GFANZ G20 SFWG Input Paper ~ Priority 2: Scaling up financing for adaptation

Under the South African Presidency, the G20 is considering how to scale up financing for adaptation as one of three priorities for the Sustainable Finance Working Group (SFWG) in 2025. As outlined in the public SFWG Note on Agenda Priorities, the work on adaptation is motivated by the fact that global efforts to scale up climate financing have largely been directed towards climate mitigation, with significantly less attention given to adaptation.[1] Although adaptation finance has increased in recent years, there remains a significant need to scale it, particularly in the emerging markets and developing economies (EMDEs) that are often more exposed to the effects of rising temperatures and extreme weather events.

Through the G20 SFWG, several complementary pieces of work are being pursued to advance this priority. The Presidency commissioned the Organisation for Economic Co-operation and Development (OECD) and African Development Bank (AfDB) to develop recommendations on how to address obstacles to scaling up adaptation finance, building on the OECD's 2024 Climate Adaptation Investment Framework.[2] The Presidency requested that the Network for Greening the Financial System (NGFS) develop considerations on how corporates and financial institutions could incorporate adaptation and resilience into their transition plans. The Presidency invited the International Association of Insurance Supervisors (IAIS) to prepare a report on the insurance protection gap.

GFANZ was invited to be a discussant of the NGFS work to bring a private finance sector perspective specifically. This GFANZ G20 Input Paper summarises a broad set of points about adaptation finance raised in a series of structured consultations with over 60 financial institutions across the world. Participating institutions included: insurers, banks, asset managers, asset owners, and financial service providers. This engagement consisted of i) a series of four workshops: three hosted by our regional networks (in Asia-Pacific, Africa, and Latin America and the Caribbean) and one hosted by our global secretariat: ii) the responses to a questionnaire sent to all firms which were invited to participate in the workshops; and iii) feedback from firms on this paper including a review by the GFANZ Steering Group.

While this Paper draws on feedback from participating firms, it should not be read to reflect the individual views of the Secretariat or any firm in particular. The GFANZ Principals Group and participants in the GFANZ Workstreams do not necessarily participate in every GFANZ publication or endorse every finding or statement contained herein.

[1] G20 (2025), SFWG Note on agenda priorities
[2] OECD (2024), Climate adaptation investment framework

The Input Paper is structured in two sections reflecting the G20 work being taken forward by the OECD/AfDB and NGFS. The first section covers how the private financial sector is approaching the provision of adaptation finance, and sets out some of the main barriers that firms identified that they face in scaling adaptation finance, which speaks to the ongoing OECD/AfDB work. The second section provides a summary of how firms are currently approaching physical risk assessment and adaptation, which speaks to the NGFS work, finding this is not generally being done as part of transition planning and that many firms would find incorporating adaptation finance into transition planning challenging.

Section 1: Private financial institutions' provision of adaptation finance

This section focuses on the wide range of barriers to adaptation finance which are relevant to the OECD and AfDB's report on Scaling up Finance and Investment for Climate Adaptation. GFANZ's engagement with financial sector firms highlighted a series of barriers that private finance identified as having the most significant impact on their ability to finance adaptation opportunities, which also provide important context for considering the NGFS's work on transition planning.

Adaptation relates to actions taken to reduce the risks posed by the growing physical impacts of climate change. Adaptation is important alongside mitigation because even though it remains essential to reduce global emissions to limit future warming to the greatest extent possible delivering on the Paris Agreement objectives, adaptation will be needed to deal with the climatic changes already set in motion and caused by future emissions.[3]

As with mitigation, adaptation implies adjustment across national, regional and local governments, real economy companies, financial sector firms, communities and households. As the climate changes, actors across society and the economy will be faced with decisions about how to adapt and increase their resilience. In many jurisdictions, adaptation planning is still at an early stage and by setting out national, regional or local adaptation plans, governments can provide clarity on priorities, policy and a pipeline of associated projects. Real economy companies may need to assess the resilience of their activities and business models, take steps to ensure that they are robust to a higher temperature world, and may consider developing solutions to enable the adaptation of others. The financial sector has increasingly focused on managing its exposures to physical climate risk, and could support clients and portfolio companies in delivering their adaptation objectives.

Adaptation finance can be any form of financing that supports actions and projects to reduce the risks posed by the physical effects of climate change and strengthen resilience. The increase in resilience or reduction of vulnerability that such financing secures may occur at a government, company, individual asset, community or household level. In some cases, adaptation finance can be something explicitly identified as such, but in many cases it

[3] https://www.lse.ac.uk/granthaminstitute/explainers/what-is-climate-change-adaptation/

forms part of broader government, corporate or project financing or insurance provision, which can make it difficult to identify the scale of relevant investments accurately.

Recognising estimation challenges, the current level of adaptation finance appears to fall well short of estimated needs. The UN estimates adaptation finance needs for developing countries of between $215bn to $387bn per year between now and 2030, compared to estimated public adaptation finance flows of $27.5bn in 2022.[4] While much of this finance will have to come from the public sector, the scale of the investment needed across economies indicates the scale of opportunity for private finance. In a new methodology, the Climate Policy Initiative has estimated private flows of adaptation finance could be $4.7bn per year (up from $1bn a year in their previous methodology).[5]

In GFANZ outreach, it was clear that many firms across the financial sector are interested in adaptation finance. Firms recognised that climate impacts are already present, including through changing weather patterns and increases in the frequency and intensity of extreme events, and that this is impacting the macroeconomy and balance sheets of some governments, firms, and households. Moreover, chronic and acute climate risks rise with units of warming up to and beyond 1.5 degrees and as the chance of tipping points being hit rises. As a consequence, there is increasing focus on managing such risks. Financial institutions are developing a greater understanding about how physical climate risk translates into financial risk on their balance sheets including through consideration of the risks posed to their clients and portfolio companies. There is willingness to support clients and the communities in which financial institutions operate in increasing their resilience, and a growing number of firms have an appreciation of the potential opportunities associated with some adaptation activities.

Despite this interest, many financial institutions indicated that they are relatively early in developing their in-house toolkit relating to adaptation and in their approaches to providing adaptation finance. Even where financial institutions are fairly advanced in assessing and understanding physical risk, they may not yet have internal processes for converting physical risk assessment results into concrete adaptation financing goals and investment and financing products and decisions. There may be relatively limited engagement between firms' physical risk management and product development functions. That said, in a few cases firms have developed explicit adaptation strategies and are beginning to develop approaches and structures for financing adaptation.

It is well recognised that many types of financial institutions have a role in providing adaptation financing. Some banks are financing entities across the economy to enhance their resilience and are providing finance to clients that produce and distribute climate-resilient infrastructure and technologies. Insurers are offering both natural disaster-related insurance and specific parametric insurance solutions which utilise sophisticated models and/or data analytics to provide payouts based on predefined weather-related triggers. Some private equity firms are supporting growth businesses providing technological solutions to enhance resilience.

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[4] UNEP (2024), Adaptation Gap Report

[5] CPI (2024), Tracking and Mobilizing Private Sector Climate Adaptation Finance

Infrastructure funds are providing long term capital to assets which should be built to withstand greater physical risks and asset managers are offering adaptation-focused funds that invest in public and private debt in EMDEs. There are also examples of blended finance facilities that combine concessional and commercial capital to finance adaptation projects in EMDEs. Some of these are set out in more detail in **Annex 1**.

Barriers identified to the provision of adaptation finance

Financial sector firms highlighted that there are a wide range of barriers to adaptation finance, and that there are steps that could be taken to help address them. Barriers include both issues relating to the sectors in which firms operate and the nature of adaptation investments themselves. For example: the difficulty in assessing the value of adaptation projects; the reality and perception of financial returns relative to the wider socio-economic benefits of a project; the interaction of return profiles with investment mandates and horizons; challenges relating to the availability of data and differences in definitions and categorisation; and issues relating to a lack of capacity, knowledge and understanding within FIs and their clients and portfolio companies. These barriers are widely recognised in the adaptation literature and are summarised in a consolidated way here.[6]

It was also highlighted that there is a need to recognise that adaptation finance sits in a broader ecosystem of government planning and policy, real economy demand, financial sector innovation, and public-private collaboration. Firms would like to see an increased focus on ensuring an enabling planning and policy environment which in turn creates demand from both public and private actors for adaptation finance, and encourages the development of new financial products and services.

1. *Importance of enabling policy*

Firms highlighted the importance of national strategies for adaptation and resilience, with coherent policy to support delivery and incentives for adaptation investments that deliver wider social benefits. They identified a series of steps that governments could undertake to create a more enabling environment, starting with the development of National Adaptation Plans (NAPs) or similar that clearly set out a country's adaptation priorities, inform relevant policy and support the identification of projects.

Some firms highlighted national adaptation plans would be most useful if developed hand in hand with enabling policies and plans for key economic sectors. In relation to some sectors, such as utilities, a focus on adaptation and resilience was seen as becoming essential for ensuring operational continuity. For other sectors, specific government policies were identified as relevant, such as linking adaptation actions to agricultural subsidies, and the use of building codes and planning requirements to ensure that long term assets and infrastructure are built to a climate resilient standard as being examples of good practice, which

[6] For example, Global Commission on Adaptation (2019), Adapt now: a global call for leadership on climate resilience; OECD (2023), Scaling up adaptation finance in developing countries; OECD (2024), Climate adaptation investment framework.

could help create the enabling conditions for financial institutions to provide capital. Firms also noted that given adaptation encompasses multiple sectors and a wide range of potential models for financing opportunities within those sectors, more detailed sectoral or region-specific plans could help them assess where financial opportunities could lie.

Firms felt that it was important to plan policy interventions carefully so as not to impact markets in a way that creates unintended consequences. Some firms highlighted that price signals can encourage real economy firms and governments to take action to increase their resilience. As such, policy interventions which mute those signals risk undermining incentives (e.g. placing caps on pricing of insurance for at-risk assets can result in those exposed to higher physical risk being less incentivised to take action, and could result in a reduction in insurance coverage for higher risk assets).

2. *Importance of demand for finance*

Firms perceived that there was a lack of demand for adaptation finance from governments and the real economy. Sometimes this is due to a lack of a robust pipeline of financeable infrastructure and other such projects developed by governments and local authorities. Sometimes it relates to a lack of projects at the real economy company level which require external financing from the private financial sector. Some firms associated this lack of demand with need for clearer definitions and categorisation, and the need for capacity building in government and the real economy. Some firms saw this as an opportunity for engagement.

3. *Ensuring risk adjusted financial returns*

Firms recognised that adaptation activities have the potential to provide significantly positive socioeconomic outcomes. Estimates vary very widely but for every dollar invested, returns range from between $2 to $14 in relevant studies, but with some examples of specific investments reaching as high as $43.[7] These returns typically capture the 'triple dividend' of avoided losses, induced economic benefits, and wider social and environmental benefits. These are increasingly recognised by private sector analyses.[8] However, it was also noted that these wider benefits such as increased resilience or food security can be difficult to quantify, and they accrue to a range of stakeholders. What matters most directly for private finance when assessing investments is that the activity can deliver a financial return covering the cost of capital while also being consistent with the firm's risk-return requirements.

Firms noted that whether adaptation activities provide financial returns, which can make them commercially viable and financeable, depends heavily on the nature and structure of the project. In cases where it is hard to ensure that adaptation projects create a financial return and cashflow even if they have positive expected socioeconomic returns overall, it is

[7] JPMorgan (2025), Building resilience through climate adaptation.
[8] Jefferies (2025), Ten questions for the energy transition in 2025; BCG (2025), Investment opportunities in climate adaptation and resilience; GIC (2025), Sizing the climate adaptation opportunity; SwissRe (2023), We need to talk about climate adaptation; WEF (2025), Climate adaptation: unlocking value chains with the power of technology; Standard Chartered (2023), Adaptation Economy Report.

difficult for the private corporate and financial sector to finance such activities at scale. Transaction costs can weigh on returns when the projects are relatively small scale, which is often the case for adaptation.

Firms highlighted that across all stakeholders, greater nuance around the types of projects which might be most suitable for private finance, public finance, or blended finance would be helpful. Firms noted that projects fell broadly into **three groups**:

1. Community protection projects such as sea walls, flood defences, and early warning systems which may be most suitable for public management and financing given benefits are shared across a wider group and they generally don't have a clear and reliable cashflow, notwithstanding some recent innovations relating to the use of reduced insurance premia to create a funding stream in some projects.

2. Adaptation-enabling investments such as financing agricultural technologies, water desalination, infrastructure and power system resilience, including servicing companies, heating, ventilation and air cooling (HVAC) technologies, and parametric insurance which are generally perceived to be more commercially viable and have the potential to attract both traditional investors and venture capital funds. A recent study found that across 20,000 listed companies, over 10% had adaptation-related products and services, and together these firms generated around $1 trillion in adaptation-related revenues in 2024.[9] Another study identified a range of companies which are providing adaptation and resilience solutions in Asia.[10] Actions taken by firms to protect their own business models and revenues from a changing climate could also fall into this category.

3. A set of activities which sit between with potential to be financeable either on a standalone basis or with public support through blended finance structures. This includes actions which may be required to ensure that current revenues are protected against a changing climate and greater physical risks. Some EM-based firms noted that high-quality carbon credits have the potential to make some types of projects commercially viable where they lack or have limited cashflows.

In discussions of how to scale adaptation finance, there could be greater clarity about the different types of projects that need financing and the respective roles of public and private finance. A number of firms noted that it would be useful for the G20 to develop a broad categorisation which gives some guidance on the types of activities which are likely to be public in nature, which could be financed with public risk sharing or co-financing, and which could be commercially viable. This could then support a more nuanced debate about the potential role for private finance for adaptation.

Adaptation projects can have longer timelines to deliver returns than mitigation projects which can also play into the financial case. Some firms identified that their investment time horizons may be shorter than the expected payoff from many types of adaptation projects.

[9] LSEG (2025), Investing in the green economy 2025
[10] MSCI (2025), How adaptation finance can help Asia withstand a hotter future

Combined with the unpredictable nature of climate policy and physical events this can make pricing with any certainty difficult. Firms gave examples of projects e.g. on flood prevention, water management and biodiversity, which could take over 20 years to realise, due in part to the nature of the projects but also due to regional and local policies and regulations. That said, long term financing is also a feature of some sectors such as real estate, power generation, and infrastructure suggesting scope for alignment with adaptation payoffs. And some climate change impacts have been worse than those predicted by climate models, increasing the potential benefits of adaptation measures but also the risks that they prove insufficient.[11]

4. *Role of definitions and classifications*

Firms frequently highlighted that challenges existed with definitions and classification of adaptation finance. Many firms reported that they do a lot of activity that could be considered as supporting adaptation, but have no consistent way of classifying it. For example, corporate financing can be used for a range of activities, including taking actions which increase the company's resilience to climate risks but it may not have use of proceeds requirements; and adaptation activities are often integrated as part of projects but not classified separately, such as installing cooling systems, flood resistant designs in commercial real estate, or ensuring the resilience of new infrastructure to higher temperatures, floods, or windspeeds. Where real economy firms undertake adaptation-related activities they are often only one element of the company's set of products and services or are part of ongoing expenditure to ensure operational resilience. The lack of common definitions has two impacts, first the overall estimates of adaptation related finance are likely to underestimate the real total, and second, not having a common language and way of classifying financing makes it more difficult to engage internally and externally on how to finance adaptation and resilience.

While firms use different internal approaches to classifying adaptation investments, there are commonalities. Most approaches incorporate the idea of:

- *adapted* investments: where the increase in resilience applies directly to the asset, firm or activity); and
- *adaptation enabling* investments: which increase the resilience of others, either directly or through technological development

Firms reported that a focus on promoting consistency, interoperability, and some degree of convergence across definitions and classifications can help develop industry norms. The Climate Bonds Initiative Climate Resilience Taxonomy[12] and the Guide for Adaptation and Resilience Finance prepared by Standard Chartered, KPMG, and UNDRR[13] were both frequently highlighted as valuable resources but there was clear recognition that approaches should continue to evolve and some degree of convergence could be beneficial. Some firms mentioned the potential benefits coming from a 'white list' of activities which can be characterised as adaptation without undertaking detailed assessments.

[11] Duan et al. (2025) Near-term benefits from investment in climate adaptation complement long-term economic returns from emissions reduction
[12] Climate Bonds Initiative (2024), Climate Bonds Resilience Taxonomy Methodology
[13] Standard Chartered (2024), Guide for adaptation and resilience finance

5. *Addressing data challenges*

Most firms raised challenges around the availability, granularity and quality of data related to physical assets, the likelihood, nature and geolocation of risk materialisation, and information that can link that to financial losses. The current availability and quality of such data is insufficient for detailed analysis of risks, opportunities, and decision-making. Firms shared they will often 'heat map' sectors and regions with risk assessments but generally lack the capacity to do this at an asset-by-asset level. Firms noted that much of the available data is backwards-looking and based on past incidents of physical risk materialisation and losses. They acknowledged that disclosure frameworks being implemented in many countries, as they implement the International Sustainability Standards Board (ISSB) standards, will support disclosure of information related to adaptation including physical risks and impacts. Public-private collaborations, such as XDI Climate Risk Hub's work with HKMA in Hong Kong[14], OSFI's work with riskthinking.ai to provide data for the OSFI scenario analysis exercise[15], and Brazil's AdaptaBrasil[16] were identified as good examples of where the public sector has supported the development of key data for private actors. There was broad consensus that further work by governments to put climate-related risk data into the public domain would support firms in undertaking risk assessments and providing associated adaptation finance.

6. *Importance of internal and external knowledge and capacity*

Many firms highlighted the need for capacity building on adaptation both within their firms and for their clients. Often, it is not commonly understood that adaptation is a commercial opportunity and could be part of core business strategies. That said, recent months have seen a significant step up in private finance reports highlighting the potential of adaptation finance.[17] Engagement with clients is revealing that many real economy companies lack experience and understanding of climate related risks and how to take opportunities to enhance resilience. Firms highlighted the benefits of knowledge-sharing, as appropriate, and publishing successful examples of adaptation financing. Several firms noted that securing buy-in from across their organisation on the relevance of adaptation financing has been a long-term process, given perceptions of low-returns and given public financing has historically played a far greater role.

7. *Need for greater collaboration between public and private financial institutions*

Public sector financial institutions can play a number of different roles to support the scaling of adaptation finance, with many of these being identified in the outreach, and as summarised in Table 1. Even in advanced economies, some adaptation projects may be very

[14] https://xdi.systems/hub
[15] https://riskthinking.ai/blog/riskthinking--selected-by-osfi-amf
[16] https://adaptabrasil.mcti.gov.br/
[17] For example, JPMorgan (2025), LSEG (2025), GIC (2025), MSCI (2025).

heavily dependent on public finance, particularly those that generate wider socio-economic benefits but are not otherwise revenue generating or commercially viable.

The role of public finance is particularly important in EMDEs, where public finance institutions can assist in developing national adaptation plans, developing pipelines of bankable adaptation projects, and - where feasible - mobilizing private finance towards adaptation projects. MDBs, DFIs and IOs have expertise in project preparation and technical elements such as feasibility studies. By working closely with governments and project developers, public sector financial institutions can support the development of adaptation projects some of which may then be able to attract private finance.

Where adaptation projects have a prospect of attracting private finance, firms highlighted the important role that public sector co-financing can play in shifting risk-return profiles within commercial ranges. Public financial institutions can be better placed to internalise wider socioeconomic returns from a project, or can have longer investment horizons or greater risk tolerance for some project types. As such, their role in taking on risks that the private sector is unable to and derisking projects such that private capital can participate is even more important for adaptation as compared with mitigation projects (many of which are more likely to be revenue generating or generate commercial return). As with mitigation finance, the relevant public finance instruments can include the provision of equity, first loss guarantees, political risk insurance, accepting capped returns, and providing local currency financing or hedging.

Table 1: How public sector financial institutions and public finance can support the scaling of adaptation projects

Supporting project preparation	Public sector FIs can provide technical assistance and finance to help support new types of adaptation projects, through their early development, to prove their utility and viability
Providing derisking instruments	Public FIs can provide a range of guarantee instruments to help mitigate risks where this is a prospect of private FIs coming into adaptation projects. Traditional guarantees for political/commercial risk can also help adjust private finance risk-return profiles. Reinsuring portfolios of guarantees for adaptation finance to the private sector is another way to attract pools of private finance to take new exposure.
Using equity finance	Using public finance to deploy equity with a longer-term horizon, or to accept higher risk (e.g. first-loss equity) or lower returns (e.g. capped returns) can make some adaptation opportunities possible for private investors within their risk-return appetite.
Helping grow the provision of LC financing	Many EMDE adaptation finance projects would ideally be financed in local currency (LC). With appropriate FX hedging support, MDBs or commercial FIs can use national development banks or local commercial FIs as intermediaries to deploy LC funds. MDBs/DFIs can also do domestic fundraising to help grow LC financing.
Directing co-financing and syndication	Public sector FIs can actively share their pipeline with commercial investors via syndication facilities, minimizing the share of public finance allocated and helping private finance find adaptation opportunities in line with their risk-return appetites.
Developing pooled investment vehicles	Where adaptation finance opportunities are too small to attract private FI interest, public sector FIs can help to structure pooled vehicles like funds into which they can invest.

Each type of institution has a role to play in adaptation finance, and firms highlighted that across the financial system entities could work more closely together to identify their respective roles so that each is working to its comparative advantages.
To maximise the amount of adaptation finance, firms felt that is important for MDBs, DFIs, public development banks, governments, and the private sector to work together to grow the pipeline of adaptation projects and to actively discuss how to enable the right players to finance different pieces of the pie according to their mandates and their fiduciary and regulatory duties.

Key Observations

Based on the outreach with firms, the following are a range of suggestions of areas where action could help reduce barriers to adaptation finance.

- Governments could prioritise producing national and/or sectoral adaptation plans which set out priorities, policy and identify priority adaptation projects. This could include policy measures such as embedding adaptation and climate resilience considerations in key sectors such as new infrastructure, and commercial and residential real estate.
- Categorisation could be developed to provide greater clarity around the types of activities which are likely to be purely publicly financed, those which could be financed by the private sector with some public sector risk mitigation or co-financing, and those which could be commercially viable on a standalone basis with private financing, recognising country and regional differences.
- Convergence around consistent definitions and classifications for adaptation and resilience could be supported. There are many definitions and frameworks available, and so supporting interoperability and some convergence would help support a common language. Identification of a white list of activities could also help.
- Continued support the implementation of relevant disclosures and other public good initiatives which aim to provide open access to key geophysical risk data that firms can use to enhance their risk assessments and better understand where greater resilience to climate change is needed.
- Public sector financial institutions could be encouraged to (a) scale adaptation finance directly, where private finance is not able to participate directly; and (b) develop their toolkit to further support private finance to increase its capital allocation to adaptation finance.

Section 2: Adaptation finance and transition plans

This section focuses on the questions that the G20 SFWG is considering around whether financial and non-financial institutions should incorporate adaptation and resilience considerations into their transition plans. The NGFS was asked to develop a set of high-level considerations for incorporating adaptation and resilience in financial institutions and corporate transition planning approaches building on previous work.[18]

There has been growing momentum on mitigation-focused transition planning, with over 6,000 real economy companies[19] and approximately 500 financial institutions[20] having voluntarily set out their plans. These plans are primarily used to outline company-level mitigation-focused strategies, including their transition-related objectives, implementation actions, engagement strategies, relevant metrics, and governance frameworks. These plans can address how firms approach both transition-related risks and the opportunities.

Overall, firms were clear that they are very early in the process of integrating adaptation and resilience into their activities and felt that it was premature to conclude that adaptation should be brought into any transition planning requirements introduced by government authorities. Firm transition planning typically recognises that climate-related risks — transition and physical — are rising and this is addressed as part of the firm's strategic response. Climate considerations are being integrated into risk governance, financial decision-making, and firms' overall strategies. However, beyond this, firms do not routinely use their transition planning process to consider how adaptation should be captured in their firm wide objectives, targets, implementation strategies, their product offerings and engagement strategies. This is the case even for those firms which have more advanced approaches to adaptation.

All of the wider barriers - including those relating to nascent adaptation planning and project development across governments and companies - were considered to be significant. Alongside needing more clarity from governments on national priorities for adaptation, with enabling policy, it was highlighted that there is much less clarity over the objectives pertaining to adaptation and resilience, as compared with mitigation where the Paris Agreement provides a framework. The challenges around definitions and data were also seen as being material, as were those that arise because ensuring the economics and financial viability of adaptation projects is more difficult as compared with mitigation.

Firms noted that the outcomes transition planning delivers were not always well understood and while plans may result in a scaling up of particular types of finance, this is rarely the objective. Firms' transition plans will often include the estimation and monitoring of climate-related financial risk and supporting real-economy emission reductions. In many cases, these objectives are supported by detail on the business levers and financing strategies

[18] NGFS (2024), Tailoring transition plans for EMDEs and NGFS (2024) Conceptual note on adaptation
[19] CDP (2024), Climate transition plans 2024
[20] BNEF (2024), Tracking climate transition plans in the financial sector

they will use to achieve their individual goals. The result of this process may be that the firm aims to scale up transition or green finance, but this is rarely the overarching objective.

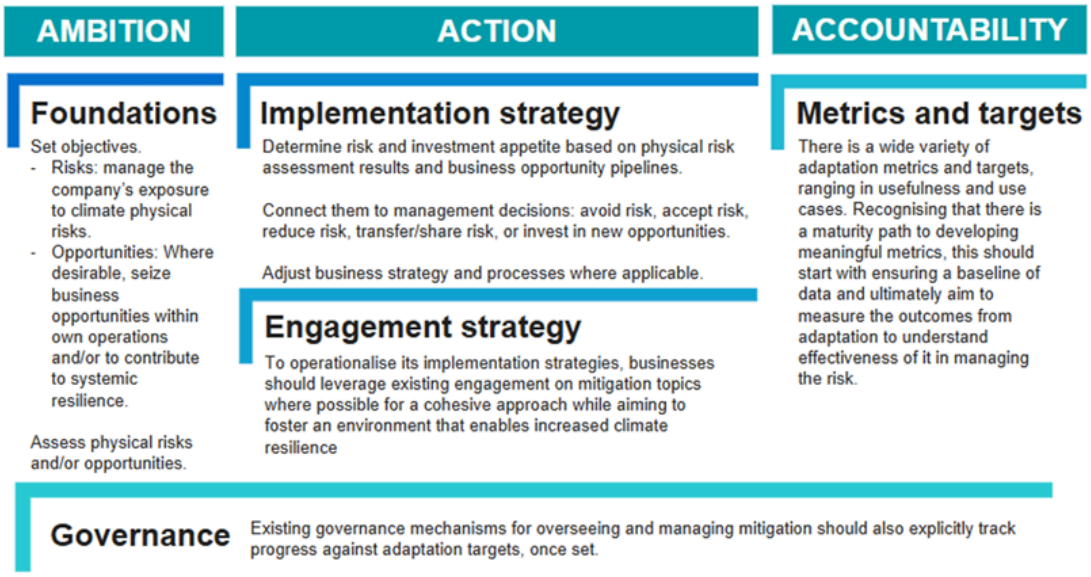
Moreover, firms did not highlight a lack of adaptation considerations in transition plans as a significant barrier to adaptation finance. Some firms highlighted that embedding adaptation and resilience into broader risk assessment and financial decision-making could reduce the negative impacts of physical climate impacts on the value and stability of financial institutions' assets, clients, or portfolio companies. Others noted that there could be new economic and financial opportunities, including potential new revenue streams from providing advice and financing to support real economy companies in enhancing their resilience and from providing financing to companies that are developing innovative adaptation solutions. But firms did not highlight issues relating to their transition plans as a reason that they were not providing more adaptation finance, focusing instead on the range of barriers outlined in Section 1.

The NGFS's transition plan framework

This sub-section considers in more detail the framework the NGFS is developing to explore how real economy corporate and financial institutions could voluntarily think about adaptation in the context of their transition planning activities, based on the outreach GFANZ carried out.

The NGFS's work builds on existing frameworks for transition planning by using the same five pillars approach used in, for example, the GFANZ Net Zero Transition Plan Framework, UK Transition Plan Taskforce Disclosure Framework, and the ISSB's educational guidance on transition plan disclosures. The report takes the pillars of the net zero transition plan framework developed by industry - foundations, implementation strategy, engagement strategy, metrics and targets, and governance - and considers how a corporate or financial institution could consider adaptation within each of these. Doing so aligns their considerations of adaptation with the approach that many firms and regulators are already taking. This is set out in **Table 2.**

Table 2: Summary of NGFS framework for integrating adaptation into transition planning



Source: NGFS (2025), Integrating adaptation and resilience into transition plans

(i) Governance

The NGFS framework suggests using existing governance processes to support adaptation planning. While most firms are not planning to integrate adaptation into their transition planning at present, those who indicated that they might consider doing so generally agreed that there could be advantages to using the same governance frameworks as for mitigation while highlighting the need for significant capacity building. Integrating adaptation considerations into the processes used to develop existing transition plans would help position it as an extension to existing processes to develop strategies pertaining to climate-related opportunities and risks rather than an entirely new and unconnected exercise. Some firms highlighted the advantages of integrated thinking across mitigation and adaptation as it can reduce the risk of "maladaptation" - including increased GHG emissions or shifted vulnerability - and create more opportunities for co-benefits and integration with mitigation and nature considerations. A major challenge is enabling senior leadership and relevant staff across the organisation to have sufficient knowledge to effectively oversee the development and implementation of a strategy for adaptation finance, underlining the need for extensive capacity building. Enhancing capacity building can help address the identified barrier related to the lack of *internal and external knowledge and capacity*.

(ii) Foundations

The NGFS framework anchors the integration of adaptation into transition plans around two key foundational objectives: i) managing exposure to physical risks; and ii) seizing adaptation-related opportunities which align with objectives that were identified by firms, who also note the need for opportunities to be commercially viable. Many firms noted that

they have or are developing risk assessment frameworks which include physical risk. In some cases, firms noted that these risk assessments could be the basis for any objectives they set related to adaptation but that this was not general practice presently. Some firms noted that there are economic opportunities associated with adaptation, for example, as global temperatures rise demand for cooling technologies, water desalination, drought-resistant agriculture is likely to grow. Financing these technologies could both provide financial upside and support adaptation. Firms were clear that setting adaptation finance-related objectives would not lead to the scaling of finance unless the financing opportunities were commercially viable, on a standalone basis or with public sector support.

Firms highlighted that given the challenges around adaptation policy and defining adaptation outcomes, developing consistent objectives which can inform business strategy is much harder for adaptation than in their net zero transition plans. At present, adaptation objectives are difficult to define and so this makes it hard to internalise adaptation routinely into business decisions and to develop a clear story for staff across the business on what the firm is trying to do and why.

(iii) Implementation strategy

The NGFS's implementation pillar covers both assessing risks and opportunities, and the options available to a firm once they have been identified. Firms reported that the starting point for adaptation is often physical risk assessment, but that accurate, decision-useful analysis is challenging. Firms' assessment of physical risk often starts at the portfolio level to identify potentially high exposure assets by geographies or sectors which can be used to prioritise assets or clients which are likely to have the most material exposures. But the data needed to undertake a reliable risk assessment on individual companies is extremely granular, with information required about the location of assets, the local geography, scenarios for potential physical impacts, and the ability to link these to financial outcomes. Firms report that they often have data on the location of their clients' headquarters but not the more relevant information about the main sites of economic activity.

Firms recognised that understanding the <u>current</u> risk exposure is not sufficient, and that a <u>forward-looking</u> assessment is needed, including through the use of scenario analysis and real economy transition planning. Financial sector firms would welcome firms in the real economy more systematically developing strategies to understand and manage their exposure to physical risk. Including adaptation considerations into corporate transition planning could be helpful. That said, firms do not generally expect that a published transition plan would contain large amounts of granular information. Rather it is likely to give an indication of how firms are approaching physical risk, and whether they have a strategy to increase their resilience.

Risk methodologies are improving but are still nascent and there is a role for governments in providing improved access to data. Firms generally welcomed initiatives such as the NGFS Scenarios[21], IIGCC's Physical Climate Risk Assessment Methodology[22], the

[21] https://www.ngfs.net/ngfs-scenarios-portal/
[22] IIGCC (2024), PCRAM in practice

outputs of the UNEP FI's Adaptation and Resilience Investors Collaborative[23], the ENCORE tool[24], and the UK's Climate Financial Risk Forum's work on adaptation[25] which set out approaches and methodological considerations for undertaking climate risk assessment. Increased provision of data by government authorities can help address some of the identified *data challenges*.

As recognised in the NGFS framework, once firms have identified physical risk, they can translate it into concrete risk management and investment decisions. These include accepting, avoiding, adapting, or transferring risk, or investing in new opportunities, and it would be important to further consider how reliance on these could evolve and impact real world outcomes.

- Few firms outside the insurance sector are actively using their risk assessment to inform risk pricing and financing decisions, in part due to the level of uncertainty in the analysis. In effect, they are choosing to **accept** the (uncertain) level of physical risk. This approach does not lead to an increase in real economy or financial sector resilience.

- Firms could choose to **avoid** a particular climate risk exposure if it does not meet their risk tolerance or they cannot see a path to the asset or client becoming sufficiently resilient. This is not a widely used strategy at present as firms are aware of the issues which could be created if they routinely refuse finance or divest, especially for more vulnerable communities. This does not lead to an increase in resilience in the real economy even if it could reduce risk exposures for individual financial institutions.

- Firms recognise the need to support their clients in **adapting** to a changing climate and building resilience. At present this largely consists of initiating conversations with clients and portfolio companies about their risk exposures and their need to enhance resilience. Over time, firms could turn those conversations into more structured advice, integrate analysis into pricing and financing decisions, and seek to provide specific adaptation-related financing. Some firms are already taking some of these steps.

- Bank lenders routinely look to **transfer** at least some of their physical risk exposure by requiring insurance coverage that explicitly covers natural disasters. Insurers are becoming more alert to physical risk in their liabilities and often requiring greater deductibles or co-insurance. Some insurers are worried about their ability to take increasing risk, and the reinsurance market's ability to take on the final liabilities. Some banks worry about whether insurers will continue to cover these risks, and the contrast between lending maturity and the typically annual nature of insurance contracts adds to the uncertainty and the risk of borrowers being in breach of loan covenants if they are unable to source adequate insurance coverage.

- There is a wide range across firms in how actively they are looking for **new investment opportunities** associated with adaptation and resilience. There are some examples of

[23] https://www.unepfi.org/climate-change/adaptation/adaptation-and-resilience-investors-collaborative/
[24] https://www.encorenature.org/en/about/about-encore
[25] CFRF (2024), Mobilising adaptation finance to build resilience

private equity, venture capital and asset managers that are explicitly looking to scale up the provision of finance to technologies which are likely to be in demand in a higher temperature world and which have the potential to enhance resilience. Others are looking to highlight to clients or project developers where they can take steps to enhance the resilience of their activities or projects, especially where long term in nature.

(iv) Engagement

The NGFS framework recognises that institutions can support adaptation and resilience by engaging with a wide range of stakeholders. Firms underscored how central their engagement strategies are to their ability to influence adaptation and resilience outcomes, especially with clients and portfolio companies. The nature of engagement with clients and portfolio companies can take various forms, including: i) **information gathering and awareness raising**, better understanding the extent of client exposure to physical risk and plans to manage and reduce it; ii) **sharing information and best practice**, such as offering advice and analysis on exposure to physical risks to medium and smaller firms who don't have the in-house capabilities; and iii) **creating incentives and offering finance**, such as feeding into decision-making about whether to provide finance, pricing models, financial incentives for action to enhance resilience, and loan covenants or insurance conditions. Some firms are seeking to engage with local and national governments to encourage adaptation and resilience actions and data collection. Firms are also developing collaborative partnerships related to adaptation. These can be across the financial services industry, with client groups, with civil society, and with official sector actors to develop a common understanding of the issues holding back the provision of adaptation finance, facilitate peer-to-peer learning, and to support the development of solutions. There are many examples of good practice in this area. Engagement can help address the identified challenge of the *need for greater collaboration between public and private financial institutions.*

(v) Data and metrics

The NGFS framework suggests a maturity model whereby firms build up the complexity of the metrics they monitor and targets they set. Firms noted that the definition of relevant metrics and associated targets for adaptation finance is far more complicated than for mitigation finance and few have associated targets. When designing adaptation focused metrics, there are a multitude of hazards, relevant sectors and activities, and it is difficult to assess the impacts of particular interventions. This is exacerbated by the granularity and localised nature of the data needed to assess exposure, risk and vulnerability. A maturity model reflects the diverse range of capacities across firms and the need for firms to develop their approaches over time. This aligns with industry guidance on target setting prepared by the UNEP FI Principles for Responsible Banking.[26] As firms build their expertise and data improves they could move to more sophisticated metrics and potentially adaptation related targets.

Firms are likely to start by prioritising the sectors, geographies and assets with the most significant financial exposures to physical risk. Measures that require aggregation or detailed assessment of the whole balance sheet are likely to be beyond the data and

[26] UNEP FI (2023), PRB - Adaptation target setting guidance:

methodological capabilities of most firms in the first instance. Some firms use the methodologies developed by the Joint Methodology for Tracking Climate Change Adaptation Finance, developed by the MDBs, which focuses on tracking the amount of finance within a project that is committed to addressing climate vulnerabilities and building resilience.[27]

Firms recognised the importance of moving beyond stocktaking and input metrics, and to assess the impact of adaptation finance, which bring new challenges of long term monitoring, evaluation and verification. This includes measuring the reduction in physical risk exposure, and contributing to enhanced client and community resilience. Measuring how adaptation financing has fed into reduced costs for the recipient company (e.g. avoided losses, lower financing costs, or reduced insurance premia) could help engagement with real economy firms on the benefits associated with investing in their own resilience. Methodologies to measure the impact of such financing are nascent, especially linking to financial risk and returns, but firms highlighted the importance of their continued development. The development of better metrics can help address the identified challenge of the *definitions and classifications.*

Key Observations

- It could be recognised that there exist many barriers to adaptation finance that are unrelated to transition planning, and as such simply encouraging or requiring firms to address adaptation in transition planning, without also addressing the wider barriers, is unlikely to deliver the scaling in adaptation finance desired.
- It could be clarified that the primary focus of financial sector transition planning is encouraging firms to take a strategic approach to the risks and opportunities of climate change and the transition. Transition planning and plans are not the primary tools to drive scaling up of any particular type of finance, even if that could be a potential outcome.
- It could be recognised that firms are generally very early in the process of considering adaptation. For many firms the focus in the short term will be on increasing the quality of their risk assessment and developing a strategy to feed that into decision making. Systematically including adaptation in transition planning is likely to be some way off for many firms.
- The financial sector could be further supported in using scenario analysis tools as part of their risk assessment toolkit, and continue to encourage the regular development of reference scenarios and methodological developments.
- The importance to some firms of their engagement strategies could be recognised. Many financial institutions report that the biggest impact that they can have is through the way they work with their clients and portfolio companies to put a spotlight on climate vulnerabilities and provide advice, solutions and finance to enhance resilience.
- Further work could be undertaken to identify and develop appropriate metrics and

[27] MDBs (2021), Joint methodology for tracking climate change adaptation finance

targets for adaptation activities, especially related to measuring impacts.

- The importance of skills and capacity building within financial institutions, real economy corporates, and public bodies could be underscored. Increasing the understanding of adaptation and resilience issues is a prerequisite for significant scaling of finance.

Annex 1: Examples of adaptation finance transactions and facilities from private finance

Banking Services	A global bank recently completed financed guarantees for a company that develops and delivers storm and extreme-weather resilient solar modules to solar farms in geographies vulnerable to physical climate risks, and previously worked with an insurer to provide financial protection against extreme weather such as river and wind level changes for businesses in the renewable energy sector.
Insurance Provision	In Colombia, a global insurance company and domestic bank have worked together to offer a parametric agricultural insurance solution that uses satellite data to monitor rainfall and trigger payouts when levels threaten crops, which so far has protected over USD 1.5 million in investments, covering 390 hectares across 45 municipalities.
Private Equity Funding	A US-based private equity firm has a climate resilience fund which is financing growth-stage companies developing technologies to address the physical impacts of climate change, including in water efficiency and smart water management, resilient food systems, agricultural analytics, geospatial intelligence, supply chain analytics, and catastrophe risk modeling and risk transfer.
Asset Management	A global asset manager has a climate adaptation fund, which invests in public and private placement bonds in EMDEs. The fund aims to provide solutions for institutional investors seeking to invest in adaptation projects in EMDEs. It has a layered capital structure, with private-sector institutional investors having access to the fund via senior units, and DFIs and public-sector investors having access to the relatively riskier junior units, acting as a 'loss buffer' for the senior units. The fund utilizes a proprietary impact evaluation framework for adaptation impact assessment across projects and works with the Global Center of Adaptation to identify high impact investment opportunities.
Blended Finance Facility	Another firm is in the process of developing a dedicated $1.5 billion blended finance platform, which will blend commercial and concessional capital to address climate risks through mitigation and adaptation investments in EMDEs. Further examples include the development of country platforms, such as the Bangladesh Climate and Development Platform which partner governments, MDBs, and firms to incorporate private finance as part of a structured program.
Public-Private Fund	An infrastructure solutions provider in Africa and its asset management arm set up a Infrastructure Climate Resilient Fund, with a US$240 million commitment in junior equity from Green Climate Fund (GCF). By supplying the catalytic first loss equity, the fund aims to address investment barriers to financing climate-resilient infrastructure in sub-Saharan Africa and to catalyze private capital for projects that integrate adaptation and climate-resilient measures into climate-proofing infrastructure. The fund targets institutional investors including African pension funds, sovereign wealth funds and insurance companies.
Technical assistance facilities for SMEs	A global bank has partnered with public sector organizations to create a Microfinance Foundation, which focuses on providing financing and technical support to SMEs in Latin America that typically lack the capacity to assess physical risk or access adaptation finance. This includes a series of microfinancing programs to promote the implementation of mitigation and adaptation measures to climate change in Colombia, the Dominican Republic, and Peru in partnership with UNEP and local institutions in each country.