
	Other activities	0	2	2	9%
	Other industry	0	6	6	29%
		<b>12</b>	<b>9</b>	<b>21</b>	<b>100%</b>

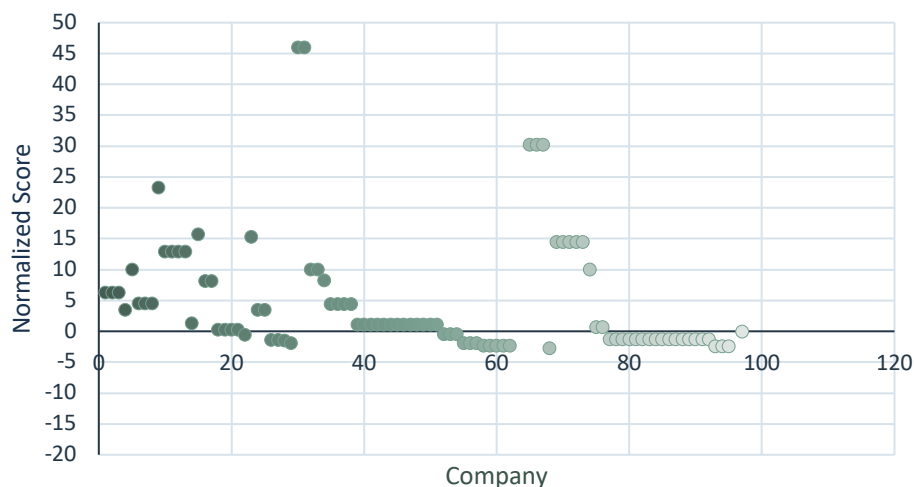
In general, data gaps were found in non-PACTA sectors, which could be the result of a bias in the resulting distribution of tier 1 and tier 2 companies towards those activities where more data points were found in the climate performance assessment. Despite this result being satisfactory given the share of emissions these sectors represent, this is expected to change, as it becomes more evident for the markets that all economic activities must move towards a carbon neutral pathway.

#### 4.1.3 Benchmarking of issuers in climate performance tier 3

Tier 3 companies, as described in the methodology (section 3.2), are those issuers from non-PACTA sectors that have a score less than 50 and amongst their peers demonstrate a better relative climate performance. This is measured using the normalized score, which evaluates the distance of each company's climate score to the average score in its sector for issuers with a score of less than 50.

The methodology does not define a fixed threshold for selecting tier 3 companies but leaves it open for analysis depending on the results of the climate performance assessment and the number of tier 1 and tier 2 issuers. The results of the normalized score for issuers in the investible universe situate it in a range from -2.7 to 45.9. The distribution of the data points of the issuers' normalized scores within this range is depicted in Figure 4.4:

Figure 4.4 Distribution of normalized scores



As the objective is to identify those issuers that are performing better than their peers, the analysis to select tier 3 issuers will be focused on the 61 companies that have a positive normalized score. The distribution of the normalized score of these 61 companies in different ranges is presented in Table 4.3, also identifying which of these already belong to tier 1 or tier 2.

Table 4.3 Distribution of normalized scores date points by range.

Normalized Score Ranges	Total	Tier 1	Tier 2	Others
> 40	2	0	0	2
30 - 39	2	0	0	2
20 - 29	1	0	1	0
10 - 19	14	1	5	8
0 - 9	42	10	8	24
	<b>61</b>	<b>11</b>	<b>14</b>	<b>36</b>

For the purpose of the study, the 12 companies with a normalized score of 10 or higher were selected. Even though in order to comply with the minimum required number of companies in the equity portfolio only four more companies were necessary - which could be those with a normalized score of 30 or higher- (see section 4.2), it was decided to broaden the selection seeking to have more representatives from relevant sectors like financials.

In total, for the equity portfolio 12 companies with a normalized score of 10 or higher were selected to constitute tier 3. These 12 companies have a climate score between 10 and 30, which is equivalent to

having a decreasing trajectory on past emissions or having a general decarbonization target, providing some differentiation from other sector peers that cannot currently demonstrate any action.

## 4.2 Equity portfolio results

### 4.2.1 Portfolio distribution by climate performance tier

The cluster analysis conducted for the 176 equity issuers from the investible universe, resulted in 7 clusters of companies that demonstrated a similar performance behaviour during the period between 2016 and 2021. The distribution of the companies in the clusters keeps an overall consistency with the country or sector they belong to, which shows that these two factors have an overriding impact on the performance of the assets.

Following step 1 of the portfolio construction methodology, the weight of each cluster is calculated according to the total market capitalization of its constituents. This weighting will later be one of the inputs for the company allocation in the portfolio, as each cluster weight will be distributed among the issuers that fulfil the alignment requirements. The resulting number of companies by cluster and the weight of each cluster are presented on Table 4.4 below.

*Table 4.4. Distribution of companies and market capitalization by cluster*

Cluster	Companies by cluster		Cluster weight by market cap	
			USD million	
1	43	24%	309,515	40%
2	28	16%	30,887	4%
3	20	11%	48,996	6%
4	44	25%	250,664	32%
5	20	11%	29,607	4%
6	9	5%	8,525	1%
7	12	7%	103,835	13%
	<b>176</b>	<b>100%</b>	<b>782,030</b>	<b>100%</b>

Then, by using the results of the climate performance assessment (see section 4.1), companies that fulfil the conditions to be tier 1 and 2 are identified by cluster. The 21 companies are distributed in all clusters and, even though they concentrate mainly in four of them, all clusters have at least one tier 1 or tier 2 representative, which supports the construction of a diversified portfolio. Notably it can be seen in Table 4.5 that the total number of companies is less than the minimum required by the portfolio rules (21 vs 25), which therefore triggers consideration of tier 3 companies for inclusion in the portfolio.

To evaluate the diversification in terms of countries and sectors, the geographical distribution of the 21 companies is analysed. The results are presented in Table 4.5. The distribution of tier 1 and tier 2 companies by country show that there are representatives from all geographies, in line with what is desirable for diversification purposes. Although there are a higher proportion of companies in countries like Mexico (29%) and Brazil (24%), this is somewhat consistent with the relative size of the different markets. This contrasts with the distribution of tier 1 and tier 2 issuers by sector, which shows a high concentration in PACTA sectors (57%), and in the power sector in particular (33%) (see Table 4.2).

Table 4.5. Distribution of tier 1 and tier 2 companies by country

Country	Tier 1	Tier 2	Total	
Argentina	1	0	1	5%
Brazil	3	2	5	24%
Chile	1	3	4	19%
Colombia	3	0	3	14%
Mexico	2	4	6	29%
Peru	2	0	2	10%
	<b>12</b>	<b>9</b>	<b>21</b>	<b>100%</b>

Moreover, activities that are relevant for the Latin American equity market such as financials (with a weight of 23% in the MSCI EM Latam Index) are not found in the tier 1 and tier 2 universe, which signals an alert for the sectoral diversification of the portfolio. This, together with the fact that the total number of companies do not comply with the minimum required by the portfolio rules, triggers the inclusion of tier 3 companies into the analysis and portfolio allocation (see section 4.1.3).

#### 4.2.2 The resulting portfolio construction and performance testing results

The next step is to determine the weight of each security in the portfolio. Following step 3 of the portfolio construction methodology, the weight of each cluster is distributed among its tier 1, 2 and 3 representatives according to a combination of the issuers' i) climate score and ii) market capitalization. The resulting equity base portfolio consists of 33 companies:

- 12 companies from tier 1 representing 40% of the portfolio allocation,
- 9 companies from tier 2 representing 30%, and
- 12 from tier 3 representing 30%.

The detail of the resulting composition is shown in Table 4.6. Given that the historical data used is limited to the five years between 2016 and 2021, the analysis focussed on the consistency of the risk profile of the portfolio, which can respond to multiple variables and vary greatly depending on the period of analysis.

Table 4.6. Final base portfolio composition

Tier	Company	Weight	Sector
Tier 1 40%	Company 1	5.1%	Power
	Company 2	6.7%	Power
	Company 3	3.2%	Power
	Company 4	0.6%	Power
	Company 5	1.5%	Power
	Company 6	2.6%	Power
	Company 7	9.6%	Power
	Company 8	1.0%	Oil & Gas
	Company 9	2.2%	Oil & Gas
	Company 10	1.7%	Oil & Gas
	Company 11	3.0%	Cement
	Company 12	2.5%	Aviation

<b>Tier 2</b> 30%	<i>Company 13</i>	1.1%	Paper industry
	<i>Company 14</i>	6.5%	Other industry
	<i>Company 15</i>	0.6%	Other industry
	<i>Company 16</i>	0.7%	Other industry
	<i>Company 17</i>	3.3%	Other industry
	<i>Company 18</i>	2.5%	Other industry
	<i>Company 19</i>	4.7%	Other industry
	<i>Company 20</i>	4.0%	Other activities
	<i>Company 21</i>	7.6%	Other activities
	<b>Tier 3</b> 30%	<i>Company 22</i>	10.0%
<i>Company 23</i>		0.6%	Financial
<i>Company 24</i>		0.7%	Financial
<i>Company 25</i>		1.5%	Financial
<i>Company 26</i>		0.6%	Financial
<i>Company 27</i>		4.3%	Financial
<i>Company 28</i>		3.2%	Financial
<i>Company 29</i>		2.6%	Financial
<i>Company 30</i>		0.4%	Chemicals
<i>Company 31</i>		0.7%	Chemicals
<i>Company 32</i>		0.8%	Building construction
<i>Company 33</i>		4.1%	Building construction

The back-testing of the resulting 33-company portfolio demonstrated that it has an overall consistency with the behaviour of the broad Latin American equity market. The absolute risk of the portfolio measured by the annual volatility was found to be similar to that of the benchmark, with both being situated slightly above 30%, which shows that the diversification of the portfolio results in a risk profile that is comparable to the reference index.

It was also observed that the accumulated returns of the climate portfolio during the period analysed widely exceeded the ones of the benchmark (both in terms of total and annual return), and, although it cannot be asserted that this is caused by the incorporation of the climate performance score, it can be inferred that companies with more ambitious transition plans also demonstrate other characteristics valued by markets such as greater disclosure and transparency and are more likely to have an adaptative business strategy. In this sense, identifying the climate score's interconnections or correlations to other well-known factors would be an interesting topic for further research. From a portfolio construction perspective, isolating the climate score from other factors would provide a better understanding of its possible effect on portfolios' risks, returns and overall performance.

On the other hand, the relative risk measured by the tracking error is at a level above 10%, which shows that there are significant deviations in the portfolio behaviour in relation to the benchmark at specific moments in time. This is explained by the fact that the climate portfolio has a higher concentration than the benchmark in terms of constituents, therefore, it has a higher dispersion of returns and the changes in the prices of specific stocks can have a greater impact on the overall performance of the portfolio. Additionally, this can also be caused by the fact that the benchmark is a broad market index that does not incorporate a climate criterion so, although the portfolio is largely consistent with the benchmark, they can behave considerably differently in given market events.

A summary of the results is presented on Table 4.7 below and a comparison of the total return of the climate portfolio and benchmark is shown in Figure 4.5 below:

Table 4.7. Equity portfolio financial back-testing results (May 2016 – April 2022 period)

	Benchmark MSCI EM Latam	Equity Climate Portfolio
Total Accumulated Return %	59.7	213.3
Avg. Monthly Return %	1.13	2.12
Avg. Annual Return %	13.56	25.44
Annual Return %	8.3	21.47
Annual Volatility %	30.62	30.11
Sharpe Ratio (Raw)	0.13	0.24
Active Annual Return %	11.8	
Tracking Error (Annual) %	10.45	
Information Ratio	1.14	

Figure 4.5. Total return of the equity climate portfolio and benchmark



## 4.3 Fixed income portfolio results

### 4.3.1 Fixed income risk bucket screening by issuer climate performance

The results of the climate performance assessment are a key input for the portfolio construction. Out of the 170 fixed income issuers from the investible universe, those with the minimum climate score required to be considered as tier 1, 2 and 3 issuers were identified. To select tier 3 issuers, the same threshold of a normalized score of 10 or higher was used (see section 4.1.3). This resulted in the selection of 15 companies from the financials, chemicals, other activities and other industries sectors, with an underlying climate score of between 10 and 50. In total, 48 issuers fulfil the conditions to be part of the tier 1, 2 or 3. The distribution by tier and country are shown in Table 4.8:

Table 4.8 Geographical location of fixed income issuers in each climate performance tier

Country	Tier 1	Tier 2	Tier 3	Total	
Argentina	2	0	1	3	6%
Brazil	4	5	5	14	29%
Chile	3	4	2	9	19%
Colombia	6	0	3	9	19%
Mexico	3	4	1	8	17%
Perú	2	0	3	5	10%
	<b>20</b>	<b>13</b>	<b>15</b>	<b>48</b>	<b>100%</b>

The categorization of the market benchmark by risk buckets is the other input. 77 risk buckets were defined, resulting from the combination of the different maturity ranges, credit ratings, and countries of issuance (for instance: MX BBB 0-2 years, BR B 5-7 years, CL AA 7-10 years). Following step 1 from the portfolio construction methodology, the risk buckets were screened to identify bonds issued by tier 1, 2 and 3 companies. In total, 72 bonds from 24 tier 1, 2 or 3 companies were identified, falling into 42 risk buckets.

As established in the methodology, only the risk buckets with two or more bonds were considered, to ensure that the risk factors associated with a selected risk buckets are represented in the analysis and not the behaviour of one specific bond. After removing the buckets with only one bond, the result is a list of 20 selected risk buckets with a total of 50 bonds from 21 tier 1, 2 and 3 companies. These 50 bonds will therefore be the constituents of the base climate portfolio. The results are presented on Table 4.9. below.

Table 4.9 Selected risk buckets with more than two bonds from tier 1, 2 or 3 issuers

Selected risk bucket	Bonds from tier 1, 2 and 3 issuers
MX BBB 10-15 Y	6
CO BB 2-5 Y	4
BR BB 2-5 Y	3
BR BB 5-7 Y	3
CO B 2-5 Y	3
MX BBB 15-20 Y	3



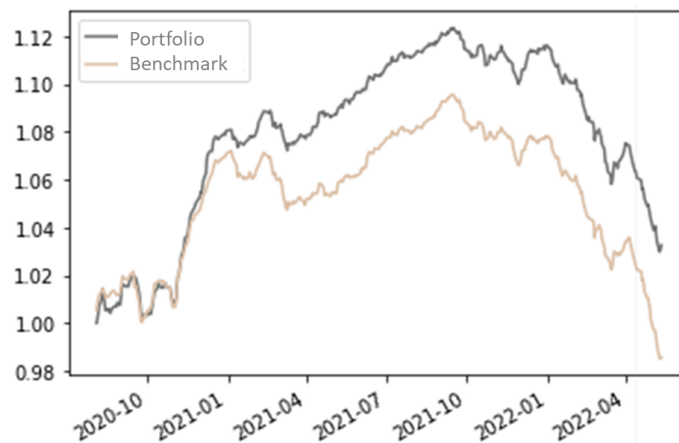
<b>BR B 0-2 Y</b>	2
<b>BR BB 0-2 Y</b>	2
<b>BR BBB 10-15 Y</b>	2
<b>CL AA-A 7-10 Y</b>	2
<b>CL BB 2-5 Y</b>	2
<b>CO BB 0-2 Y</b>	2
<b>CO BB 10-15 Y</b>	2
<b>CO BB 5-7 Y</b>	2
<b>CO BB 7-10 Y</b>	2
<b>CO BBB 2-5 Y</b>	2
<b>MX B 5-7 Y</b>	2
<b>MX BB 5-7 Y</b>	2
<b>MX BBB 7-10 Y</b>	2
<b>PE BBB 2-5 Y</b>	2
	<b>50</b>

### 4.3.2 Performance testing of the first portfolio construction

A first theoretical portfolio was constructed with all the bonds from the 20 selected risk buckets, regardless of whether they are issued by tier 1, 2 and 3 companies or not. In total, 181 bonds were selected. The final weight of each risk bucket is the result of a portfolio optimization process that sets a limit of 100 basis points for the tracking error compared to the benchmark. The weight of each bond within each bucket was assigned according to its market value at the time of the analysis.

The results from the back testing of performance show that a portfolio that includes all bonds from the selected risk buckets has a performance that is, overall, consistent with the benchmark, having a tracking error of 0,92%. This signals that it is possible to build a portfolio with a reduced number of risk factors that is representative of the index for the asset class, and that behaves in a way that is coherent with the market in general. The result of the performance back testing is shown in Figure 4.6.

Figure 4.6. Accumulated performance of portfolio with selected risk buckets vs benchmark



### 4.3.3 The resulting portfolio optimisation and performance testing results

After the consistency checks, the last step is to construct the final portfolio using the bonds of only issuers in tiers 1,2 and 3 and that belong to one of the risk buckets in which the market benchmark is categorized. The final portfolio is the result of an optimization process that sets a limit in the tracking error of 100 basis points.

The resulting portfolio consists of 31 bonds from 16 companies:

- 8 bonds from five **tier 1** companies representing 30% of the portfolio,
- 10 from six **tier 2** companies representing 21% of the portfolio and
- 13 from five **tier 3** representing 49%.

The composition is shown in Table 4.10.

The allocation of 49% in securities from tier 3 companies is greater than the 30% allocation in the equity portfolio. Tier 3 issuers are mainly concentrated in the financial sector (45%). This higher allocation is due to the different approach that was used for the fixed income portfolio construction, in which the weight of each security is the result of the optimization process. It therefore does not correspond to a set of portfolio rules in relation to tier allocation or a portfolio weighting tilt towards companies with higher climate performance scores. This difference, however, allows for a lower deviation from the benchmark and a closer consistency with the risk factors inherent in the market.

*Table 4.10. Final base fixed income portfolio composition*

Tier	Bond	Weight	Sector
<b>Tier 1</b> 30%	Bond 1	0,6%	Power
	Bond 2	0,5%	Power
	Bond 3	5,3%	Oil & Gas
	Bond 4	4,3%	Oil & Gas
	Bond 5	3,4%	Oil & Gas
	Bond 6	3,3%	Oil & Gas
	Bond 7	6,5%	Cement
	Bond 8	5,9%	Cement
<b>Tier 2</b> 21%	Bond 9	2,5%	Paper industry
	Bond 10	4,7%	Other activities
	Bond 11	3,0%	Other activities
	Bond 12	2,3%	Other activities
	Bond 13	0,9%	Other activities
	Bond 14	2,7%	Other industry
	Bond 15	1,3%	Other industry
	Bond 16	1,3%	Other industry
	Bond 17	1,3%	Other industry
	Bond 18	1,0%	Other industry
<b>Tier 3</b> 49%	Bond 19	18,1%	Financial
	Bond 20	6,2%	Financial
	Bond 21	5,2%	Financial
	Bond 22	2,5%	Financial
	Bond 23	2,0%	Financial
	Bond 24	1,7%	Financial
	Bond 25	1,6%	Financial

	<i>Bond 26</i>	1,5%	Financial
	<i>Bond 27</i>	1,4%	Financial
	<i>Bond 28</i>	5,2%	Financial
	<i>Bond 29</i>	1,3%	Chemicals
	<i>Bond 30</i>	1,3%	Chemicals
	<i>Bond 31</i>	1,2%	Chemicals

A back-testing was conducted on the resulting portfolio in order to evaluate its performance against that of the CEMBI Broad Diversified Core Latam Index, assuming a constant climate performance score and risk categorization of the benchmark during the period analysed.

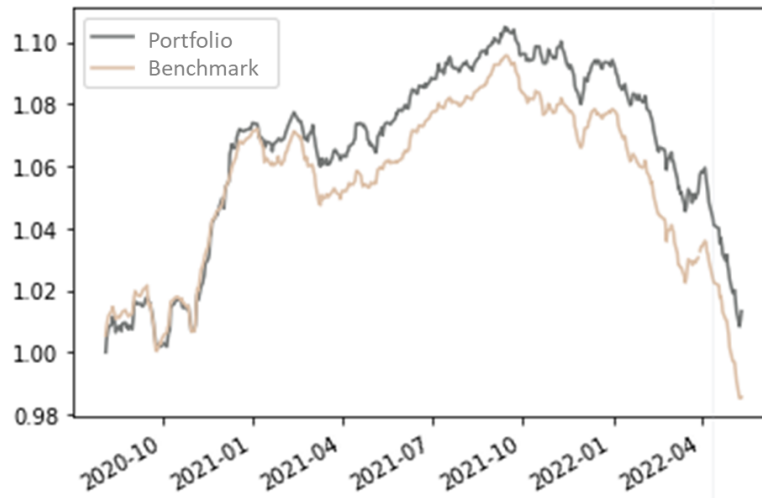
The results show that the fixed income climate portfolio demonstrates a consistent performance with that of the selected broad Latin American debt market. The absolute risk of the portfolio as measured by the annual volatility was 5.27. The relative risk measured by the tracking error was limited to levels below 100 basis points as a variable in the optimization, following a different approach than in the case of the equity portfolio construction. Although the portfolio is concentrated in 31 bonds, it is composed of enough risk buckets to ensure diversification and representativity across the asset class.

A summary of the results is presented on Table 4.11 below and the comparison of the total return of the climate portfolio and benchmark is shown in Figure 4.7.

*Table 4.11 Fixed income portfolio financial back testing results (July 2020 – April 2022 period)*

	<b>Benchmark CEMBI Latam</b>	<b>Fixed Income Climate Portfolio</b>
Total Accumulated Return %	-1.98	3.027
Avg. Monthly Return %	-0.08	0.13
Avg. Annual Return %	-0.95	1.626
Annual Return %	-1.12	1.70
Annual Volatility %	5.38	5.27
Sharpe Ratio (Raw)	-0.05	0.09
Active Annual Return %	2.578	
Tracking Error (Annual) %	0.983	
Information Ratio	2.623	

Figure 4.7. Total accumulated return of climate portfolio and benchmark



## 4.4 Portfolio climate performance for PACTA sectors

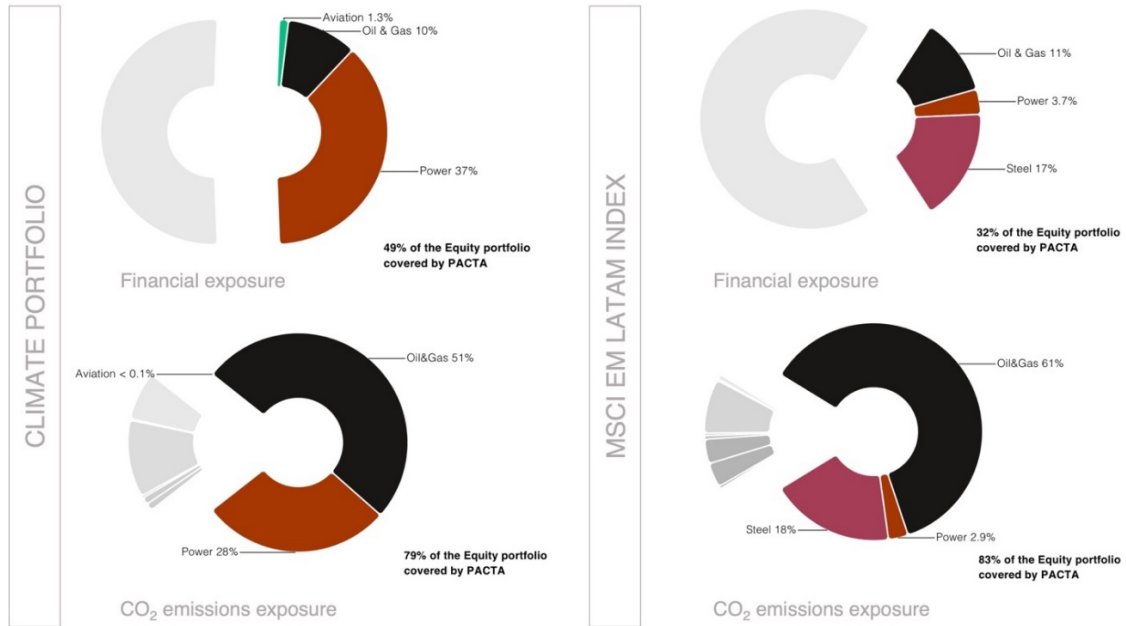
A climate alignment assessment was conducted for the resulting portfolio and the benchmark. This allowed for an evaluation to be made of the overall impact of including a climate variable on the portfolio construction on its alignment with a 1.5°C and 2°C pathway relative to the trajectory of the market (represented by the benchmark). For this purpose, the PACTA tool was used, which means that there is a focus only on the PACTA sectors and in forward-looking data (levels 1-4 in the climate performance assessment).

### 4.4.1 Portfolio absolute CO<sub>2</sub> emissions exposure

The exposure of the portfolios both in terms of financial assets under management and to the absolute CO<sub>2</sub> emissions associated with issuers was analysed in comparison with the MSCI EM Latam and CEMBI Latam index compositions. The exposure to PACTA climate relevant sectors and their share of the total emissions are depicted in Figures 4.8 and 4.9. Exposure to CO<sub>2</sub> emissions is attributed based a balance sheet approach.

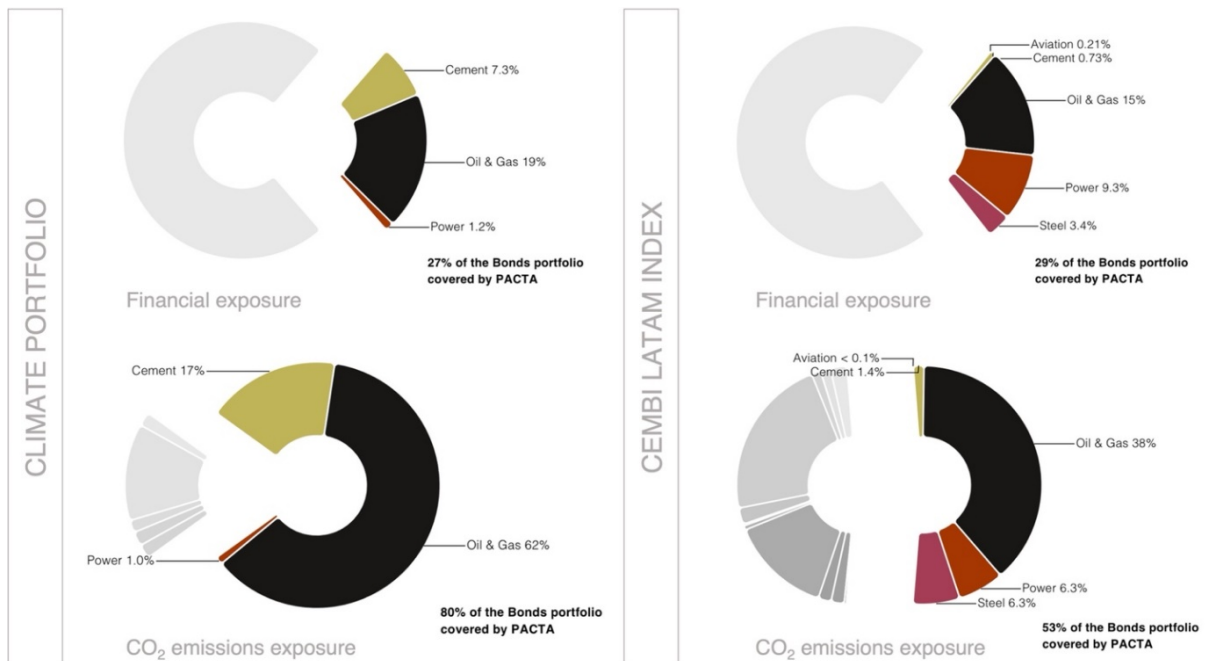
Financial exposure of the portfolios to PACTA sectors is greater than the benchmark, reflecting a tilt towards those sectors. It is notable that the portfolios are underexposed to steel production when compared to the benchmark. The results for the equity portfolio also show that the benchmark is marginally more exposed to total CO<sub>2</sub> emissions from PACTA sectors (83%) than the portfolio (79%). This may reflect the underexposure to steel.

Figure 4.8 Equity portfolio financial exposure to PACTA sectors and their absolute CO<sub>2</sub> emissions



In the bond portfolio, the financial exposure to cement and oil & gas producers is greater than for the index, with steel also giving exposure (3.4%). Financial exposure drops from 9.3% in the index to only 1.2% in the portfolio. In terms of CO<sub>2</sub> emissions, the portfolio is significantly more exposed to high emitting sectors (80%) than the index (53%), with cement and oil & gas accounting for the majority of the total exposure (79%). Like the equity index, there is significant exposure to steel in the bond index.

Figure 4.9 Bond portfolio financial exposure to PACTA sectors and their absolute CO<sub>2</sub> emissions

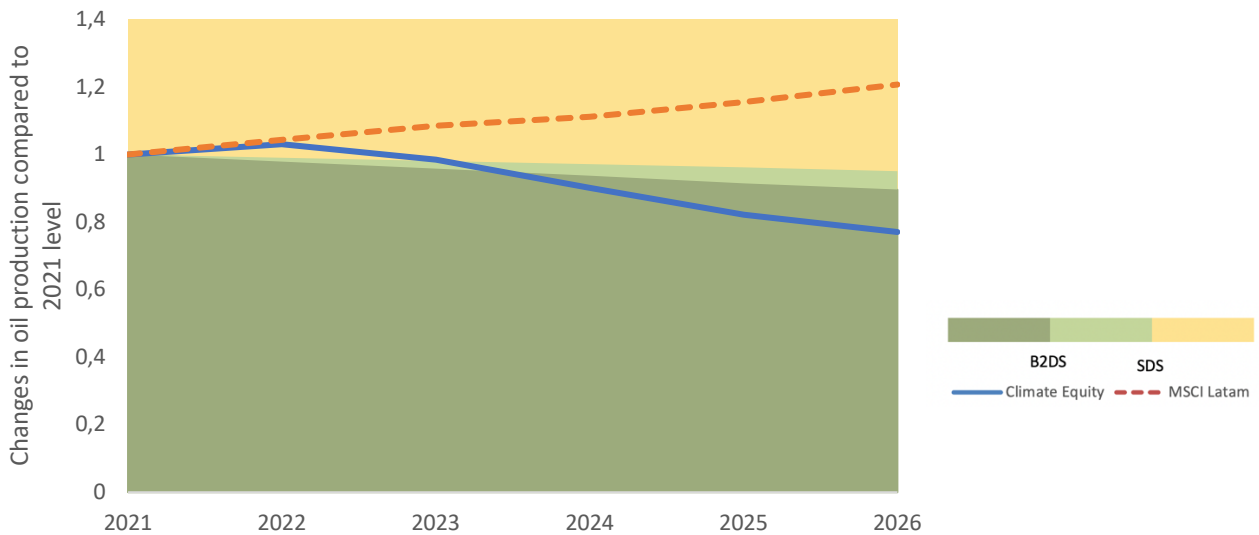


#### 4.4.2 Portfolio alignment measurement

A comparison of the resulting alignment of the two hypothetical portfolio compositions with two IEA below 2°C trajectories and the equity and bond index benchmarks are presented below for oil, gas and renewable technologies. The results show that for oil and gas production, which must decline in the IEA SDS and B2DS scenarios, both portfolios perform notably better than the benchmark (see Figures 4.10 and 4.11). For renewables, which must increase in capacity by between 20% and 25% by 2026, both portfolios are also aligned with a below 2°C trajectory and the bond portfolio in particular outperforms, being aligned with the most ambitious SDS scenario (see figure 4.12). Overall, these results show that for those sectors that account for around 80% of each portfolio’s absolute CO<sub>2</sub> emissions, the 5-year production plans of companies show alignment with a below 2°C pathway.

Figure 4.10. Portfolio production trajectory alignment for oil production

##### a. Equity portfolio results



b. Bond portfolio results

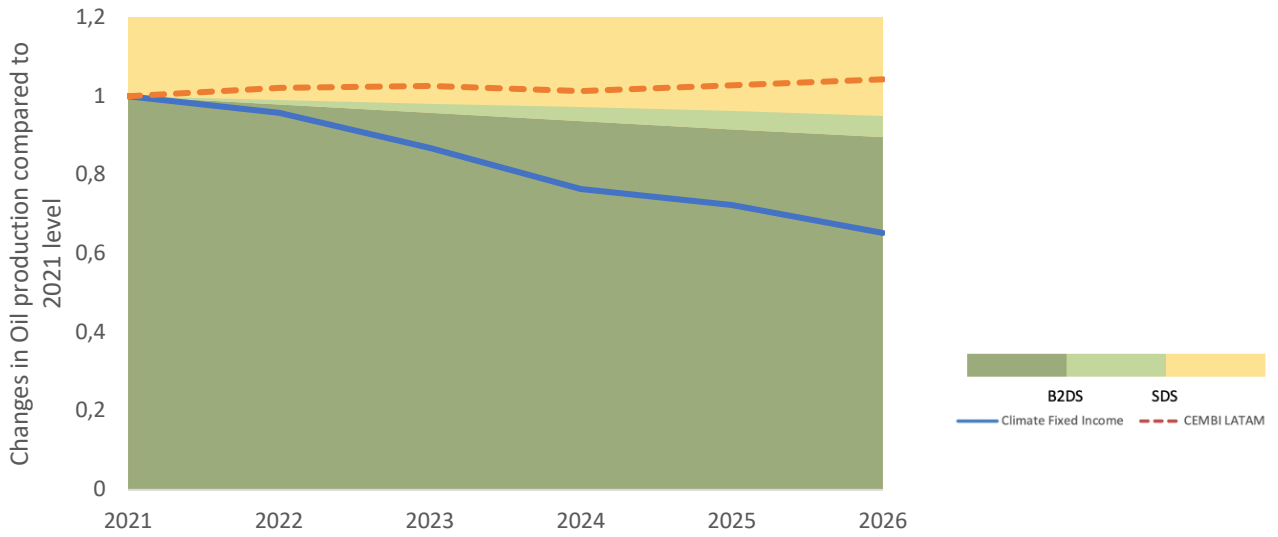
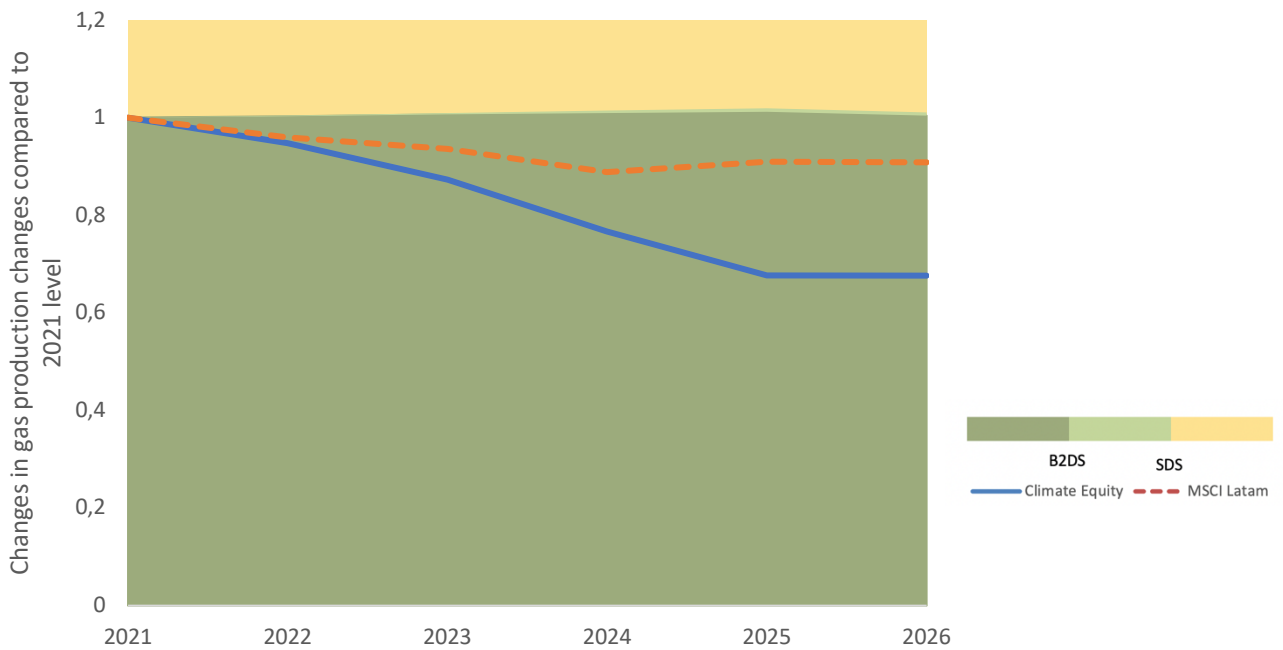


Figure 4.11. Portfolio production trajectory alignment for gas production

a. Equity portfolio results





a. Bond portfolio results

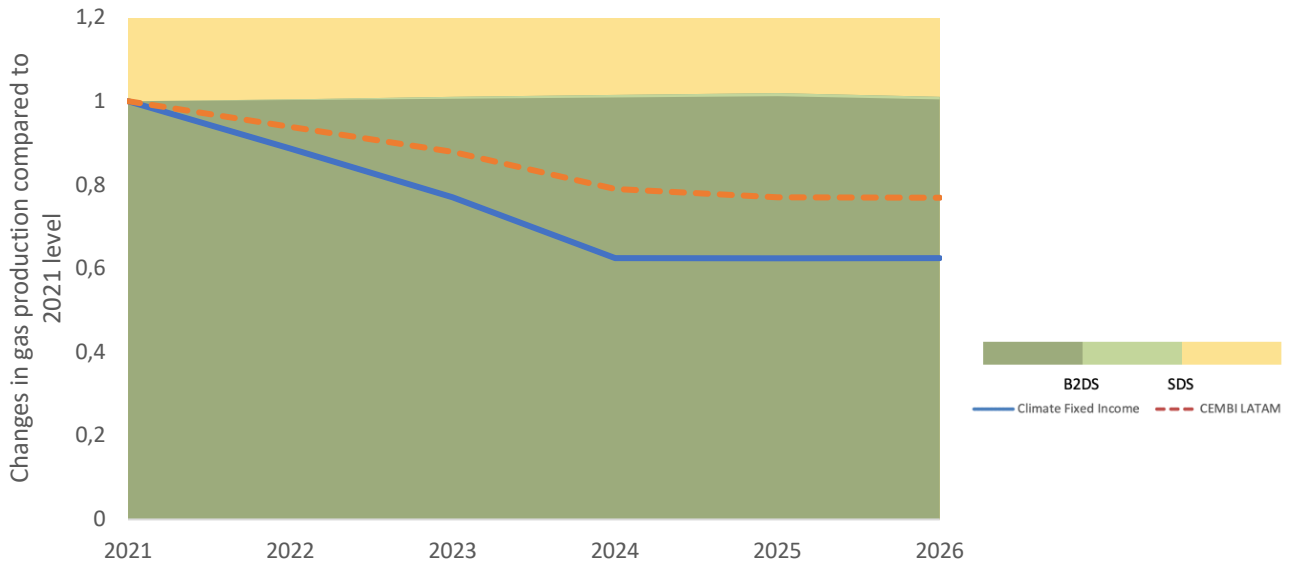
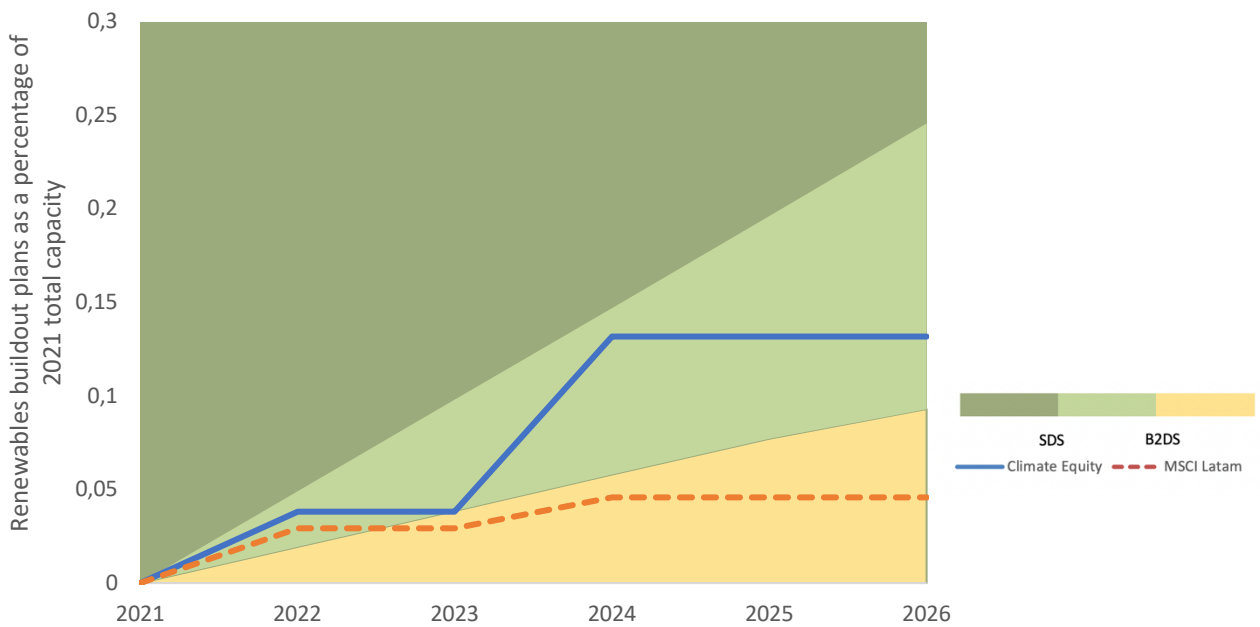
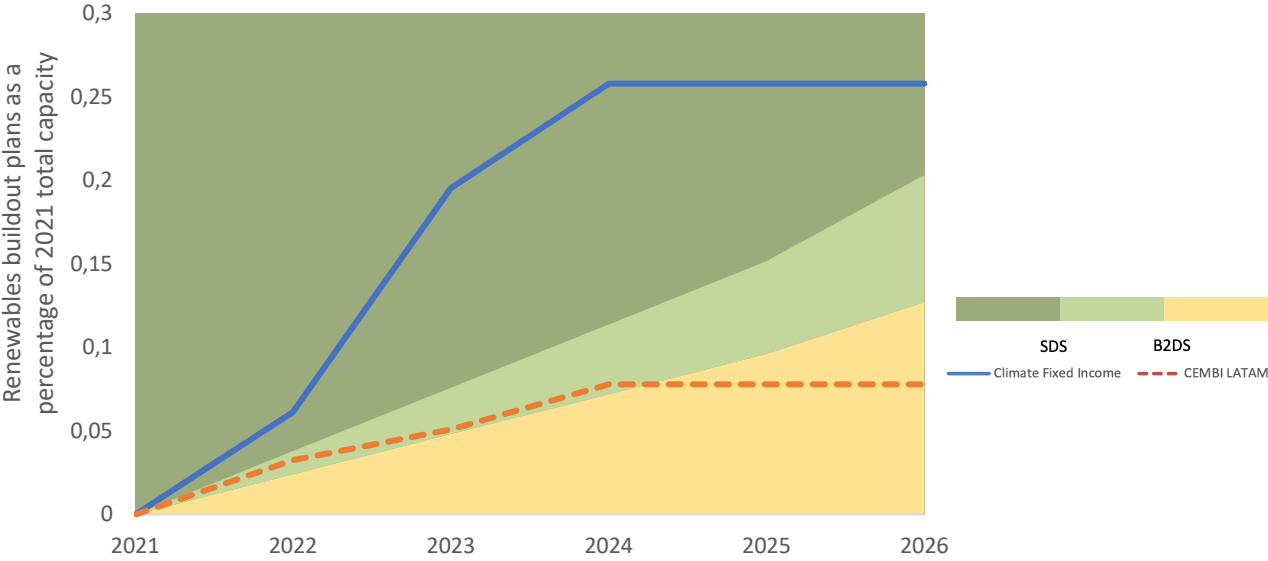


Figure 4.12. Portfolio production trajectory alignment for renewable energy

a. Equity portfolio results



b. Bond portfolio results



# 5. Impact management strategy results

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As described in section 3.7.2, three potential climate actions were selected based on consideration of academic literature and the asset classes of relevance to the study:

- New or undersupplied capital allocation (additional or concessional capital).
- Conditional capital allocation (setting climate conditions).
- Engagement with investees.

In the following sections the survey results, including the findings for each climate action, are analysed. The resulting impact strategy is also outlined.

## 5.1 Survey results for each climate action

### 5.1.1 Climate Action 1: New or undersupplied capital allocation

According to the survey response, the most relevant asset class identified for this climate action would be infrastructure (private equity and private debt investments in the energy & transport sectors) and private debt funds that focus on companies that contribute to the transition. Fixed income, equity and investments in international funds/ETF were also mentioned. However, these latter classes do not seem compatible with this impact mechanism, with the exception of undersubscribed primary issuances, but this does not seem common in the Latin American region, and possibly also short maturity bond issuance.

In relation to infrastructure investments, SURA Investment Management has both debt and equity strategies in infrastructure assets, mainly targeted at the energy and transport sectors. The equity strategy considers coal-fuel power generation as an exclusion and seeks opportunities in renewable energy and energy efficiency projects and companies. The region is not yet understood to have regulated tradeable infrastructure fund structures, along the lines of those established in response to the ELTIF (European Long-Term Investment Fund) Regulation in Europe.

### 5.1.2 Climate action 2: Conditional capital allocation

The results of the survey show that this mechanism is already incorporated into SURA Investment Management's debt strategies for infrastructure projects but not into thematic investment fund portfolio allocation. The conditionality in this asset class is associated with high environmental and social standards and greater accountability to ESG risks in general.

Based on the results, it is understood that for these projects to be financed, they should comply with conditions set by multilateral banks – in this case with reference to the IFC performance standards<sup>39</sup>. This is monitored quarterly, and capital disbursements are dependent on the fulfilment of these standards. Additionally, if gaps are identified during the due diligence stage, it is possible to create action plans for the

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<sup>39</sup> International Finance Corporation,  
[https://www.ifc.org/wps/wcm/connect/Topics\\_Ext\\_Content/IFC\\_External\\_Corporate\\_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards](https://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Policies-Standards/Performance-Standards)

projects to address them as a condition for financing. A similar process is being incorporated by SURA Investment Management team for the direct lending private debt funds.

Opportunities were identified to potentially implement conditional investment strategies in other asset classes, which are considered to be worth exploring in more depth, for example:

- An equity strategy in infrastructure: Opportunities are identified for a more in-depth analysis during the due diligence stage, and the requirement of action plans as conditions for investment. This could comprise fund shares of infrastructure investment vehicles or private equity holdings in specific projects with high emission (and mitigation) impact.
- Investments in real estate: A property sustainability assessment tool could be used to inform negotiations in the future (e.g. lower prices for less efficient buildings), and to establish key performance indicators for active management of assets. Although this is not strictly a conditional investment, it has a similar purpose of motivating a net positive impact as a result of an investment.
- Debt strategies: Both through investments in sustainability-linked bonds as the market grows in the region, and exploring alternatives of sustainability-linked loans through their private debt platform.

Including conditionality in private equity and debt strategies for both infrastructure and non-infrastructure projects/companies could represent an interesting complement to the 'growing new and undersupplied capital market' mechanism discussed above.

### **5.1.3 Climate action 3: Engagement**

With reference to empirical evidence for the effectiveness of different forms of investor engagement (see Box 5.1) the following different mechanisms have been used on an ad-hoc basis for this purpose and via different forums:

- direct contact with the management of companies,
- meetings organized by the issuer or third parties (often with the investor relation team),
- attendance at annual general meetings (AGM),
- attendance at bond-holder meetings and,
- collaborative engagements.

However, these had not yet been deployed as part of an ex-ante general engagement strategy. In addition, evidence suggests that the following aspects of engagement would also have to be put in place in order to maximise potential impact:

- Expression of expectations when engaging with companies
- Mechanisms to gather ex-post data (although it is being developed)
- Formal escalation measures

A more proactive approach to ESG engagement is being developed, initially with a focus on promoting greater ESG disclosure from issuers and addressing highly critical ESG controversies. Additionally, SURA Investment Management has led and participated in collaborative engagement initiatives like the public request for greater ESG transparency from Mexican issuers led in 2020 by the Mexican Green Finance Council<sup>40</sup>, co-led a similar initiative in Colombia in partnership with other PRI signatories in the country, and joined the 2021 and 2022 non-disclosure campaign led by CDP.

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<sup>40</sup> Consejo Consultivo de Finanzas Verdes (see: <https://www.ccfv.mx/finanzas-verdes/documentos/reportes-2020/declaracion-de-inversionistas-2020>)

Engagement initiatives have primarily been focused on reaction to issues related to corporate governance, ESG controversies (red flags)<sup>41</sup> and, more recently, imminent ESG-related risks. These issues are identified and raised according to the identification and evaluation of highly critical ESG controversies using a proprietary methodology.

At the time of writing this report, they were developing a more systematic plan, process, and methodology to more pro-actively implement engagement strategies, or monitor their effectiveness. They also identified the need for capability building and training on climate change issues. In terms of internal resources, it was identified that it was relevant to involve both sustainable investment and equity/credit teams, and to gear the sectoral expertise of each of the research and credit analysts and the thematic expertise of the sustainable investment team.

Box 5.1.

### **Evidence for the effectiveness and impact of investor engagement**

Empirical evidence for the impact of engagement can be found both in literature on engagement to increase shareholder value and improve the environmental performance of companies. Research from the EU and the USA points to the following general conclusions about effective engagement

- Shareholder influence: The influence of an asset or fund manager will vary depending on the extent of the shareholdings.
- AGM resolutions: Proxy resolutions tend to have an advisory rather than a mandatory status, so their effectiveness and certainty of outcome varies <sup>42</sup>.
- Collaborative action: By coordinating action, investors can be more effective in seeking support for policy or strategy proposals and in seeking to influence the management of companies <sup>43</sup>.
- Activism: In general, direct, bilateral contact with companies can be more effective in seeking outcomes. Although potentially also effective, more confrontational actions, such as public statements and seeking to change the management, pose risks for both investors and investees

<sup>44</sup> <sup>45</sup>

The literature on engagement to improve environmental performance is limited and reflects the difficulty in establishing a causal relationship between investor requests and outcomes, but suggests that:

- (i) the provision of non-financial support to companies with net-positive impact can spur growth of climate-friendly companies, and that
- (ii) shareholder engagement can help to accelerate incremental improvements.

Engagement may not be able to transform whole industries but rather to have an incremental impact on company-level improvements. The recent deployment of activist investor strategies by shareholders

<sup>41</sup> This includes a specific focus on land use and deforestation issues, which are of high concern in the region.

<sup>42</sup> Martin,R, Casson,P.D, Nisar,T.M, (2007) *Investor engagement – Investors and management practice under shareholder value*, Oxford University press.

<sup>43</sup> Dimson, Elroy and Karakaş, Oğuzhan and Li, Xi, *Coordinated Engagements* (April 27, 2023). European Corporate Governance Institute – Finance Working Paper No. 721/2021,

<sup>44</sup> McNulty.T and Nordberg,D, *Ownership, Activism and Engagement: Institutional Investors as Active Owners*, Corporate Governance: An International Review, 2016, 24(3): 346–358

<sup>45</sup> Harvard Law School, Forum on corporate governance, *The director's guide to shareholder activism*, <https://corpgov.law.harvard.edu/2021/06/11/the-directors-guide-to-shareholder-activism/>

suggests that it may also be possible to achieve a step change in an individual company's climate strategy, potentially then followed by changes in their capital commitments <sup>46</sup>.

## 5.2 The selected impact strategy: investee engagement

Based on the survey answers and need, the focus for further impact strategy development for the Paris Aligned transition fund will be on the engagement action. In fact, the need was identified to have formal guidelines and processes in order to:

- make engagement more systematic,
- ensure it is geared to a Paris Aligned transition fund evaluation framework,
- integrate their ESG analysis capabilities as part of their broader sustainable investing strategy.

Based on the opportunities and constraints identified in the climate action survey, as well as the intended aim of tracking the climate performance of investee companies, an engagement strategy has been developed and tailored to form an integral part of the overall fund concept. The aim will be to use engagement with investees to seek outcomes relating to each company forward-looking climate alignment and the underlying capital commitments that drive their alignment results. The follow-up questions answered in designing the strategy are:

- What should be the elements of an impactful engagement strategy?
- How to track real world outcomes from the strategy at company and portfolio level?

The strategy was developed based on follow-up research and professional knowledge of best practices in effective engagement, adopting a broader focus on the full spectrum of activist engagement modes that can be used to drive shareholder value creation, re-orientate company strategy, and achieve changes in management (where deemed necessary).

### 5.2.1 Internal capacity and the targeting of investees

Based on the available internal resource, the strategy can potentially target up to 20-30 companies and is to be initially decided based on the results of the alignment level analysis and the portfolio financial analysis. However, the need to screen at an earlier stage for companies that are likely to engage positively with investors was identified. This will take the form of a survey (for pre-inclusion in the fund) to gauge the appetite to engage of companies in the investible universe and to discriminate between candidates and only engage with the ones willing to make efforts on decarbonization.

In building the fund, emphasis will be placed on greater portfolio allocation to tier 1 and 2 companies with a greater climate performance evaluation points allocation - but if necessary for diversification, as outlined in sections 3.4 and 3.5, companies falling into tier 3 are likely to also be included. Conversely, in order to maximise the potential for impact the engagement strategy would focus primarily on;

- Companies with less climate alignment evaluation points and also,
- Overall in PACTA sectors, where progress is most critical.

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<sup>46</sup> Engine No.1 ETF, *Exxon Mobil one year later*, <https://engine1.com/transforming/articles/exxon-mobil-one-year-later/>

By adopting this approach, it would enable the asset manager to potentially drive more impact outcomes if poorer performing companies are engaged and then improve. A series of milestones will be defined along the engagement process that will be communicated to stakeholders. This process will set out on what basis:

- a company or its bond issuance will be selected to be included in the portfolio,
- assets related to each company will be maintained in (or divested from) the portfolio,
- the portfolio allocation will be over or under-weighted compared to a reference benchmark,
- the process of escalation if requested alignment and transition outcomes are not met.
- for the purpose of transparency, and to clearly set out expectations for the fund, it is important that this process is communicated to investees and stakeholders in the market.

The engagement process will also need to interface with the asset managers escalation strategy in reaction to specific ESG controversies, for which specific climate change mitigation cases could be flagged for this specific fund. If classified as ‘highly critical’ and decided by the asset manager’s determined governance body, they would fall within the scope of this strategy. This will serve to control physical climate risks related to, for example, land use and deforestation.

### **5.2.2 Detailed design of the engagement strategy**

The engagement strategy consists of six main components that, together, are intended to be used as an impact management system, with a checking and reporting cycle being used by the asset manager to monitor the outcomes from investee engagements:

1. Pre-requisite position: The asset managers stance on the time horizon for investment.
2. Requested outcomes definition: What the asset manager will request from investees, including core outcomes for the fund product.
3. Milestones for continuation: The timeline and milestones for retaining company equity/fixed income holdings.
4. Escalation using levers of influence: The engagement levers of influence that the asset manager may choose to use.
5. Evaluation and reporting of outcomes: How the outcomes from engagements will be evaluated and reported on.
6. Increase of internal capacity: Determining how the internal capacity of the asset manager may need to respond to engagement needs.

The question of whether this engagement strategy at fund level should be coordinated with a group-wide strategy in Grupo SURA and or SURA Investment Managements’ institutional clients was also raised. Although this would most definitely increase the leverage of the engagements conducted and the chances that they succeed, this engagement strategy would initially only apply to the Paris-Aligned transition fund.

#### **Component 1: Pre-requisite position**

On the part of the asset manager, the adoption of a long-term position on equity holdings. In principle, the prerequisite is about establishing a long-term dialogue with companies that extends to the timescales for forward looking alignment measurement (5+ years).



On the part of investees, there is an expectation from the asset manager of positive engagement with investor requests.

### **Component 2: Requested outcomes definition**

For each investee company: definition by the asset manager of a (or several) desired outcome(s), with intermediate outputs/outcomes when necessary. (See the next section for details on how the selection of the outcomes could be made). Two main outcomes that are central to the fund concept and therefore the engagement strategy are:

- Achievement of a **forward-looking alignment** with the defined climate scenario trajectory for the company and sector.
- Adoption of a credible **transition plan** that backs up the alignment results and provides evidence of the company's commitment to contribute to tackling climate change.

The approach would need to differ between equities and bonds, given the less direct influence that can be wielded in the case of the latter (see Box 5.2).

Box 5.2.

#### **Engagement on corporate bond issuance**

Engagement with issuers of corporate bonds will require a different strategy. The leverage that can be expected from bondholding is likely lower due in particular to holders not having a corresponding shareholding, smaller issuer size and the short-term maturity of the bonds. However, in the case of companies issuing successive shorter maturity bonds there may be greater scope and influence to be had from threatening to boycott future issuances that are linked to refinancing<sup>47</sup>. For bonds other considerations and points of influence could include:

- Inclusion of reporting requirements in pre-issuance contractual obligations,
- Adjustment of the investors investible limit for the specific issuer,
- The potential for exposure to transition risks over different maturity time horizons could also be considered.

The first point could be addressed by identifying opportunities for more formal arrangements, such as Sustainability-Linked Bonds. The second point could be directly reflected in the portfolio's management.

### **Component 3: Milestones for continuation in the portfolio**

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<sup>47</sup> UN PRI (2018) *ESG engagement for fixed income investors*

For each investee company: The setting of milestones for continuation in the portfolio. The following indicative generic timeline and milestones (tied to specifically requested outcomes) is to initially be used as a guide (see Box 5.3).

This third component is intended to set milestones for an investee company's response to the requests and to identify possible escalation actions along the way.

Box 5.3.

### **Milestones for investee engagement**

1. Pre-inclusion:
  - Positive reaction to pre-inclusion survey.
  - Verification of portfolio inclusion based on evaluation of the company and the resulting climate performance evaluation and points allocation.
2. Post portfolio allocation:
  - For those companies already achieving PACTA alignment on a 5-year forward-looking basis, the maintenance of the alignment trajectory shall be externally verified every 12 months.
  - 12–18-month period in which the investee is requested to develop requisite corporate plans, targets and alignment data, with the scope of the request geared to the company's evaluation score.
  - A 6-month period is also established for the monitoring of a company's reaction to the identification of specific ESG controversies of relevance to the fund.
3. Remedial response:
  - If the requisite material is not presented, then a 3-6 month period will be communicated in which the company will be requested to remedy the situation.
  - If the requisite material is not forthcoming, then a 3-6 month period of escalation of engagement will be initiated that may terminate with exclusion (divestment) accompanied by a public statement.
  - Each time period runs from the point of making the request the company – whether via investor relations teams, executives or officers.

### **Component 4. Escalation using levers of influence.**

For each request to a company: Use of different possible levers of influence, escalating as indicatively described in a 5-level scale (see Table 5.1).

An important part of the engagement strategy is the ‘escalation’ scale. The below mechanisms are derived from various literature sources, either sustainability-specific examples<sup>48</sup> or based on standard investor practices, i.e., shareholder value-motivated examples<sup>49</sup>. The mechanisms cover:

- “Routine” engagement activities (level 0), best suited to monitor well-performing companies.
- “Activist” activities (levels 1-5), best suited to engage and influence the worst performers.

The 5-level escalation scale is meant to reflect the relative aggressiveness of the engagement levers, and is based on the above-mentioned sources, as well as on various case studies (see Annex 3). The scale applies primarily to equity shareholdings. A different approach would need to be adopted for bond holdings, as detailed further on in this strategy. It is important to bear in mind more active and confrontational modes can have unintended consequences both for investors and investee companies, so should remain exceptional activities aimed at forcing a change in the strategic direction of a company.

Table 5.1. Indicative 5-Level scale of investor engagement escalation modes

0 Routine engagement mode	1-3 Activist engagement mode			4-5 Confrontational engagement mode	
<ul style="list-style-type: none"> <li>• Monitoring of performance and routine meetings with the investor relations office</li> <li>• Voting at AGMs</li> </ul>	<ul style="list-style-type: none"> <li>• Raising concerns directly or via company advisors</li> <li>• Meetings with the executive directors and officers</li> <li>• Letters written to the board of directors</li> </ul>	<ul style="list-style-type: none"> <li>• Public statements in advance of an AGM</li> <li>• Joint submissions of resolutions to AGMs (if binding)</li> </ul>	<ul style="list-style-type: none"> <li>• Letters written to the press published in the public domain</li> </ul>	<ul style="list-style-type: none"> <li>• Requisitioning of EGMs</li> <li>• Joint actions to change the composition of the management / board</li> </ul>	<ul style="list-style-type: none"> <li>• Divesting shareholdings or bond holdings,</li> <li>• Boycotting future bond issuances</li> </ul>

Routine
Collaborative
Mixed
Confrontational

Level 0
Level 5

All these activities should be coordinated with other financial institutions whenever possible, in order to maximise their effectiveness. Collaboration with other institutions might in particular help with access to companies at management level and in trying to get past the initial contact point, which is often the investor relations office. As highlighted by (Martin, R et al., 2007) in the context of shareholder engagement:

*“By acting in collaboration, investors share the costs of engagement, eliminate free rider problems, and—through increasing the proportion of shares controlled—acquire enhanced leverage. Lack of*

<sup>48</sup> In particular the Hermes SDG Engagement Fund reporting material – see below

<sup>49</sup> In particular: *The Responsibilities of Institutional Shareholders and Agents: Statement of Principles*, ISC, 2002; and *Investor engagement – Investors and management practice under shareholder value*, Martin,R, Casson,P.D, Nisar,T.M, 2007; *Entrepreneurial Shareholder Activism: Hedge Funds and Other Private Investors*, Klein & Zur, 2007

*unity allows targeted managements to play one investor off against another, reducing the effectiveness of engagement.”*

Discussions around the willingness of the asset manager to engage in ‘activist’ strategies led to the conclusion that, as a first step, these could be reserved for the less well performing companies as part of remedial requests made under step 3 (for example. companies classified into tiers 2 and 3), to be triggered by the non-achievement of the outcomes requested by the asset manager within a timeframe to be defined.

An important consideration is also that the ability to use some of the levers will depend on what is legally permitted in each jurisdiction – so for example, in some jurisdictions there are restrictions on contact with the board of directors or indeed the ability of shareholders to table resolutions – as well as shareholder culture and practices in the region (see Box 5.4).

Box 5.4.

### **Shareholder culture and practices in the Latin American context**

In Latin America, in contrast to more developed economies, capital markets represent a lower share of the GDP and are not necessarily representative of the economy as a whole. This means that a significant portion of the companies are not listed or do not issue bonds, and therefore the potential to use engagement strategies and influence GHG emissions reductions in the real economy is limited to the share of companies that are part of public capital markets.

As well as the general economic context already described, following distinct differences in shareholder culture and practices have also been identified in a Latin American context and could create both obstacles as well opportunities<sup>50</sup>:

- There is less history of shareholder activism which means that companies may be less prepared in how to respond and engage, with potential for reactive rather than proactive responses;
- Some Latin American companies’ shares are controlled by shareholder blocks centred around families or other affiliations;
- Shareholders generally tend to exercise more direct control over boards of directors and their decisions – something not necessarily available in other jurisdictions;
- Corporate governance disputes in Latin America are increasingly subject to arbitration proceedings, which are normally confidential;
- Latin American securities markets operate with less liquidity, which tends to reduce the appetite of activist shareholders who may struggle to sell shares they amass.

The strategy would therefore need to evolve further based on the distinct company structures, shareholder rights and approach to investor relations within the region.

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<sup>50</sup> Galvis,S.J and Ahlers,W.F. *Crisis Management as a Tool for Approaching Shareholder Activism*, 9th December 2020, <https://latinlawyer.com/guide/the-guide-corporate-crisis-management/third-edition/article/crisis-management-tool-approaching-shareholder-activism>

### **Component 5: Evaluation and reporting on outcomes.**

Annual reporting on the engagements realised will take place, including the status of the engagements, the associated requests, the outputs/outcomes achieved or not and why<sup>51</sup>. The reporting will provide aggregate results at sectoral and portfolio level.

### **Component 6: Increase of internal capacity.**

The results from the previous steps will feed into a review of the resources dedicated to engagement. The review will identify if additional resources are needed in order to improve the prospect of obtaining outcomes. This could include:

- Increasing the climate change alignment training and negotiation skills of the team.
- Expanding the capacity of the analyst teams, given the need to track progress at a sectoral and activity level,
- Using proxy consultants to provide external support.

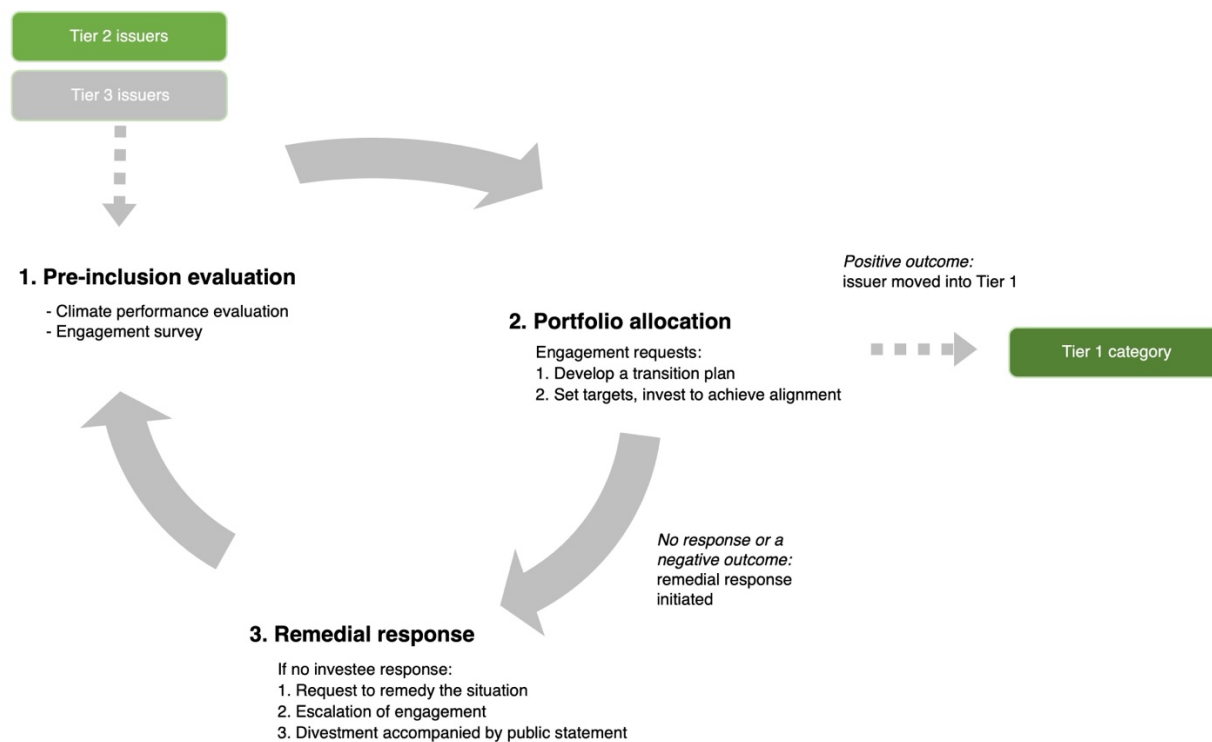
## **5.3 Implications of the engagement strategy for investee companies**

The previous section 5.2.2 described the main elements of the engagement strategy. In this section further detail is added on how it would apply to investee companies included within the fund portfolio and according to the performance tier they are assigned to. The overall approach described in this section is illustrated in Figure 5.2.

*Figure 5.2. Core components of the Paris aligned transition fund engagement strategy*

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<sup>51</sup> Good company-level examples can be found here: <https://www.hermes-investment.com/ukw/wp-content/uploads/2020/06/federated-hermes-sdg-engagement-equity-commentary-huhtamaki-may-2020.pdf> ; <https://www.hermes-investment.com/ukw/wp-content/uploads/2020/08/bd006035-sdg-engagement-equity-brunswick-professional-version-0720.pdf>



### 5.3.1 Implications for all companies in the portfolio (including Tier 3, if used)

A pre-inclusion survey to gauge their appetite for engagement as well as their capacity to respond to engagement requests that may alter their business strategy<sup>52</sup> or require technological/management innovation to fulfil. This survey could also be complemented by individual or collective meetings.

Given the general lack of climate disclosures from many of the issuers under consideration, the definition of the outcome(s) would likely involve intensive dialogue with the company. Access to improved performance data could thus constitute the first objective of the engagement process before other outcomes in cases when it is lacking.

### 5.3.2 Implications for companies that are not aligned based on targets or capital commitments (Tier 2)

<sup>52</sup> As emphasised by Dimson et al (2015)

The engagement can be focused on the creation of a transition plan with science-based climate targets which will help define relevant real-world outcomes afterwards. This request ideally needs to be coupled with a preliminary request to stop all building or buying of high emitting (non-aligned) production capacity. Additional related requests (see Annex 4) can be added if considered meaningful.

Non achievement of the outcomes defined above after a timeframe to be defined on an individual basis with each company would lead to exclusion and divestment from the fund (see the engagement strategy component 3).

### **5.3.3 Implications for companies that are aligned based on capital commitments (Tier 1)**

The engagement will first focus on maintaining real-world decarbonization scenario alignment. If the companies do not yet have one, an engagement request will be made to create a transition plan in order to provide a context for ongoing investment. The plan shall focus primarily on outcomes in a short-term (3-5 year) time horizon (e.g. changes in CAPEX/production plans, energy efficiency, product design, market share, pre-commercialization R&D, etc.). The central objective will be to ensure that the outcomes required contribute to fulfilling the transition plan. Additional asks based on ISO 14097 (see Annex 4) can be tailored and added if considered meaningful.

## **5.4 Engagement request - defining a model transition plan evaluation**

A model transition plan was defined based on the classification made in Section 3.4. The intention is that the transition plan forms part of the engagement request to each investee company and so the plan scoring can therefore be used for evaluation purposes by SURA Investment Management (see Table 5.2). The proposal also integrates elements of the alignment evaluation, given that scenario-based target-setting and capital investment are intrinsic to transition plans and the monitoring of real economy impact. The key aspects of the proposal are as follows:

- A minimum requirement for implementation of a transition plan is proposed, which would indicatively total 75 points.
- Achievement of the minimum transition plan requirements would form a main request within the engagement strategy.
- The initial aim of the minimum requirement is to achieve implementation of a corporate transition strategy then supported by ongoing alignment measurement, an investment strategy and establishment of tracking KPIs.

- Some of the elements could potentially be used to increase a company's score in the alignment evaluation – it is proposed that the 25-35 points achievable with a TP3.1/3.2 investment plan can be used as they are analogous to the 5-year production forecast of TP2.2.
- The status of the transition plans of all companies within the portfolio would be evaluated and tracked.

Given the significance of fossil fuel producers to the energy transition, a distinct treatment is proposed within the plan criterion. A set of additional criteria under components TP 2.3 and 3.5 are designed to track this sector, which requires specific attention on responsible asset phase down and investment in diversification activities. These criteria can potentially also be applied to power companies with coal and oil-fired power generation assets.

Table 5.2. Outline transition plan elements and scoring system

	Components	Minimum requirement?	Points
TP1	Corporate transition strategy		
1.1	Board level adoption	Yes	15
1.2	AGM/investor level adoption		+10
TP2	Decarbonisation pathway(s) and targets		
2.1	Targets based on scenario alignment measurement	Yes	30
2.2	Targets based on scenario alignment measurement + 5-year production forecast		+70
2.3	Targets based on clean energy diversification measurement (for fossil fuel producers)		+20
2.4	Scenario-aligned R&D measurement		15
TP3	Investment strategy with financing plan		
3.1	3-5-year time horizon - Board level adoption	Yes	25
3.2	3-5-year time horizon - AGM/investor level adoption		+10
3.3	Capex allocation to deliver scenario-alignment		50
3.4	R&D capex allocation to deliver scenario-alignment		+25
3.5	Fossil fuel producer specific - production wind-down, value recovery, diversification activities		20
TP4	Internal management and capacity		
4.1	Business division implementation plan		15
4.2	New internal resource allocation		10
TP5	Internal monitoring, reporting and verification		
5.1	Establishment of KPIs for tracking of implementation outcomes	Yes	5
5.2	External verification of implementation outcomes		10
		Total points achievable	290
		Minimum points requirement	75



## 6. Conclusions of the study

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This final chapter presents the **12 key findings from the study** together with a hypothetical description of how a 'Paris aligned transition fund' could work. The findings address in turn:

- the overall fund design concept,
- the climate performance evaluation,
- the portfolio construction methods,
- the financial evaluations of each portfolio, and
- the impact management strategy.

### 6.1 Designing a Paris Aligned Transition Fund

**In addition to acting in favour of clients' best financial interest there is an increasing imperative for asset managers to extend their fiduciary duty to investors by:**

- 1. Managing climate change transition risks, and by**
- 2. Playing an active role in fulfilling the Paris Agreement objectives of making capital flows consistent with a pathway towards stabilizing global temperatures to well below 2°C.**

**The latter has come to be referred to as the 'alignment' of capital allocation with Paris Agreement objectives.**

Whilst there have been many public statements by investors of their commitment to 'align' their investments with 2030 and 2050 climate targets, there has been very limited analysis of what it means in practice to try and align a diversified portfolio allocation. The EU's Climate and Paris Aligned Benchmark Regulation of 2020 was a first attempt to answer that question, setting economy-wide decarbonization targets accompanied by exclusions for high CO<sub>2</sub>-emitting activities.

The approach taken by the EU raises fundamental questions about how to measure alignment at portfolio level and across industrial sectors with very different decarbonization pathways, technological transitions and investment needs, as well as how it can work to drive change in the real economy. This study has sought to address the same question that this Regulation sought to address, but by proposing an approach based in looking in detail at the measurement of climate performance across sectors and the related implications for portfolio construction and financial performance.

In the case of listed securities, it would be easy to manage transition risks by simply divesting from climate critical sectors, but this will not drive the transition of companies in these sectors, in fact it could have unforeseen effects, restricting access to capital to the very companies that need to invest in and manage the necessary technology transitions, and losing the power to influence their strategic decisions through active ownership practices. This is particularly important in emerging economies, where access to capital to respond to development needs could be restricted if there is not a careful management of the transition to a low-carbon economy.

Therein lies the challenges in designing a 'Paris-Aligned transition fund' - since the economy itself is largely currently misaligned, the choice for investors is whether to concentrate their allocations on those few companies that are aligned, or to diversify across those companies that have committed to working towards

alignment. Moreover, the funds' investment strategy is proposed as being based on listed securities and corporate bonds, which in turn poses specific challenges as to how investors can use their capital allocation decisions and their influence as a shareholder in contrast to as a provider of capital to bond issuers. The key premises of the fund design that have informed the study are outlined in Box 6.1.

Box 6.1.

### **Key premises of a 'Paris-Aligned transition fund'**

In order for a fund to achieve and maintain Paris Agreement alignment over time, the portfolio design and management should seek to:

1. Focus attention on the alignment and transition status of issuers in sectors that are critical in seeking to reduce CO<sub>2</sub> emissions.
2. Measure performance of the underlying assets of its investee companies based on their forward-looking alignment with Paris Agreement goals, as well as their commitment and advance towards their climate transition.
3. Maximise the impact of the investment decisions on company plans and the real economy.
4. Monitor year on year the alignment and transition status of each investee company.

In addition, within a diversified fund that is constructed with reference to an index there is the need to measure performance for issuers in a wide range of sectors.

#### **6.1.1 Evaluating issuer climate performance**

**Key finding 1: Forward looking, scenario alignment measurements at the company level can provide decision-useful information about their climate performance.**

**This information was considered to have a high value for investment analysts, with agreement to weight it highest in a climate performance points scale which in turn will be used in portfolio construction.**

The number of sectors this approach can currently be applied to is, however, a limitation to the use of this type of climate performance metric to a diversified portfolio. For the majority of the sectors there are currently no clear technology pathways, so as a result metrics based on decarbonisation rates, emissions intensity trajectories and decarbonisation targets had to be used, but without being able to benchmark reductions or make a forward-looking alignment assessment these indicators had to be weighted lower in the total company's climate score.

**Key finding 2: The metrics used to evaluate companies' climate performance metrics can be weighted based on the value of the information they provide about the issuers' contribution to a low carbon transition.**

The study resulted in the definition of a multi-level scoring system for climate performance. The scoring has eleven levels and reflects a progression from a past performance perspective to a forward-looking perspective with reference to sectoral decarbonisation pathways. The scoring can in turn be used by an investor to categorise issuers setting thresholds for their climate performance which can be used in the

process of constructing a portfolio. The thresholds set informed the definition of three tiers of performance for the purpose of portfolio construction (see Figure 6.1).

Figure 6.1 Categorization of companies' climate performance by tiers

CLIMATE PERFORMANCE CATEGORIES		CLIMATE SCORE
<b>TIER 1</b> Alignment	<b>PACTA</b> Alignment with a 1.5°C or 2°C scenario	> 100
<b>TIER 2</b> Transition	Decrease in emissions trajectory in line with with a below 2°C pathway and having a decarbonization target.	> 50
<b>TIER 3</b> Sector-relative performance	Climate performance above that of sector peers	<b>Normalized score:</b> Threshold will depend on sector results

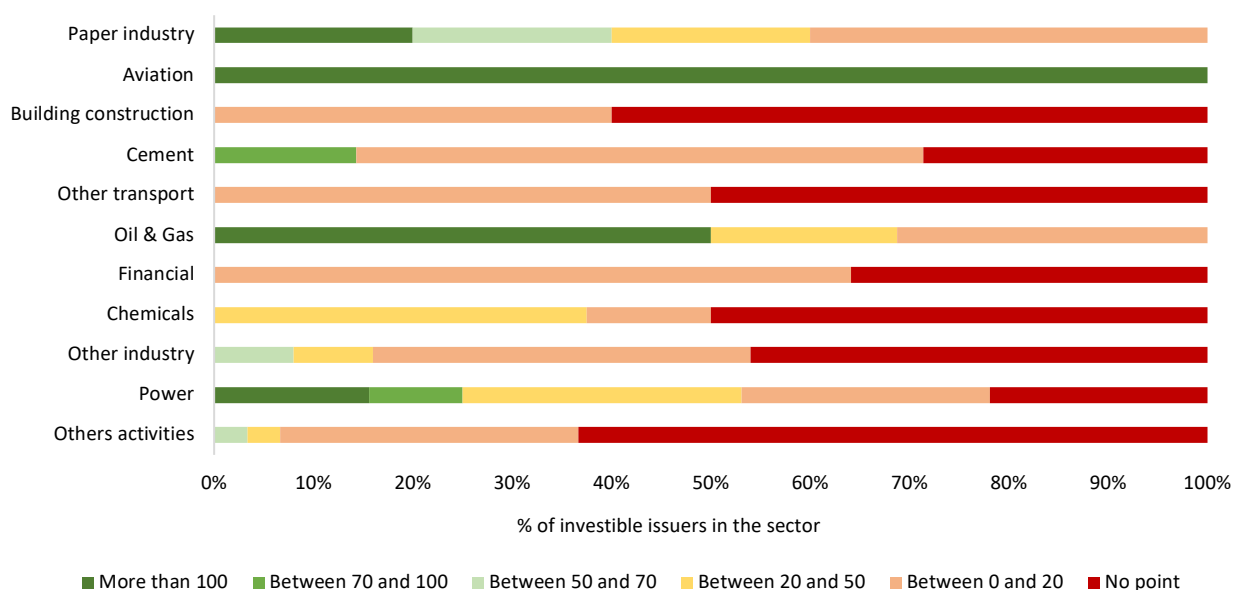
**Key finding 3: The resulting scoring system provides a tool to measure the climate performance at sectoral and company level that is actionable as a portfolio management tool.**

**It enables the asset manager to analyse and manage the spread of performance between the high-performing companies and laggards across all sectors, with the latter accounting for between 20%-60% of issuers in some sectors.**

Such an approach is anticipated to provide the investor with a starting point for portfolio construction, as well as for tracking portfolio performance year on year, and for prioritizing actions to improve performance, such as engagement.

By using this approach, it can be seen that in very few of the sectors analysed there are issuers that achieve more than 50 points, representing a minimum threshold for aligned target setting, or even 20 points, representing a track record of decarbonisation (see Figure 6.2).

Figure 6.2. Distribution of all issuers' climate performance by normalized score



**Key finding 4: Upon allocation of issuers to tier 1 (12 issuers) and tier 2 (9 issuers) according to their resulting climate performance, their distribution by sector shows a high concentration in PACTA sectors (57%), and in the power sector in particular (33%). This finding poses a challenge for managing portfolio concentration risk.**

The starting point was an investible universe of 204 Latam issuers of equities and bonds. Out of these 204, around 30% corresponded to PACTA sectors, rising to 57% in performance tiers 1 and 2. Geographically issuers are located Brazil, Mexico, Chile, Colombia, Peru, Argentina, Dominican Republic, and Panama.

The resulting concentration of issuers in PACTA sectors is partly a product of the availability of sufficient data and scenarios to measure alignment in order assign a score in tier 1. It could be the case because higher-emitting industries have a greater scrutiny as well as disclosure demands regarding their emissions and decarbonization plans both by governments and consumers. In order to build a diversified portfolio that is consistent with market benchmarks, and therefore viable for institutional investors, the inclusion of tier 3 companies was necessary (issuers with a better climate performance compared to sector peers).

Table 6.1. Distribution of companies by sector in the equity portfolio design

Sector		Tier 1	Tier 2	Tier 3	Total	
<b>PACTA</b> 36%	Power	7	0	0	7	21%
	Oil & Gas	3	0	0	3	9%
	Cement	1	0	0	1	3%
	Aviation	1	0	0	1	3%
<b>Non-PACTA</b> 64%	Paper industry	0	1	0	1	3%
	Other activities	0	2	4	6	18%
	Other industry	0	6	8	14	42%
		<b>12</b>	<b>9</b>	<b>12</b>	<b>33</b>	<b>100%</b>

### 6.1.2 Integrating climate performance into portfolio construction

A key objective of the study was to integrate climate performance as a consideration into the portfolio construction process for equity and bonds. A portfolio construction process therefore had to be designed for two portfolios – a pure equity portfolio and a pure bond portfolio.

**Key finding 5: Portfolio construction processes can be designed to make use each company's climate performance to inform selection of the securities or to adjust the portfolio weighting for equity positions.**

It was possible to directly use three tiers of performance illustrated in Figure 6.1 in the portfolio construction process. After considering a number of options for both the equity and bond portfolios, the following approaches were selected based on their potential for integration into internal processes, as well as to test different alternatives and their impact on the portfolios' financial performance and overall alignment:

- Equity portfolio weighting: In this case, the companies' climate performance score was used to select the portfolio's constituents, which also accounts for 50% of the portfolio allocation weighting (the other 50% corresponds to the normalization of the weighting according to the issuers' market capitalization). The portfolio construction process assigns a higher weighting to those companies with higher climate score. For SURA Investment Management's investible universe this resulted in a reduction in the investible universe of 82%, with securities of 33 out of 176 issuers forming part of the portfolio construction.
- Bond universe screening: The portfolio construction started by categorizing the bonds in the investible universe into risk buckets according to their credit rating, maturity, and country of issuance. The climate performance score was used to screen the bonds issued by companies from the defined tiers; the weighting was a result of a portfolio optimization process that sought to minimize the portfolio's deviation from the market benchmark.

A limitation of the approach taken for bonds is that it does not yet take into account other factors that may influence performance in a given investment time horizon, such as the market value that may be at risk as a result of a disruptive transition.

**Key finding 6: Whilst the priority in both portfolios (equity and bonds) was to only include securities from companies that demonstrate alignment (tier 1) or that show some advance in their climate transition pathways (tier 2), in practice this ran up against four main constraints:**

1. The sectors for which alignment measurement is possible represent a smaller number of companies within the investible universe (higher emitting sectors), representing a concentration risk within the portfolio.
2. The market benchmark against which the portfolio performance is measured contain a significant number of issuers from broader sectors such as financials, consumer staples and food that are important to reflect in the portfolio composition.
3. As a result, in the case of equities, there were not sufficient tier 1 and 2 companies in the investible universe to meet the condition of desirable diversification.
4. Without resorting to the inclusion of some tier 3 companies the resulting portfolio would not meet other portfolio construction rules set by the investor to ensure diversification and, for bonds, management of credit risk.

The resulting split between tier 1,2 and 3 issuers for each of the portfolios is presented in Table 6.2. Tier 3 was therefore found to be a necessary tool in portfolio construction, particularly in the case of the bond portfolio, where it accounts for 49% of the issuers. This means that the focus of the portfolio is on companies leading the transition, rather than fully aligned.

Table 6.2. Climate performance composition of the optimised equity and bond portfolios

Climate performance tier	Equity portfolio		Bond portfolio	
	Number of issuers	%	Number of issuers	%
Tier 1	12	40	8	30
Tier 2	8	30	11	21
Tier 3	12	30	13	49
<b>Total</b>	<b>32</b>	<b>100.0%</b>	<b>32</b>	<b>100.0%</b>

### 6.1.3 Financial evaluation of the equity and bond portfolios

**Key finding 7: The back-testing results show that it is possible to construct sufficiently diversified equity or fixed income portfolios with Latin American issuers that can be considered as Paris-aligned or with the potential to advance in their transition.**

The resulting portfolios can demonstrate a performance that is somewhat consistent with that of the respective broad market benchmark in terms of absolute and relative risk. The financial results and related performance indicators, including tracking error, are presented in Table 6.3.

There are implications depending on the portfolio construction methodology used. In the case of the equity portfolio, in which more weight was given to companies with higher climate performance score, the resulting climate portfolio demonstrated a higher volatility at specific points in time, and a higher tracking error. This could be the result of the concentration of the portfolio in a smaller number of securities from the benchmark, as well as the fact that the defined benchmarks are broad market indexes that are not aligned with climate objectives. An alternative could be to select a benchmark that is in line with the portfolios' investment thesis, instead of a broad market index.

In the case of the fixed income portfolio, in which the climate score was used to select the eligible bonds but the weight of each security was the result of a portfolio optimization process, the results show a much greater consistency with the market benchmark, with a tracker error below 100 basis points. Additionally, both portfolios demonstrated a higher active return compared to the selected market benchmark, and, although it is not possible to claim causality between the climate alignment and the return, this points that investors do not necessarily need to sacrifice performance on a climate aligned transition fund.

**The exposure of the portfolio both in terms of assets under management and to the absolute CO<sub>2</sub> emissions associated with issuers was analysed in comparison with the MSCI EM Latam index (equity) and CEMBI Latam broad diversified (bond) index composition.**

Table 6.3. Results of the financial evaluation for the equity and bond portfolios

	Equity		Fixed income	
	Benchmark MSCI EM Latam	Equity Climate Portfolio	Benchmark CEMBI Latam	Fixed Income Climate Portfolio
Total Accumulated Return % (for each analysis period)	59.7	213.3	-1.98	3.0
Avg. Monthly Return % (for each analysis period)	1.1	2.1	-0.08	0.1
<b>Avg. Annual Return %</b>	<b>13.6</b>	<b>25.4</b>	<b>-0.95</b>	<b>1.63</b>
Annual Return %	8.3	21.5	-1.1	1.7
<b>Annual Volatility %</b>	<b>30.6</b>	<b>30.1</b>	<b>5.4</b>	<b>5.3</b>
Sharpe Ratio (Raw)	0.13	0.24	-0.05	0.09
Active Annual Return %	11.8%		2.6%	
<b>Tracking Error (Annual) %</b>	<b>10.5%</b>		<b>0.98%</b>	
Information Ratio	1.14		2.62	

Implementing the climate portfolios described in the study requires connection of the portfolio construction methodology with the other elements of an investment process. The identification and selection of companies with a better climate performance is the starting point. But an additional stage in the integration of climate performance, as well as transition readiness, into portfolio construction would be the incorporation of:

- The results of the fundamental and credit analysis of the issuers including the companies' growth prospects and historical price behaviour,
- A top-down analysis of macro variables like the economic and socio-political context that ab investment team would carry out, and the observed market conditions in specific moments in time.

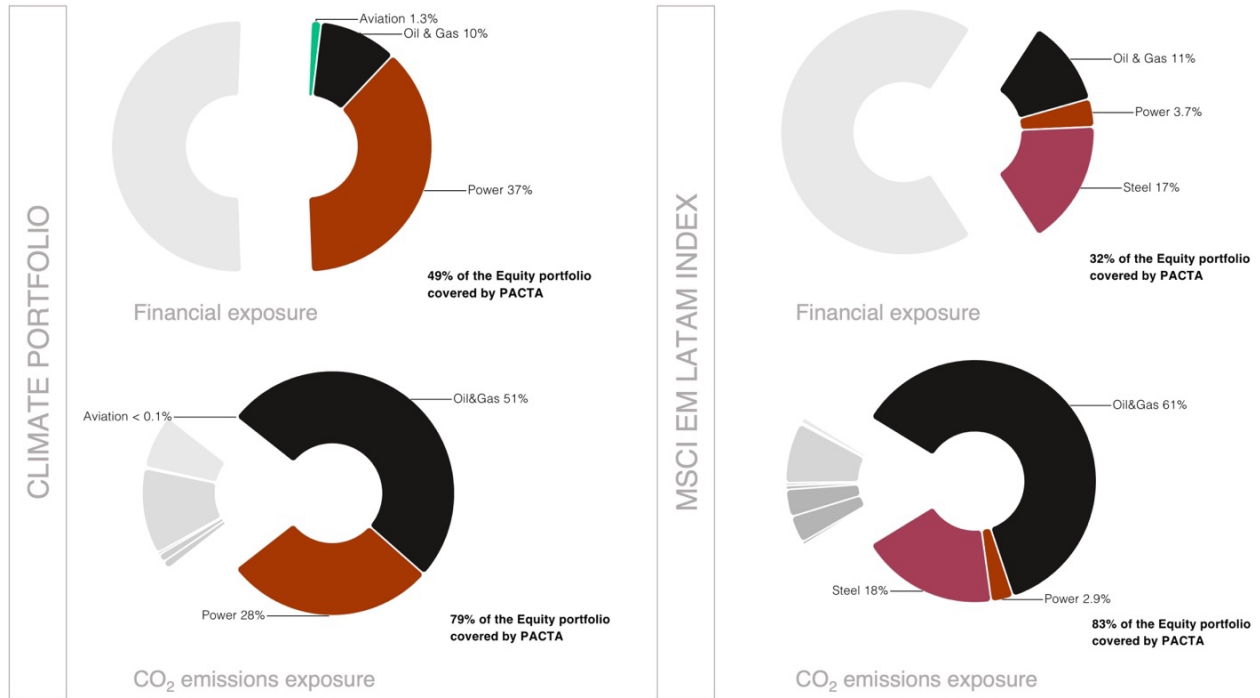
In this way, portfolio managers would combine the assessment of financial indicators with that of the climate performance indicators to have a more integral view of investee companies, and are able to make tactical decisions during the portfolio management. As a result, the initial weight assigned to the issuers only using the climate variable and the company selection itself can vary according to the portfolio managers' view, while respecting the portfolio objective and rules that ensure a focus on companies with greater alignment with climate objectives.

#### 6.1.4 Portfolio climate exposure and alignment

**Key finding 8: Financial exposure to PACTA sectors is greater than the benchmark, reflecting a tilt towards those sectors.**

However, the results for equity in Figure 6.3 show that the proportion of the total emissions represented by PACTA sectors is lower in the portfolio than in the benchmark (75% vs 86%), including an underexposure to steel. The results for fixed income can be found in Section 4.4.

Figure 6.3. Equity portfolio financial exposure to PACTA sectors and their absolute CO<sub>2</sub> emissions

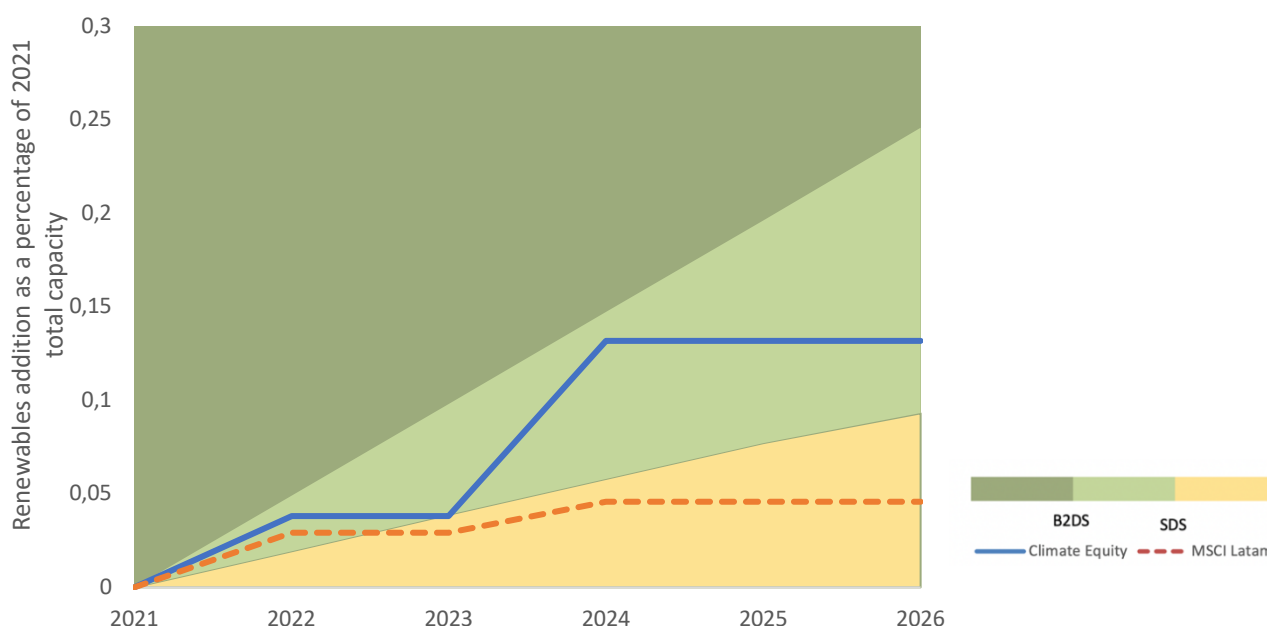


**Key finding 9: For those sectors that account for around 80% of each portfolio’s absolute CO<sub>2</sub> emissions, the 5-year production plans of companies show alignment with a below 2°C pathway and have a better performance in climate terms than the reference index.**

The results show that for oil and gas production, which must decline in the IEA SDS and B2DS scenarios, both portfolios perform notably better than the benchmark. For renewables, which must increase in capacity by between 20% and 25% by 2026, both portfolios are also aligned with a below 2°C trajectory and the bond portfolio in particular outperforms, being aligned with the most ambitious SDS scenario (see Figure 6.4). The results in more detail for equity and fixed income can be found in Section 4.4.



Figure 6.4. Equity portfolio production trajectory alignment for renewable energy



### 6.1.5 Selecting a climate impact strategy for portfolio management

A key premise of the fund design is that it will be managed in order to achieve a change in investment decisions and a reduction in CO<sub>2</sub> emissions in the real economy.

The first step towards achieving this was the design decision to include within the portfolio companies that, although still needing to improve, have taken more steps towards the decarbonization of their businesses in comparison to their sector peers.

A second step explored by the study was to determine which climate strategies and actions could be used to influence investee companies to improve.

**Key finding 10: Engagement was selected as the potentially most impactful climate strategy because it reflects the influence that the investor can leverage via their holdings.**

A focus on listed securities places constraints on the influence that the investor can have and the climate strategies they can adopt. A survey and dialogue with the investor were therefore used to explore this issue further, with investee engagement selected as a main mechanism for achieving impact.

Based on a survey of the available internal resource, the strategy can potentially target up to 20-30 companies and is to be initially decided based on the results of the alignment level analysis and the portfolio financial analysis. However, the need to screen at an earlier stage for companies that are likely to engage positively with investors was identified. In order to maximise the potential for impact the engagement strategy was decided to focus primarily on;

- Companies with less climate alignment evaluation points and, also
- Overall in PACTA sectors, where progress is most critical.

Whilst bond issuance is in practice less directly influenceable, there is potential for engagement to be carried out by developing relationships with companies and signalling within the market.

**Key finding 11: By adopting a tiered engagement strategy an asset manager can potentially drive more impactful outcomes by focussing attention on poorer performing companies and the need for them to become aligned.**

Within such an engagement strategy, important elements were identified as including:

- Relevant and consistent data revelation and transparency,
- Clear processes for requesting and tracking improvements in climate performance;
- Milestones for engagement, escalation and divestment for communication to issuers;
- Co-operation with other investors to increase influence in the region;
- Allocation of resources and capacity building for analysts to engage.

An engagement strategy was designed accordingly, taking into account the experience and internal resources available as a starting point. It was also identified that the engagement process would need to interface with the asset managers escalation strategy in reaction to specific ESG controversies.

**Key finding 12: A specific engagement request could be an individual issuers transition plan. A model transition plan was therefore specified, drawing upon a range of initiatives that have sought to define the elements of a credible transition plan.**

Each plan could be scored based on the presence of the different elements, with a focus on those elements that provide the investor with intelligence on tangible forward commitments to technology phase down, investment, market development and R&D.

Whilst a transition plan cannot be a substitute for objective measurement of a company's direction of travel, the score achieved for each plan could be used to further adjust the climate performance of each company, or to make a risk assessment of each company's transition status.

## 6.2 Description of a Paris-Aligned Transition Fund concept

The following fund description intends to capture and summarize the elements that the study concludes are key for the construction of a climate investment strategy. These are broad characteristics that could be adapted by the asset manager to fit their objectives and investment processes.

*Disclaimer: The following has its basis in a theoretical exercise and is not intended to be used for commercial purposes in the context of this study.*

**Risk profile:** Potential increased volatility risk compared to Latam index-linked funds in the short term. This could change if the strategy used a benchmark with climate characteristics, and it will potentially result in a more robust risk-management framework as transition risks materialize.

**Length of investment:** estimated 5-year, reflecting longer positions and engagement with investees. Open-ended fund.

### Objectives and investment strategy:

- The fund will be **actively managed**, with a team of sectoral and ESG analysts tasked with assessing companies' climate performance and engaging with them in order to track and improve their transition plans and alignment.
- The selected **reference indexes** will be used solely in order to compare the returns achievable.
- The fund will **seek to increase the value of its positions in the medium term**, investing in listed securities issued by Latam companies that are either already contributing to a low-carbon energy transition or have agreed to work with SURA Investment Management to improve their contribution.
- The fund will **actively seek to mitigate the potential for investment value to be at risk as a result of foreseeable future market changes in response to climate change**. It will also seek opportunities to invest in the securities of companies that are successfully leading the market with their capital commitments to climate aligned transition in their respective sectors.
- The funds will be **focused on the sectors of greatest priority, in terms of reducing CO<sub>2</sub> emissions**, including, power, fossil fuel production, cement and aviation, but will also invest in other industries of relevance, including paper and chemicals.
- In order to **maintain sector diversity** with reference to the reference indices, investments will be made in service sectors, including the financial sector. These sectors will still be subject to evaluate and benchmarking of their climate performance.
- Two main non-financial strategies will be used to uphold the climate performance of the funds:
  1. **a climate performance evaluation method** will be applied to screening of the investible universe and annually to all issuers from onset of the fund,
  2. **engagement via available channels**, either singularly or with other investors, will be used to request improvements in climate performance and a reduction in the potential market value-at-risk as a result of exposure to climate change transition risk.

- Investee companies will also be screened and monitored with reference to **SURA Investment Management’s ESG policy and criteria**, including processes for responding to controversies in relation to environmental damage of high concern and that pose significant risks to the global carbon budget and climatic system (e.g. deforestation and forest degradation).

**Climate performance evaluation:**

- The objective is to achieve portfolios composed of issuers that are making capital commitments in line with what will be required to put the economy on track to stabilise global average climate change at a level well below 2°C <sup>53</sup>.
- The climate performance of issuers will be evaluated on an annual basis. Performance is graded into three tiers:
  - Tier 1: Where possible climate performance in tier 1, which requires alignment of 5-year forward looking production plans with sectoral decarbonization pathways, will be prioritized.
  - Tier 2: This is followed by tier 2, which requires target setting or rates of decarbonization in line with sectoral decarbonization pathways.
  - Tier 3: This tier will be used to benchmark the remaining issuers and will only be used if required for diversification purposes.
- Investee companies for which there are sectoral decarbonization pathways will be communicated the milestones for achievement of and/or maintenance of on an annual basis a tier 1 grading.
- Investees that fail to respond to the outcomes corresponding with the milestones set out by SURA Investment Management may be subject to divestment from either of the funds.

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<sup>53</sup> Reference scenarios used are the IEA Beyond 2 Degrees (B2DS) with a goal of 1.75oC (50% probability), IEA Sustainable Development Scenario (SDS) with a goal of 1.65oC (50% probability) and JRC GECO 2.0°C (50% probability)

# 7. Annexes

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## Annex 1: Description of the PACTA method as applied to each sector

### Power and fossil fuel sectors

For these sectors, the decarbonization pathways in the IEA scenarios provide the data points required to determine the sectors technology mix and to make alignment measurements using PACTA – namely the installed power generation capacities for the different technologies and the production volumes for oil, natural gas, and coal.

The market share approach is used to attribute the macro-economic decarbonization trajectories of the scenario to each micro-economic actor (i.e. companies). The formula used to calculate target trajectories for each micro-economic actor is different for high-carbon and low-carbon technologies. High-carbon technologies follow the overall rate of decline of the market for the technology in the scenario, whereas low-carbon technologies must, regardless of their starting point, make investments in new capacity in proportion to their size and what is anticipated for the sector as a whole.

### Automotive

For this sector, the decarbonization pathways in the IEA scenarios provide data points that can be used as the basis for determining the sector technology mix and to make alignment measurements using PACTA. Both scenarios provide future anticipated sales volumes for vehicles. At a global level, these sales are taken as a proxy for the production volumes of Internal Combustion Engine (ICE), hybrid and Electric Vehicles (EV).

Like the fossil fuel and power sectors, the market share approach is used to attribute the macro-economic decarbonization trajectories of the scenario to micro-economic actor (i.e. companies). The formula used to calculate target trajectories for each micro-economic actor is different for high-carbon ICE and low carbon hybrid and EV technologies. High-carbon technologies follow the overall rate of decline of the market for the technology in the scenario, whereas low-carbon hybrid and EV production must, regardless of each companies starting point, make investments in new production in proportion to their production capacity and the proportional increase in production anticipated for the sector as a whole.

### Steel and cement

For the steel and cement sectors, the IEA and European Commission scenarios do not currently contain production volumes per technology in the same way that they are provided for the power, fossil fuel and automotive sector. They do however give absolute production and absolute CO<sub>2</sub> emissions at the sector level.

In light of this, PACTA draws upon a sectoral level metric to measure alignment - the emission intensity metric. This metric normalises tonnes of CO<sub>2</sub> emissions to a unit of production, in this case 1 tonne of steel or cement. Scope 1 and 2 emissions are used for the alignment measurement.

## **Aviation**

Similarly to steel and cement, passenger aviation sector alignment has to be measured using an emissions intensity metric. The metric chosen for aviation is tonnes of CO<sub>2</sub> per revenue passenger kilometre (tCO<sub>2</sub>/pkm). The scenario for this sector provides the two main datapoints required to calculate the scenario values – the total fuel consumption of airlines and the total revenue passenger kilometres. The jet fuel (kerosene) consumption requires conversion to CO<sub>2</sub> emissions. Scope 1 emissions are used for the alignment measurement.

## Annex 2: Decarbonisation rates for every sector according to Paris-Aligned scenarios

For the power sector:

Technology	Decarbonization rate	Units	Time unit decarbonization rate	Scenario <sup>54 55</sup>	Scenario Geography
Coal	-0,4%	Change of capacity in the total technology	Additional reduction year on year until 2025	SDS	Central & South America
Gas	0,3%	Change of capacity in the total technology			
Hydro	0,4%	Change of capacity technology in total market			
Nuclear	-0,01%	Change of capacity technology in total market			
Oil	-2,0%	Change of capacity in the total technology			
Renewables	5,0%	Change of capacity technology in total market			
Coal	-0,9%	Change of capacity in the total technology	Additional reduction year on year until 2025	B2DS	Global
Gas	1,8%	Change of capacity in the total technology			
Hydro	0,5%	Change of capacity technology in total market			
Nuclear	0,2%	Change of capacity technology in total market			
Oil	-0,7%	Change of capacity in the total technology			
Renewables	2,5%	Change of capacity technology in total market			

<sup>54</sup> World Energy Outlook 2020 from IEA for SDS scenario

<sup>55</sup> Energy Technology Perspective from IEA for B2DS scenario

**For automotive sector<sup>56</sup>:**

Sector	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Electric	1,5%	Change in sales in total market	Additional reduction year on year until 2025	B2DS	Global
Hybrid	3,0%	Change in sales in total market		B2DS	
ICE	-5,3%	Change in sales in the total technology		B2DS	
Electric	0,5%	Change in sales in total market		SDS	
Hybrid	3,2%	Change in sales in total market		SDS	
ICE	-2,7%	Change in sales in the total technology		SDS	

**For the fossil fuel sector<sup>57</sup>:**

Sector	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Coal	-4,4%	Change in production in total market. Coal production is measured in tons, oil MMbbl and gas in m <sup>3</sup> .	Additional reduction year on year until 2025	SDS	Global
Oil	-0,8%				
Gas	0,4%				
Coal	-6,2%			B2DS	
Oil	-2,1%				
Gas	0,5%				

<sup>56</sup> IEA (2017) Energy Technology Perspectives

<sup>57</sup> Idem as power



**For cement production<sup>58</sup>:**

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Energy efficiency improvement	-1,4%	tCO <sub>2</sub> /t cement	Additional reduction year on year	B2DS	Global
Intensity convergence	0,50		2025		

**For steel production<sup>59</sup>:**

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Share of scrap steel in total input production	40%	% of scrap in production	2030	SDS	Global
Energy efficiency improvement	-2,9%	tCO <sub>2</sub> /t steel	Additional decrease in intensity until 2025	GECO 2°C	Central & South America
	-3,4%			GECO 1.5°C	
Intensity convergence	0,984991965		2025	GECO 1.5°C	Global
	1,042101505		2025	GECO 2°C	

**For the aviation sector<sup>60</sup>:**

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography	
Biofuel share	5%	% of biofuel in total fuel	2025	SDS	Global	
Intensity convergence	0,0690	tCO <sub>2</sub> / passenger km	2025	GECO 1.5°C		
	0,0694		2025	GECO 2°C		
Decrease in intensity	-1,4%		Additional decrease in intensity until 2025			GECO 2°C
	-1,6%					GECO 1.5°C

<sup>58</sup> Cement sector, <https://www.iea.org/reports/cement>

<sup>59</sup> Joint Research Centre, Global Energy and Climate Outlook (GECO)

<sup>60</sup> IEA, Aviation sector, <https://www.iea.org/commentaries/are-aviation-biofuels-ready-for-take-off>

### For the financial sector:

The fund invests in companies that are improving their portfolio's alignment with the international climate goals over time. In case, the company does not measure nor provides this information to Sura Investment Management, the following proxy indicators will be used:

In the case of banks:

- A decrease in the exposure to high carbon sectors and in the total financed emissions.
- An increase:
  1. to the ratio: loans to low carbon vehicles/ total auto loans.
  2. in the issuance of green bonds,
  3. in the percentage of credits dedicated to renewable energy
  4. in the percentage of credits for new building construction and real estate with energy efficiency certifications (see real estate sector criteria).

### For the paper industry<sup>61</sup>:

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Share of recycled fiber	60%	share of recycled fiber	2030	SDS	Global
Energy efficiency improvement	1,6%	GJ/t paper	Additional increase in efficiency	SDS	
	2,1%			NZE2050 1.5°C	

### For the petrochemical industry<sup>62</sup>:

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Feedstock use improvement	-0,4%	Mtoe	Additional reduction year on year until 2025	SDS	Central & South America

<sup>61</sup> IEA, Pulp and paper sector, <https://www.iea.org/reports/pulp-and-paper>

<sup>62</sup> IEA, World Energy Outlook 2020

**For chemical industry<sup>63</sup>:**

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Energy intensity	0,37	Primary chemical energy intensity (toe/t of chemicals)	2025	SDS	Global
Energy efficiency improvement	-0,7%		Additional reduction year on year until 2025	SDS	Global

**For building and building construction<sup>64</sup>:**

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Energy efficiency improvement	-2,5%	Energy intensity (final energy use in J/m <sup>2</sup> )	Additional increase year on year	WEO SDS	Central & South America
Share of retrofitted area	1,5%	Annual share of total floor area retrofitted by year	2025	SDS	Central & South America <sup>65</sup>

**For shipping industry<sup>66</sup>:**

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Energy efficiency improvement	-2%	tCO <sub>2</sub> / ton/mile	Additional reduction	GECO 1.5°C	Global
Energy intensity	16,04242656		2025	GECO 1.5°C	

<sup>63</sup> IEA, Chemicals sector, <https://www.iea.org/reports/chemicals>

<sup>64</sup> IEA, Buildings tracker, <https://www.iea.org/reports/tracking-buildings-2020>

<sup>65</sup> Global Alliance for Buildings and Construction, [https://globalabc.org/sites/default/files/inline-files/2.%20GlobalABC\\_Regional\\_Roadmap\\_for\\_Buildings\\_and\\_Construction\\_in\\_Latin\\_America\\_2020-2050.pdf](https://globalabc.org/sites/default/files/inline-files/2.%20GlobalABC_Regional_Roadmap_for_Buildings_and_Construction_in_Latin_America_2020-2050.pdf)

<sup>66</sup> Joint Research Centre, Global Energy Climate Outlook (GECO)

**For other transport<sup>67</sup>:**

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Energy efficiency improvement	-5,56%	boe/ 1000 USD	Additional reduction	SDS	Global
Energy intensity	0,17		2025	SDS	

**For biofuel producers:**

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Production of biofuel	5,0%	production (Mtoe)	Annual growth	SDS	Brazil

**For other industry<sup>68</sup>:**

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Value added per unit of energy used	1,6%	(Industrial value added per unit of energy used) USD/GJ	Year on year	SDS	Central & South America

**For others activities<sup>69</sup>:**

Indicator	Decarbonization rate	Units	Time unit decarbonization rate	Scenario	Scenario Geography
Absolute contraction of CO2 emissions	-2.5%	tCO <sub>2</sub>	Additional reduction year on year	Well Below 2°C	Global
	-4.2%			1.5°C	Global

<sup>67</sup> IEA, Transport sector, <https://www.iea.org/reports/tracking-transport-2020>

<sup>68</sup> IEA, Industry overview, <https://www.iea.org/reports/tracking-industry-2020>

<sup>69</sup> From Science-based Target Setting Tool, developed by SBTi

## Annex 3: Description of each level in the engagement escalation scale

Level	Engagement lever	Description
<b>Routine engagement mode</b>		
<b>0a</b>	Monitoring of performance and routine meetings with the investor relations office	Regular (at least yearly) one-to-one meetings with the investor relation office and/or management have become a routine element of investor strategy since the 90s and are often considered as the prime source of information about the company for the investor (Barker et al., 2004). Although usually conducted to monitor the financial health of the company, climate considerations could be included in the agendas of these meetings. A key to the meeting being useful to both parties is the preparation of a clear agenda ahead of the meeting. (Martin R. et al., 2007)
<b>0b</b>	Voting at AGMs	Voting at AGMs can also be considered a “routine” engagement practice to exercise shareholder rights. However, meaningful climate engagement might sometimes require diverging from proxy advisors’ recommendations and thus make the voting process more demanding than for standard products. A best practice when it comes to voting is notifying the company when voting against a resolution. (Martin R. et al., 2007)
<b>Activist engagement mode</b>		
<b>1a</b>	Raising concerns directly or via company advisors	When specific concerns are identified that cannot be remedied by the “Level 0” engagement, more tailored engagement activities will be necessary. These activities mainly include meetings with the directors and/or sustainability department (not general “monitoring” meetings as in level 0, but goal-oriented meetings), and letters written to the management.  These engagement activities should target precise objectives that the investor expects the company to meet, and these objectives need to be articulated clearly to the company. See an interesting example of such a “level 1” engagement process <a href="#">here</a> . As evidenced <a href="#">here</a> , these steps can also take place before the inclusion of the company in the portfolio.  Level 1 engagement activities, combined, if necessary, with threats to publicise the dispute, are expected to be usually sufficient. More aggressive strategies that involve public exposure of the disagreement (2 to 5) should remain rare.
<b>1b</b>	Meetings with the Chairman/separate directors, or at first the head of sustainability.	
<b>1c</b>	Letters written to the board of directors	
<b>2a</b>	Public statements in advance of an AGM/BHM	Level 2 engagement activities correspond to AGM-related activities that go beyond voting and involve greater public exposure. Engagement with investee companies should ideally take place in private, and it is only when the situation is not resolved after a defined timeframe that the concerns of an investor should become public. A first step in exposing the investor’s concerns can be a public statement in advance of AGM/BHM.
<b>2b</b>	Joint submissions of resolutions to AGMs (if binding)	

		<p>Another Level 2 activity is to propose resolutions in order to put pressure on management, and withdraw the proposals if management agrees to the resolutions.</p> <p>Proposals are more likely to be withdrawn as a result of management acceptance if they are sponsored by coordinated groups (Martin R. et al., 2007). A key element to be investigated if the asset manager considers submitting resolutions is the local legislation, minimum holdings required and other potential conditions need to be identified.</p>
<b>3</b>	Letters written to the press/published in the public domain	<p>This activity, which can lead to significant reputational damage to a company – and to some extent the investor - is likely to be most effective when carried out in co-operation with other investors. It should be undertaken as the last engagement step before requesting management change.</p>
<b>4a</b>	Requisitioning of EGMs	<p>Shareholders can requisition an EGM to consider a resolution, at this escalation level for the removal of directors and the appointment of new ones. Requisitioning an EGM is a rare occurrence as it can damage a company's share value, but the threat of requisitioning an EGM is frequently used to coerce company management to change in the direction recommended by shareholders. (Martin R. et al., 2007).</p> <p>For this reason and like engagement lever 3 it is likely to be most effective when carried out in co-operation with other investors. However, if the threat is activated, the investor needs to bear in mind that the outcome of the process will be the change of management, not directly the desired climate outcome. Further engagement will thus be needed with the new management to still bring about the requested climate-related changes.</p> <p>An <u>example</u> of successful climate-motivated management change is provided by the recent Exxon-Mobil and Engine No.1 ETF case. Lessons that can be learn from this use case are that engagement is most likely to succeed if a balance is found between climate-related concerns and the overall economic strategy of the group: managers put forward by the investor(s) should be relevant from both climate and economic perspectives. Another key to success, when the initiator of the process is a small investor, is to mobilize the larger, usually institutional, shareholders of a company through well-documented meetings and argumentation related to the capacity of the company executive to 1) secure the company's future financial prospects and 2) to manage transition risks associated with the existing forward business strategy.</p> <p>A key element to be investigated if the FI considers using such aggressive activities is the local legislation - the minimum holdings required and other potential conditions for requesting management change would need to be identified.</p>
<b>4b</b>	Joint actions to change the composition of the management / board	

<b>5</b>	Divesting shareholdings or bond holdings, or boycotting future bond issuances	Divestment from the company, or the threat of divestment, as well the boycott of future bond issuances (contributing to a restriction in financing) is the last lever to use once all others have been exploited.
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## Annex 4: Taxonomy of possible aligned engagement outcomes that can guide the selection

Type of targeted decisions	Definition	Level
Capital expenditure plans	Require a company to modify its capital expenditure plans and/or to potentially raise new capital in order to increase production from decarbonization scenario aligned economic activities.	1-4
R&D expenditure plans	Require a company to modify its R&D expenditure plans and/or to potentially raise new capital in order to invest in the commercialization of technologies and solutions earmarked in decarbonization scenarios or sectoral roadmaps.	1-4
Green House Gases emissions	Require a company to reduce its GHG emissions in line with a production trajectory or convergence decarbonization scenario.	all
Product design/production plans	Require a company to progressively modify the design and performance of its products or its production plans in line with that earmarked in decarbonization scenario or (as a proxy) the related requirements of specific labels, standards or regulations.	1-4
Operational procedures	Require a company to modify the design of its operational procedures in line with those earmarked in decarbonization scenarios, sectoral roadmaps or best available techniques guidance.	1-4
Supply chain management	Require a company to modify the management of its supply chain in order to support decarbonization scenario aligned changes in product design and production planning.  The requirement may also relate to the avoidance of controversy flags related to negative impacts on natural carbon sinks such as forests.	1-4
Selection & deployment of products and services	Require a company to modify the way it selects or deploys its products and/or services in the market in line with market development strategies earmarked in decarbonization scenarios and technology roadmaps.	1-4
Compliance with relevant standards	Require a company to comply with climate-related standards that are relevant to its operations.	all
Dividend policy	Require linking a company's dividend policies with sustainability and climate related outcomes.	all



Sustainability-linked remuneration	Require executive compensation linked to sustainability and climate related targets.	all
Board representation	Require stakeholder representation on the board of directors or delegated committee for climate change issues.	all
Political lobbying & spending	Require companies to engage in political lobbying and spending in a manner and agenda consistent with climate goals.	all
Environmental impact disclosure	Require a company to disclose on the direct environmental impact of their operations, including how their operations pose environmental risks to public health.	all
General climate risk disclosure	Require a company to disclose on risks related to climate change, with a specific focus on business-related transition risk.	all
Climate-related target setting	Requires the setting of company-wide climate target(s) based on scenarios with Paris Agreement aligned climate goals.	all
Climate disclosure	Requires reporting to CDP (to keep track of historical data), Requires reporting on sector-specific KPIs (eg. % of exposure to fossil fuels)	all
Climate education of management and/or staff	Require a company to educate its management and/or employees on climate issues, with a focus on analyst's knowledge of decarbonisation pathways for climate critical sectors.	all