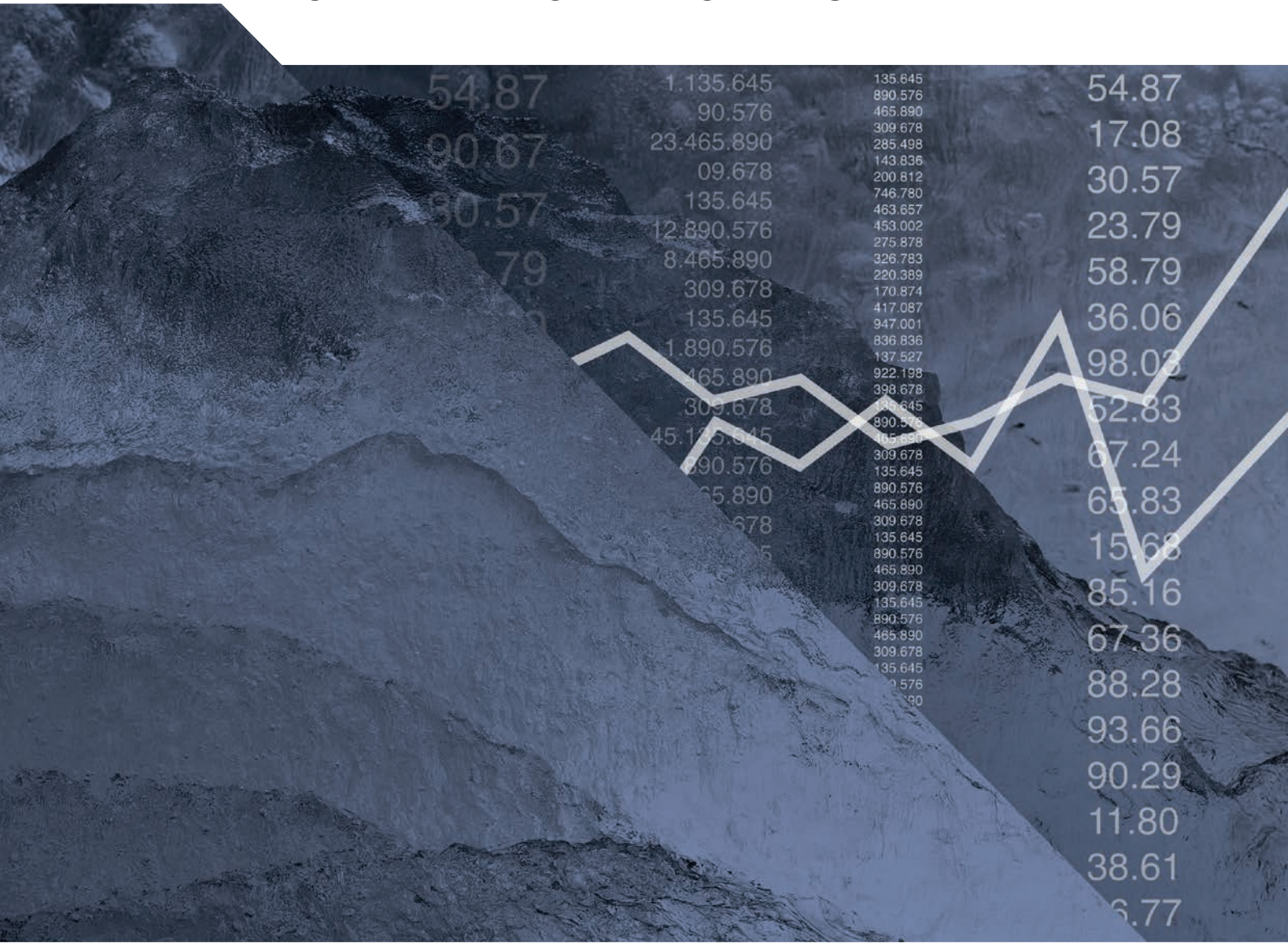
Green Finance and Investment

Scaling Up the Mobilisation of Private Finance for Climate Action in Developing Countries

CHALLENGES AND OPPORTUNITIES FOR INTERNATIONAL PROVIDERS



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Foreword

Global efforts to tackle climate change are off-track. Without a major, immediate course-correction, the Paris Agreement goal of limiting the global average temperature rise to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C will slip away, with the crossing of climate change tipping points leading to irreversible impacts. Meanwhile, efforts to adapt and build resilience to the impacts of climate change remain inadequate. The challenge is most acute in developing countries, for whom the imperative of climate action is one among several priorities, including wider economic development and poverty alleviation, amidst a complex and difficult global economic backdrop.

Achieving low greenhouse gas and climate-resilient development in developing countries requires a rapid scaling up of finance from all sources – public, private, international, and domestic – for climate action. International climate finance providers have a key role to play, both in contributing to financing climate mitigation and adaptation activities, as well as in mobilising and helping to catalyse finance from other sources.

At the 15th Conference of the Parties (COP15) of the UNFCCC in Copenhagen in 2009, developed countries committed to a collective goal of mobilising USD 100 billion per year by 2020 for climate action in developing countries from a variety of sources, including the private sector. In this context, the effectiveness of international public climate finance in mobilising private finance has been limited: of the USD 89.6 billion provided and mobilised in 2021, only USD 14.4 billion was mobilised from the private sector.

Bilateral agencies, development finance institutions, multilateral development banks and funds need to work together more systematically and in collaboration with beneficiary countries to mobilise and crowd-in private finance. This requires rethinking how climate finance is deployed, scaling up the use of blended finance mechanisms, and adjusting to changing commercial dynamics in individual sectors and geographies. At the same time, capacity building needs to be expanded to support developing countries to improve the conditions for investment, even more so given difficult macroeconomic conditions and constrained fiscal space. Unlocking private investment for climate action also requires collective efforts to address the institutional barriers in the international climate finance architecture that prevent the mainstreaming of private finance mobilisation as a strategic objective.

This report draws on the best-available climate finance data to explore key challenges limiting private finance mobilisation towards climate action, with the aim of identifying actions needed to overcome them. To this end, it presents a set of recommendations that international climate finance providers could take in their climate finance interventions, in deepening international cooperation and mechanisms that crowd-in cross-border finance, in enhancing the mandates and practices of international institutions towards deeper and better co-operation with the private sector, and in supporting beneficiary countries' own actions to improve domestic enabling environments.

Combined with complementary OECD analyses relating to climate finance, this report aims to provide data-driven insights to help inform discussions and deliberations under the UNFCCC and other international processes including the G20, as well as serve as a reference for governmental and public finance entities in the formulation and implementation of their respective strategies, programmes, and actions towards mobilising private finance for climate action.

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Abbreviations and acronyms

ADB	Asian Development Bank
AFD	Agence française de développement
AFOLU	agriculture, forestry and other land-use
AIIB	Asian Infrastructure Investment Bank
AIMM	Anticipated Impact Measurement and Monitoring system
AR6	Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report
BII	British International Investment
CAF	capital adequacy framework
CIV	collective investment vehicle
CRA	credit rating agency
CRS	OECD Creditor Reporting System
CSA	climate-smart agriculture
DAC	OECD Development Assistance Committee
DESNZ	UK Department for Energy Security and Net Zero
DFI	development finance institution
DSA	debt sustainability analysis
DSSI	debt service suspension initiative
EBRD	European Bank for Reconstruction and Development
EFSD	European Fund for Sustainable Development
EIB	European Investment Bank
EMDE	emerging markets and developing economies
ESCO	energy service company
ESG	environmental, social and corporate governance
FCDO	UK Foreign, Commonwealth, and Development Office
FDI	foreign direct investment
FMO	Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden
GCF	Green Climate Fund
GEM	Global Emerging Markets Risk Database
GHG	greenhouse gas
GSS	green, social and sustainability (bond)
HFLD	high forest low deforestation

IADB / IDB	Inter-American Development Bank
IBRD	International Bank for Reconstruction and Development
ICMA	International Capital Market Association
IEA	International Energy Agency
IFC	International Finance Corporation
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IRENA	International Renewable Energy Agency
JETP	Just Energy Transition Partnership
JICA	Japan International Cooperation Agency
KOICA	Korea International Cooperation Agency
LCFP	Luxembourg-EIB Climate Finance Platform
LFI	local financial institutions
LIC	low-income country
MBD	multilateral development bank
MCA	Master Cooperation Agreement
MCPP	Managed Co-Lending Portfolio Program
MIC	middle-income country
MIGA	Multilateral Investment Guarantee Agency
NAP	national adaptation plan
NDB	national development bank
NDC	nationally determined contribution
NSIA	Nigeria Sovereign Investment Agency
ODA	official development assistance
PCT	preferential creditor treatment
REDD	United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries
RST	IMF Resilience and Sustainability Trust
SDG	Sustainable Development Goals
SDR	special drawing rights (IMF)
SIDA	Swedish International Development Cooperation Agency
SME	small and medium-sized enterprises
SPV	special purpose vehicle
TDB	Trade and Development Bank
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WBG	World Bank Group

Executive summary

Meeting the Paris Agreement's goals requires a rapid scaling up of financing from all sources – public, private, international and domestic – towards climate action, including in developing countries. Private finance from a range of commercial actors in developed and developing countries is critical to closing the financing gap for investments in climate action, notably in clean energy systems, agriculture, forestry, land-use, adaptation, and resilience. International public climate finance has an important role to play in mobilising such private finance.

In the context of the collective goal of developed countries to mobilise USD 100 billion per year for climate action in developing countries, tracked volumes of private finance mobilised by bilateral and multilateral public finance interventions remain relatively small. In 2021, developed countries provided USD 73.1 billion in international public climate finance through bilateral and multilateral channels, and USD 2.1 billion as export credits; in that same period, only USD 14.4 billion was mobilised from the private sector. The picture is uneven across climate themes, sectors and geographies, as private finance mobilisation has been concentrated in climate mitigation and energy-related activities, and in middle-income countries.

There is considerable scope to improve the effectiveness of public climate finance in mobilising private finance. Loans provided with long maturities continue to be the dominant form of international public climate finance. Meanwhile, across sectors, the volumes mobilised by public providers via existing leveraging and blended finance mechanisms remain low relative to overall public climate finance flows. Scaling up and tailoring the use of mechanisms such as syndicated loans, credit lines, guarantees, and collective investment vehicles, is critical to help improve the risk-return profile of climate-related investment in specific country and sector contexts. Support for structured finance, including project aggregation and securitisation, can help bridge the gap between climate projects in developing countries and capital stocks from investors and financial institutions in developed countries.

Approaches and mechanisms to mobilise private finance need to be tailored to specific sectors, technologies, and geographies. In more mature sectors, including clean energy, the rapidly-improving commercial picture means the scope and potential for private investment has grown. Where that is the case, international public climate finance should evolve to mirror these dynamics. In other areas, including agriculture and forestry, although the scope for commercial investment remains more limited, there are opportunities to deploy climate finance in more innovative ways to mobilise private finance.

Given the growing role of multilateral development banks (MDBs) as providers of international climate finance, their private finance mobilisation potential needs to be tapped. MDB shareholders and management should explore options for strengthening mandates to target private finance mobilisation more explicitly. MDBs should also explore opportunities to expand efforts and financial innovation towards increased mobilisation at both the portfolio as well as at the project and transaction levels, including through wider use of risk transfer mechanisms. A greater focus on private finance mobilisation should be undertaken with a holistic view of broader MDB mandates and objectives to avoid any unintended consequences on wide development priorities, including poverty reduction, health and education. Using public finance more efficiently, for example by de-risking projects rather than financing them in whole, can

in turn free up resources for more support to less commercially viable climate action priorities and wider development priorities, including in low-income countries.

Developing countries need to continue to address persistent institutional and capacity challenges that limit the scope for private finance mobilisation, including with the support of international providers. Investments in climate action need to be complemented by capacity development through technical assistance in support of climate-relevant policy and regulatory reforms, climate mitigation and adaptation project pipeline development, and improvements of wider enabling conditions required to make private finance mobilisation possible. At the same time, more efficient use of public finance in more mature markets and sectors can help free up more concessional forms of climate finance for sectors and geographies where commercial opportunities remain more constrained.

International providers of climate finance – alongside recipient country governments – can take a number of actions to scale up and accelerate the mobilisation of private finance**:**

Action area 1: Tailor project- and country-level interventions to de-risk projects and markets

1. Tailor public finance interventions to reflect the rapidly shifting commercial dynamics in key sectors, including scaling up blended finance and other mobilisation approaches in more mature sectors.
2. Within more mature sectors and markets, reorient loans and other debt instruments towards private finance mobilisation.
3. Scale up the use of guarantees at the project and portfolio levels and enhance providers' institutional capacity to provide guarantees.
4. Provide tailored capacity-building to support improved enabling conditions for investment and the development of project pipelines.
5. Progressively exit projects once they become commercially viable to free up financial resources for new climate change mitigation and adaptation priorities and projects.

Action area 2: Scale up the use of cross-border financing mechanisms and improve co-ordination to channel global finance

6. Expand the use of public climate finance to support the development of financing structures that crowd-in institutional investment at scale.
7. Strengthen co-ordination and collaboration between bilateral and multilateral climate finance providers, domestic actors, and the private sector.

Action area 3: Enhance international institutions to maximise the mobilisation potential of public climate finance

8. Request clearly defined institutional private finance mobilisation targets from MDBs, while safeguarding development objectives and avoiding unintended consequences.
9. Encourage MDBs to further use or develop risk transfer mechanisms and provide local currency financing.
10. Further improve data disclosure and transparency on accounting methodologies relating to public climate finance and the private finance it mobilises.

These identified actions and the underlying analysis mainly address the mobilisation of private finance for climate change mitigation. The complementary OECD report, *"Scaling up adaptation finance in developing countries: Challenges and opportunities for international providers",* identifies specific actions and options for scaling up adaptation finance in developing countries.

1 Introduction

Achieving low-greenhouse and climate-resilient development in developing countries requires a significant mobilisation of finance from all sources: public, private, domestic, and international. The estimated financing gap for climate action in developing countries is significant. International public climate finance needs to be deployed more effectively to accelerate and scale up the mobilisation of private finance. This chapter provides context for the report. It presents the global challenge, both in the context of the USD 100 billion climate finance goal and beyond, and the fundamental questions this report seeks to address – what are the barriers to private finance mobilisation, and what are the opportunities to overcome them? – and the report's scope and methodology for answering them.

Global efforts to reduce greenhouse emissions and adapt to the impacts of climate change are off-track. Without a major, immediate course-correction, the goal of limiting the global average temperature rise to 1.5ºC above pre-industrial levels will slip away (IPCC, 2023[1]), with the crossing of climate change tipping points leading to catastrophic impacts on human life, nature, societies, and economies (OECD, 2022[2]). Meanwhile, efforts to adapt to and build resilience against the impacts of climate change remain inadequate (UNEP, 2022[3]).

Finance remains one of the most intractable barriers to accelerated climate action; but it is also an essential enabler. While governments and the private sector have ramped up investments in climate action in recent years, finance flows remain significantly below what is needed. The financing needs for climate action in developing countries[1] alone are estimated at USD 2.4 trillion a year between now and 2030; this requires a four-fold increase on pre-pandemic levels (Battacharya, Songwe and Stern, 2023[4]).[2] These figures stand in stark contrast to the tens of trillions of capital globally, which could be tapped to close this gap (IPCC, 2023[1]).

Meanwhile, significant public resources and private investment continues to flow towards business as usual. Civil society studies estimate that the world's 60 largest banks provided an estimated USD 742 billion of fossil fuel financing in 2021 (RAN, 2022[5]), while official estimates indicate that fossil fuel subsidies in 51 major economies doubled from USD 362 billion in 2020 to USD 697.2 billion in 2021 (OECD and IEA, 2022[6]). This underscores the urgency of rapidly accelerating efforts to make all sources of finance consistent with a pathway towards low greenhouse gas emissions and climate-resilient development, in line with Article 2.1c of the Paris Agreement (UNFCCC, 2015[7]).

Given the scale of financing needs, and against the wider economic backdrop of constrained fiscal capacities and high indebtedness, combined with rising interest rates, governments will need to much more effectively tap private resources to finance climate action: between 2013 and 2020, it is estimated that public finance accounted for 70% of climate investments – including decarbonisation of energy systems and use, agriculture, forestry and other land-use, and adaptation and resilience – in developing countries (Songwe, Stern and Bhattacharya, 2022[8]). In the context of the collective goal of developed countries to mobilise USD 100 billion per year for climate action in developing countries, USD 73.1 billion came from public sources in 2021, whilst only USD 14.4 billion was mobilised from the private sector[3].

Significant barriers to private investment in climate action remain. Though all countries face these issues to varying degrees, risks – perceived and real – in developing countries are often deemed by investors to be prohibitively high relative to the prospective returns. Commercial investors face uncertainty around the direction of policy and the supportive measures required for investments in climate mitigation and adaptation, in addition to other long-standing, economy-wide and sector-specific issues that dampen private investment, which remain unresolved in many countries (Kreibiehl, 2022[9]). Mobilising private resources at the pace and scale required to meet climate investment needs and wider sustainable development goals in developing countries will require a systemic shift in development finance to meet these challenges. Developed countries and multilateral climate finance providers have a key role to play.

Providers of international public climate finance recognise the need to improve their effectiveness in mobilising private finance in the context of the USD 100 billion goal (Ministry of Environment and Climate Change, Canada and Federal Foreign Office, Germany, 2022[10]). Ahead of the *Summit for a New Global Financing Pact* in June 2023, a number of leaders underscored the importance of scaling up private capital flows to achieve development and climate goals (Le Monde, 2023[11]), whilst the G20 has called for multilateral development banks to enhance private capital mobilisation (G20, 2023[12]).

This report seeks to identify evidence-based action areas to increase and accelerate the mobilisation of private finance for climate action in developing countries, and the role of international public finance providers in doing so. It draws on best-available data to provide disaggregated analysis of the sectoral, geographic and other features of private finance mobilised by public climate finance (Chapter 2). It then explores some of the key economy-wide, climate action area-specific, and institutional challenges to

private finance mobilisation and, building on the data analysis presented in Chapter 2, sets out opportunities for international public climate finance to more effectively mobilise private finance (Chapter 3). In particular, the report identifies specific actions that can be taken to scale up private finance mobilisation. These span more effective use of context-specific blended finance instruments at the sector level, more tailored technical assistance to support the enabling conditions required for private investment, and the institutional, governance, and structural steps required to recalibrate the international development architecture towards mobilisation. Specifically:

- The remainder of Chapter 1 provides a brief overview of climate finance in the context of developing countries.
- Chapter 2 deep dives into trends in private climate finance mobilised by bilateral and multilateral public climate finance interventions, providing disaggregated analysis by climate action area, development actor, country income group, and within these, the role of different public finance mechanisms in mobilising private finance.
- Chapter 3 draws on the quantitative analysis in Chapter 2 as well as further empirical evidence to provide insights on barriers to the mobilisation of private finance towards climate action in developing countries and sets out opportunities for greater private finance mobilisation through public climate finance interventions. It explores: (i) policy, regulatory and wider constraints in recipient countries and their impact on investor perceptions and sentiment; (ii) specific constraints to private investment and possible solutions in two core climate action areas (clean energy, and agriculture and forestry); and (iii) the state of the multilateral development architecture and related constraints that limit private capital mobilisation.
- Chapter 4 draws on the challenges and solutions identified in Chapter 3 to set out recommendations for increasing and accelerating the mobilisation of private finance. It also sets out recommendations on wider steps beyond finance that climate finance providers and development practitioners can take to improve co-ordination on climate action within the international development architecture and its interaction with domestic actors, with a view to increasing private sector participation, as well as in-country enabling environments.

The action areas and underlying analysis presented in this report mainly address the mobilisation of private finance for climate change mitigation. The complementary OECD report – *"Scaling up adaptation finance in developing countries: Challenges and opportunities for international providers"* – examines options for scaling up adaptation finance in developing countries (OECD, 2023[13]).

1.1. Climate finance for developing countries

1.1.1. Overview of current flows and needs of climate finance for developing countries

To achieve the 1.5°C temperature goal of the Paris Agreement whilst adapting and building resilience to the impacts of climate change, developing countries will need to draw on all sources of finance – public, private, domestic, and international – to be able to deploy an estimated USD 1 trillion per year by 2025 and USD 2.4 trillion per year towards climate investment by 2030 (Songwe, Stern and Bhattacharya, 2022[8]). Along a similar order of magnitude, the nationally determined contributions (NDCs) of 153 developing countries are estimated to require a total of almost USD 6 trillion of investment up until 2030 (UNFCCC SCF, 2021[14]).

Available estimates indicate that total finance towards climate action in non-OECD member countries[3] from all sources (public, private, domestic, and international), were around USD 600 billion in 2020 (CPI, 2022[15]) (Battacharya, Songwe and Stern, 2023[4]), which falls significantly short of needs. According to these same estimates, the flow of finance in and to developing countries is uneven, both geographically and across sectors: 70% of the total investments in climate for developing countries were directed towards

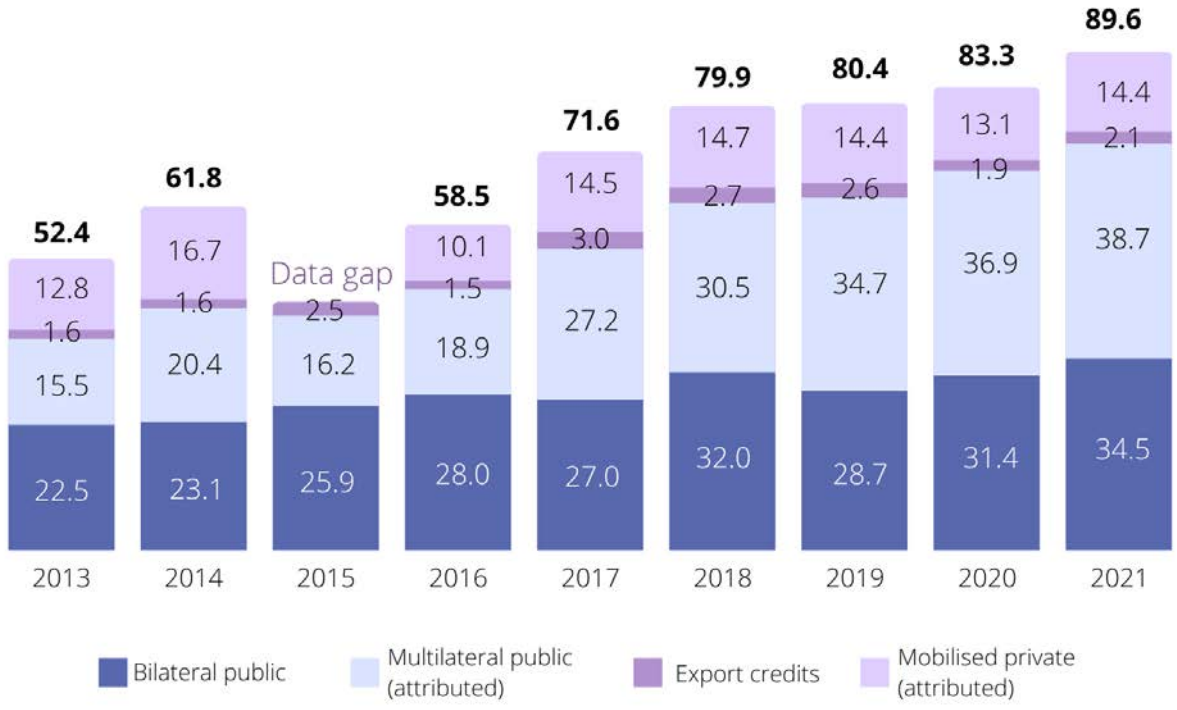
East Asia and the Pacific, while South Asia and Sub-Saharan Africa received a considerably smaller share. Across sectors and climate action priorities, most finance is concentrated in renewable energy and energy efficiency projects, while finance for adaptation and resilience accounted for only 25% of total climate finance in 2022 (CPI, 2022[15]).

1.1.2. Climate finance provided and mobilised by developed countries in the context of the USD 100 billion goal

Though representing a small fraction of total climate-related investment needs in developing countries, climate finance provided and mobilised in the context of the USD 100 billion goal plays a crucial role in financing climate activities that would otherwise not be financed, building local capacity, as well as supporting the mobilisation of larger volumes of climate finance from other sources, notably the private and commercial sector.

In 2021, according to OECD figures, developed countries provided and mobilised a total of USD 89.6 billion in climate finance for developing countries (see Figure 1.1). Public climate finance accounted for the majority of the total between 2016 and 2021 and drove the year-on-year progress towards the goal. Private climate finance mobilisation proved to be challenging, stagnating between 2017 and 2019, dropping in 2020, and slightly recovering in 2021. Box 1.1 provides further context to the four climate finance components.

Figure 1.1. Climate finance provided and mobilised by developed countries for developing countries, 2016-21 (USD billion)



Source: Based on Biennial Reports to the UNFCCC, OECD DAC and Export Credit Group statistics, complementary reporting to the OECD.

Box 1.1. Climate finance components and attribution shares

In its exercise of tracking progress towards the USD 100 billion goal, the OECD identifies four different components of climate finance, with each component playing a different role in the context of supporting developing countries to address climate priorities (OECD, 2022[16]):

- **Bilateral public climate finance** provided by donor countries' development finance agencies and institutions to developing countries to address climate change. It typically takes the form of grants and concessional loans to help developing countries implement climate change mitigation and adaptation measures.
- **Multilateral public climate finance** provided by multilateral development banks (MDBs) and climate funds to developing countries to address climate change, based on paid-in capital from bilateral public providers and, for some multilateral institutions, additional funds raised from capital markets. The support provided by MDBs and climate funds is typically larger than that provided by donor countries through bilateral channels, and is therefore often directed towards larger-scale climate change mitigation and adaptation projects.
- **Climate-related export credits** provided by developed countries' official export credit agencies for the sale of climate-related goods and services. Climate-related export credits are most notably used to help promote the deployment of clean energy technologies in developing countries, mainly renewable energy.
- **Private finance mobilised** by bilateral and multilateral public climate finance. Public climate finance can leverage private finance though risk mitigation instruments, such as guarantees and insurance.

Given the nature of the USD 100 billion goal climate finance accounted for in this context does not capture all finance for climate action in developing countries. Due to the geographical scope, the figures do not account for: (i) the share of multilateral public finance and mobilised private finance attributable to developing countries themselves; (ii) developing countries' domestic public climate finance; and (iii) bilateral public climate finance between developing countries in the context of the so-called "South-South" cooperation. Further, the figures presented do not include private finance catalysed by public policy interventions, for which there remains a lack of measurement methodology, nor private finance invested in the absence of public interventions altogether.

Note: Further technical detail on the methodologies used to calculate the attribution of multilateral public and mobilised private climate finance can be found in Annex A of (OECD, 2022[17]).
Source: Authors.

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Notes

[1] “Developing countries” refers to countries and territories included on the DAC List of ODA Recipients for 2018 development finance and/or on the non-Annex I list of Parties to the UNFCCC. This definition may not align with definitions and categorisations of developing countries in other literature, including that referenced throughout this report, and includes countries often referred to as “emerging markets/economies”.

[2] Estimates of needs are uncertain, while estimates of current flows partial. They should therefore be used with caution, and as providing indications rather precise and definitive assessments.

[3] The OECD / non-OECD member countries categorisation is different to country groupings under the UNFCCC; for example, OECD member countries include Parties included on the UNFCCC non-Annex I list and vice versa.

2 Trends of private climate finance mobilised for developing countries

This chapter examines trends in private climate finance mobilised by bilateral and multilateral public climate finance interventions between 2016 and 2021. It presents disaggregated analysis of private climate finance mobilisation across a range of dimensions. It analyses the use of different leveraging mechanisms in mobilising private finance, the distribution of private climate finance across developing country geographies and income groups, and the role of different development actors.

2.1. Understanding the mobilisation of private climate finance

Private investments and financing for low-emission and climate-resilient projects and activities are typically the result of the combined effects of a range of public interventions and of broader enabling conditions. While some public interventions mobilise private finance for specific projects or programmes, others can have a more catalytic effect on levels of private finance over time. The role played by different types of interventions are, however, intertwined, especially as public policies and broader enabling conditions can have a major impact on the amounts that public finance interventions can mobilise. Providers of bilateral and multilateral public climate finance can play a crucial role in unlocking private investment in developing countries, contributing to both the mobilisation and catalysation of private finance for climate action, as well as to development goals more generally.

In statistics from the OECD Development Assistance Committee (DAC), as defined in the "Converged Statistical Reporting Directives for the Creditor Reporting System", mobilisation of private finance by official development finance interventions refers to the stimulation by specific leveraging mechanisms of additional financial resources from the private sector for development purposes.[1] In this context, the "mobilisation" of private climate finance requires a demonstrable causal link between private finance made available for a specific project or programme, and the leveraging mechanism deployed by official development finance providers. Based on methodologies developed in consultation with bilateral and multilateral development finance providers, and thereafter approved by DAC members, activity-level data are collected from those same providers for the following leveraging mechanisms: syndicated loans, guarantees, shares in collective investment vehicles, direct investment in companies, credit lines, project finance and simple co-financing arrangements (see corresponding analysis in the next section). Efforts are underway to expand coverage to also capture private finance mobilised through technical assistance. Following a two-year data pilot carried out in 2021-22, bilateral and multilateral providers will have the opportunity to report on the mobilisation effect of technical assistance activities, where causality can be assumed, links to the financing stage of the project demonstrated, and risks of double counting amounts mobilised addressed.

"Catalysation" is often used to encompass all interventions that help to create a more conducive environment for increased private sector investment and financing over time (OECD, 2018[1]). Such interventions comprise public policies and incentives put in place by countries domestically, as well as the support from international providers towards the development and implementation of such policies, as well as towards more generally improving investment conditions in developing countries.

The analysis presented in this chapter focuses on private climate finance mobilised by public finance interventions, as defined by the DAC and captured by the activity-level data it collects annually from bilateral and multilateral development finance providers on that basis. In this context, the aforementioned leveraging mechanisms deployed by development actors typically take the form of blended finance, defined by the OECD as "the strategic use of development finance for the mobilisation of additional finance towards sustainable development in developing countries" (OECD, 2018[1]).[2] Blended finance typically involves a public entity (for example development banks and government agencies) deploying finance intended to reduce the risk profile of a project or development intervention, thereby unlocking additional finance flows from private sector or other sources. Such interventions can help attract private investment into areas where it may not have otherwise been feasible without public support. The private sector then contributes additional funding to projects aiming at creating positive social and environmental impact alongside financial returns for investors.

Defining, measuring and reporting the mobilisation of private finance contributes to setting incentives for official providers. Particular care should be taken if amounts of private finance mobilised are translated into indicators such as institution- or aggregate-level mobilisation ratios. Experience shows wide ranges claimed on potential ratios (ODI, 2019[2]). Moreover, limited information is available on how leverage ratios are calculated by different institutions, which hinders comparability and consistency as the numerator and denominator of such ratios can include or exclude different categories of public and private finance involved

(Jachnik and Raynaud, 2015[3]). A further important issue surrounding the use of such indicators is that the ability of development actors to mobilise private finance should not be considered as a proxy for their ability to achieve effective and transformational climate action, as assessing the latter would require monitoring and evaluating actual impacts. Indeed, measuring the performance of public providers solely on the basis of mobilisation results could set perverse incentives and potentially put mobilisation, development effectiveness and climate action goals at odds.

Methodologies for estimating catalysation are by nature more challenging to develop and implement. Assessing the catalytic effect of domestic public policies and of international capacity building is complex. Numerous instruments operate within a broader policy landscape, making it challenging to isolate the effects of a specific intervention and identify it as the sole cause of mobilisation (Caruso and Ellis, 2013[4]), as illustrated by exploratory pilot studies (McNicoll et al., 2017[5]; Haščič et al., 2015[6]).

2.2. Insights from new disaggregated data analysis of private climate finance mobilised by public climate finance interventions.

This section provides disaggregated analysis of private climate finance mobilised by developed countries for developing countries between 2016 and 2021.[3] The data presented throughout the remainder of Chapter 2 is sourced from the OECD statistics on financing for sustainable development and build on the OECD DAC international standard for measuring and collecting data on the amounts mobilised from the private sector by official development finance interventions, including for climate. It is important to note that:

- Data on private finance mobilised cannot be matched with a specific amount of public development finance.
- Commercial confidentiality related to private entities and finance prevents the characterisation of mobilised private finance, for example in terms of financial instrument and terms and conditions (Habbel et al., 2021[7]).

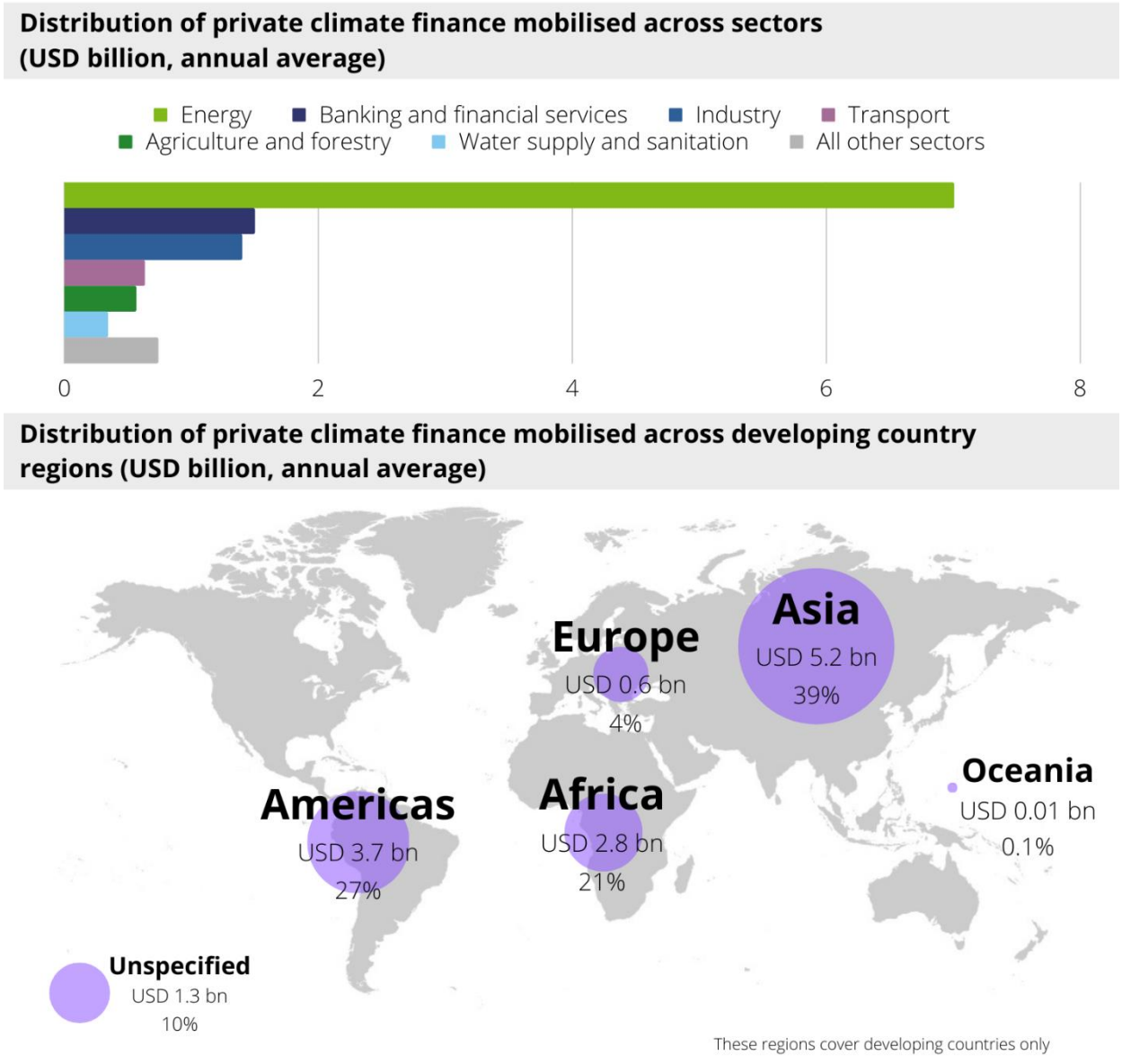
Between 2016 and 2021, developed countries mobilised in total USD 81.2 billion of private climate finance in developing countries, i.e., a yearly average of USD 13.54 billion (OECD, 2022[8]). Of these USD 81.2 billion, USD 69.5 billion (86%) targeted mitigations activities, while USD 7.1 billion (9%) went to adaptation. The remaining USD 4.6 billion (6%) focused on cross-cutting activities.[4] In terms of sectors, on a 2016-21 annual average basis, more than half of private climate finance mobilised went to the energy sector (USD 7 billion, 52%), and another 40% targeted six other sectors: banking and financial services (USD 1.5 billion, 11%), industry (USD 1 billion, 7%), transport (USD 0.6 billion, 5%), agriculture and forestry (USD 0.6 billion, 4%) and water supply and sanitation (USD 0.3 billion, 3%). From these trends, latest OECD analysis identifies four main takeaways (OECD, 2022[9]):

- **Overall, direct investments, guarantees and syndicated loans were the main leveraging mechanisms used, and mobilised 77% of total private climate finance.** All three mechanisms are particularly effective for mobilising private finance at scale by reducing risk exposure and providing structured financing methods that allow investors to participate in specific projects. Chapter 3 further explores the role that different leveraging mechanisms can play in scaling-up the mobilisation of private climate finance.
- **Most private climate finance was mobilised for projects in middle-income countries with relatively low risk profiles.** The ability of developing countries to attract private finance and investment depends on a range of factors related to their enabling environments, such as regulatory frameworks, investment policy, and financial market policy. Other factors, such as a country's implementation and enforcement capacity, human capital, economic infrastructure, and integration into the global economic system, also play a role in determining its absorptive capacity

for investment. To date, private climate finance has mostly been mobilised in countries with relatively strong economic infrastructure and a degree of market maturity, while the riskiest countries with high political and macroeconomic uncertainties tend to have limited capacity for private sector development. As further explored in Chapter 3, developing countries with relatively well-functioning markets, including more developed financial markets, and regulatory frameworks struggle less in mobilising private finance, and require relatively less or different types of support from international public climate finance.

- **Overall, MDBs mobilised a larger proportion of private finance for developing countries, with a relatively higher risk profile than bilateral providers.** As further analysed in Chapter 3, MDBs tend to have larger portfolios of infrastructure projects and, to some extent, greater capacity to manage risk, which can allow them to operate in more challenging environments. Chapter 3 looks further into the role that MDBs can play in the mobilisation of private finance.
- **Adaptation finance represented a very small share (9%) of total private climate finance mobilised.** Private sector investment in adaptation projects is often challenging due to the lack of clear revenue streams, lack of scalability potential, as well as the uncertainty of future climate scenarios, which make it challenging to build a solid business case for the private sector. Given the traditionally dominant role played by the public sector in financing adaptation, the private sector often lacks awareness of pipelines of adaptation projects that may benefit from private investment. At the same time, in sectors such as sustainable agriculture and climate-resilient infrastructure, the role of the private sector in adaptation is becoming increasingly important due to the escalating impacts of climate change, including on profitability. The importance of private investment is magnified by the fact that governments alone cannot meet the financial demands of adapting to a changing climate. The role of the private sector in financing adaptation is further explored in a parallel and complementary paper that examines options for scaling up adaptation finance in developing countries (OECD, 2023[10]).

Figure 2.1. Overview of key trends and figures of total private climate finance mobilised for developing countries, 2016-21



Source: Based on OECD DAC statistics, and complementary reporting to the OECD.

2.2.1. The role of different leveraging mechanisms in mobilising private climate finance

Leveraging mechanisms refer to financial instruments and structures designed and implemented by public finance providers to help attract, de-risk and direct private capital towards sustainable development, and in the context of this paper, towards climate change projects. Table 2.1 provides an overview of the definitions, use and purpose of different leveraging mechanisms captured in OECD DAC statistics. Combining these mechanisms amongst a range of wider support measures tailored to individual country contexts, sectors, and projects, alongside domestic efforts, can significantly enhance their effectiveness in mobilising private finance.

Between 2016 and 2021, direct investments in companies mobilised nearly half (41%) of private climate finance. These were followed by guarantees (19%), syndicated loans (16%), credit lines (9%), simple co-financing arrangements (7%) and collective investment vehicles (CIVs) (7%) (OECD, 2022[9]).

Table 2.1. Role and use of leveraging mechanisms

Leveraging mechanism	Definition	Underlying financial instruments used by public finance providers	Typical mobilised private finance
Direct investments in companies and special purpose vehicles (SPVs)	In the context of project finance, these mechanisms refer to mobilising private investments in SPVs, which are neither covered by official guarantors nor part of a syndicated loan. Beyond project finance, direct investment in companies refers to loans, mezzanine finance and equity investments in enterprises alongside with private investors to provide liquidity for expansion purposes.	Equity investments, mezzanine finance, standard loans, bonds, and other debt instruments	In the context of project finance: private equity investments or private debt financing in SPVs (if not through syndicated loans). Beyond project finance: private debt financing (not syndicated) and equities invested in enterprises.
Guarantees	Guarantees are legally binding agreements under which the guarantor agrees to pay part of or the entire amount due on a loan, equity, or other instrument in the event of non-payment by the obligor or loss of value in case of investment.	Guarantees and other unfunded contingent liabilities	Private equity investments and loans to SPVs and companies as well as portfolios of private local finance institutions
Syndicated loans	Syndicated loans are defined as loans provided by a group of lenders (a syndicate) which works together to provide funds to a single borrower.	Standard loans, subordinated loans	Private lenders participating in the loan syndication.
Credit lines	Credit lines refer to a standing credit amount which can be drawn upon by borrowers (typically local finance institutions) for on-lending purposes, mainly to SMEs.	Standard loans, subordinated loans	Top-up funds by private local finance institutions and in certain cases also equity investments in the end borrowers (if required).
Simple co-financing arrangements	Simple co-financing arrangements refer to various business partnerships, B2B programmes, business surveys, matching programmes, co-financing of specific projects and similar arrangements where official providers extend finance in co-financing with the private sector.	Standard grants, standard loans	Private co-finance of specific projects in the field or in the context of business partnerships.
Shares in collective investment vehicles (CIVs)	Shares in collective investment vehicles (CIVs) represent investments in pooling vehicles, such as investment funds and facilities, which typically use such finance to foster local SME development	Equity investments, loans, and mezzanine finance (rarely)	Private equity investments in the CIVs.

Source: Adapted and further expanded from (OECD, 2022[9]).

In the context of climate-related themes, direct investment in companies have been employed significantly more for the financing of mitigation and adaptation projects, accounting for 43% and 44% of private climate finance mobilised within each of these climate areas, respectively. In contrast, simple co-financing

accounted for a greater share of private finance mobilised towards cross-cutting activities, making up 35% of the total.

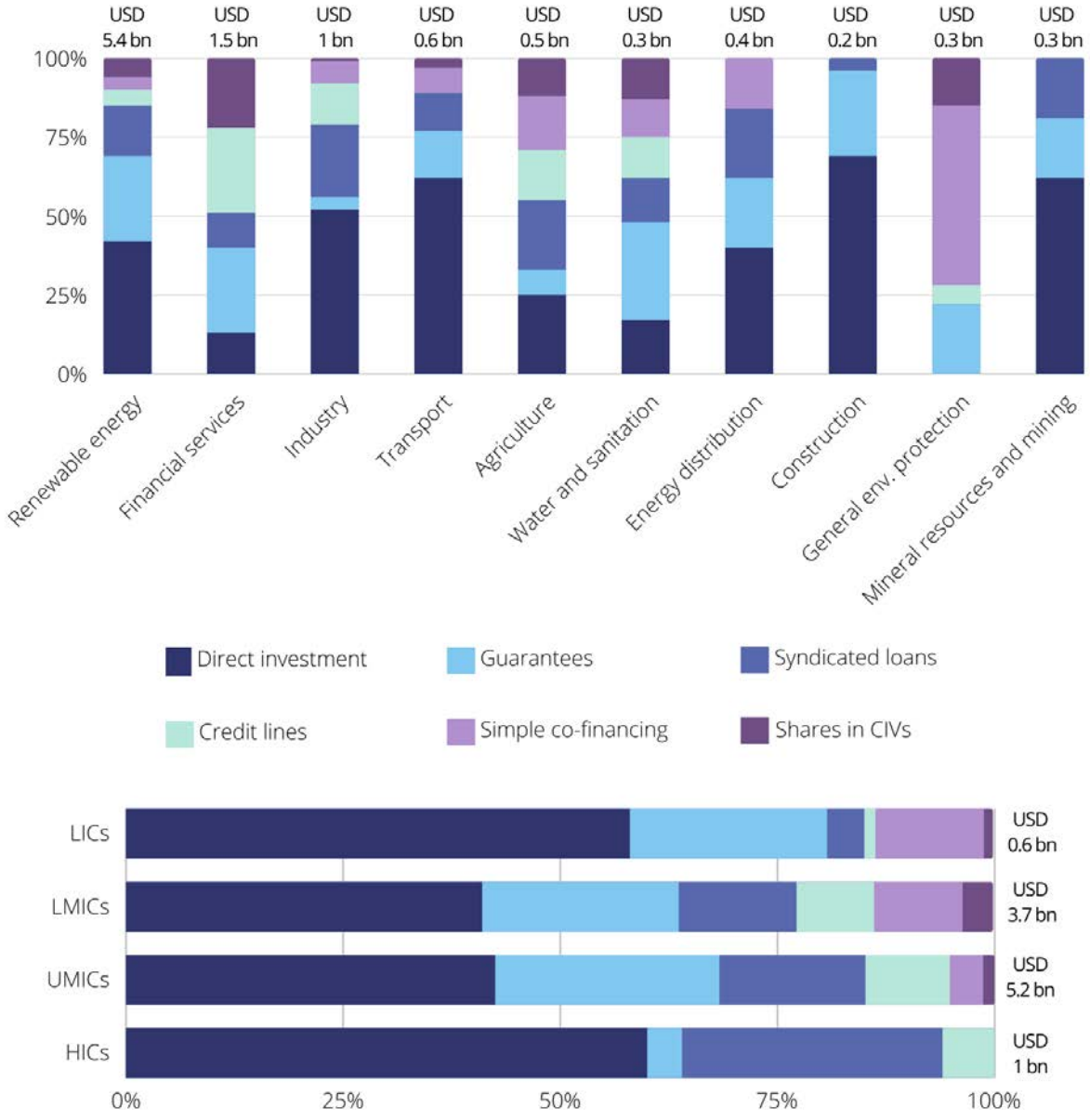
Different trends emerge by further breaking down private climate finance by leveraging mechanism across different sectors and recipient country profiles (see Figure 2.2). The differences in trends can be explained by a range of factors, including the nature of the projects being financed, the availability of funding sources, the risk profile of different countries and sectors, the level of maturity of the private climate finance market in each sector, as well as the business models of the provider institutions. While the level of granularity and confidentiality of data on private climate finance mobilisation does not allow for the reflection of all these dimensions, several observations can be made on the features of various leveraging mechanisms. Looking at the leveraging mechanisms from those the mobilised the most climate finance to those that mobilised the least:

- **Direct investments in companies and special purpose vehicles (SPVs)** are mostly relevant for financing large infrastructure projects that require significant upfront investment. For this reason, they contributed to the mobilisation of 50% or more of private climate finance in sectors involving infrastructure projects, such as industry, transport, construction, and mineral resources and mining, and to approximately 40% of private finance mobilised for renewable energy and energy distribution projects. At the same time, due to the versatility and broad range of applications of these leveraging mechanisms, direct investments in companies are used evenly across all four recipient country income groups.
- **Guarantees**, serving to alleviate political and/or commercial risks such as credit, contractual and regulatory uncertainties, are predominantly employed in sectors and countries where these risks are higher. They find substantial application in water supply and sanitation (contributing to 31% of private finance mobilised in the sector), renewable energy (27%), financial services (27%), and construction (27%). The high prevalence in the banking and financial services sector is due to the fact that, at the time of allocation of portfolio guarantees, the provider does not have specific knowledge of the end-users' sector. Moreover, guarantees are particularly prevalent in low-income and middle-income countries, accounting for approximately 24% of the volumes mobilised, in contrast to 5% in high-income developing countries. This difference in the use of guarantees across different income groups underscores the heightened requirement for risk mitigation in the former country categories, where the investment risks associated with climate-related projects are typically more substantial. A potential explanation could be that upper-middle income and high-income countries with higher degrees of political credibility and economic stability, and more financial resources, can provide formal or informal guarantees adequately satisfying private investors. Conversely, in lower-middle income and low-income countries, basic sovereign credibility may be insufficient to make domestic guarantees effective, necessitating additional backing.
- **Syndicated loans** accounted for significant shares of private finance mobilised in education (46% of all private climate finance in the sector) and played a significant role (19% or more) in industry, health, waste management, and hybrid energy sectors. The use of syndicated loans increases as countries move up the income ladder, possibly reflecting greater willingness amongst private investors to participate in syndications. They are particularly relevant to large-scale projects in infrastructure, energy, or natural resources that require significant capital investment.
- **Credit lines** are typically used in sectors where projects may require ongoing financing rather than a one-time investment, as they allow borrowers to draw on funds as needed, giving them more flexibility than other forms of financing. As such, credit lines were used primarily to mobilise finance in financial services (where they mobilised 27% of total climate finance in the sector) and agriculture (16%). However, these credit lines are typically provided to local financial institutions (LFIs). Similar to guarantees, at the time of allocation, the provider often does not have specific knowledge of the end-user's sector of intervention. This may lead to bias in the sector distribution. In terms of recipient countries' income groups, credit lines accounted for slightly higher shares of

private finance mobilised in lower- and upper-middle income countries – 9% for both groups – compared to only 1% in in low-income countries. This could be explained by greater access to financial services and more sophisticated financial markets in upper-middle and lower-middle income countries, which facilitate the use of credit lines.

- **Simple co-financing** is widely used in sectors where projects may be smaller in scale and more diverse in nature. These mechanisms were most extensively employed in general environment protection (where they mobilised 57% of private climate finance), followed by the forestry (68%), and fishing (53%) sectors. In all other sectors simple co-financing mobilised less than 10% of total climate finance. Simple co-financing is mostly used in low-income and lower-middle income countries, where it mobilised 16% and 9% of total climate finance. The role of simple co-financing diminishes as countries move up the income ladder. In upper-middle income and high-income countries simple co-financing only mobilised 4% and 1% of total climate finance, respectively.
- **Shares in collective investment vehicles (CIVs)** were most significant in the government and society sector, where they were used to mobilise 78% of total private climate finance. Shares in CIVs were used to mobilise only 1% total climate finance in low-income countries and upper-middle income countries, and 5% in lower-middle income countries. They represent a significantly higher share (24%) in total climate finance mobilised that is not allocable by income group, for example because they target regional projects or projects in multiple jurisdictions through aggregation structures. This reflects their coverage of pooling vehicles, such as investment funds and facilities, where the ultimate beneficiary countries are not defined.

Figure 2.2. Overview of leveraging mechanisms used to mobilise private climate finance by sub-sector and recipient countries' income group, 2016-21 (annual average)



Note: The graph shows only the top 10 largest sub-sectors for private climate finance mobilised.
Source: Based on OECD DAC statistics, and complementary reporting to the OECD.

A 2022 OECD DAC survey on providers' portfolios towards private mobilisation[5], conducted to complement and help explain trends observed from the mobilised private finance data collected from providers, revealed that while private finance mobilisation for development, as well as for climate action, was a strategic objective for most bilateral and multilateral providers, only 18% of their financial instruments had private finance mobilisation as a main objective. Nonetheless, the survey confirmed the key role of leveraging mechanisms such as guarantees, syndicated loans, and project finance in mobilising private finance, including for climate action. It also showed that several providers have strengthened their use of leveraging mechanisms by experimenting new approaches to mobilise private finance (for example

through new bond or guarantee programmes, capitalisation of blended finance funds and facilities) (OECD, 2023[11]).

2.2.2. The scale and sectoral focus of mobilised private climate finance varies across geographies

Examining the mobilisation of private climate finance across various developing country groupings reveals the significant influence of specific economic conditions and enabling environments. The top five developing countries benefitting from private climate finance mobilised benefitted from almost 30% of the total. Of these, all five are large developing countries that are members the G20.

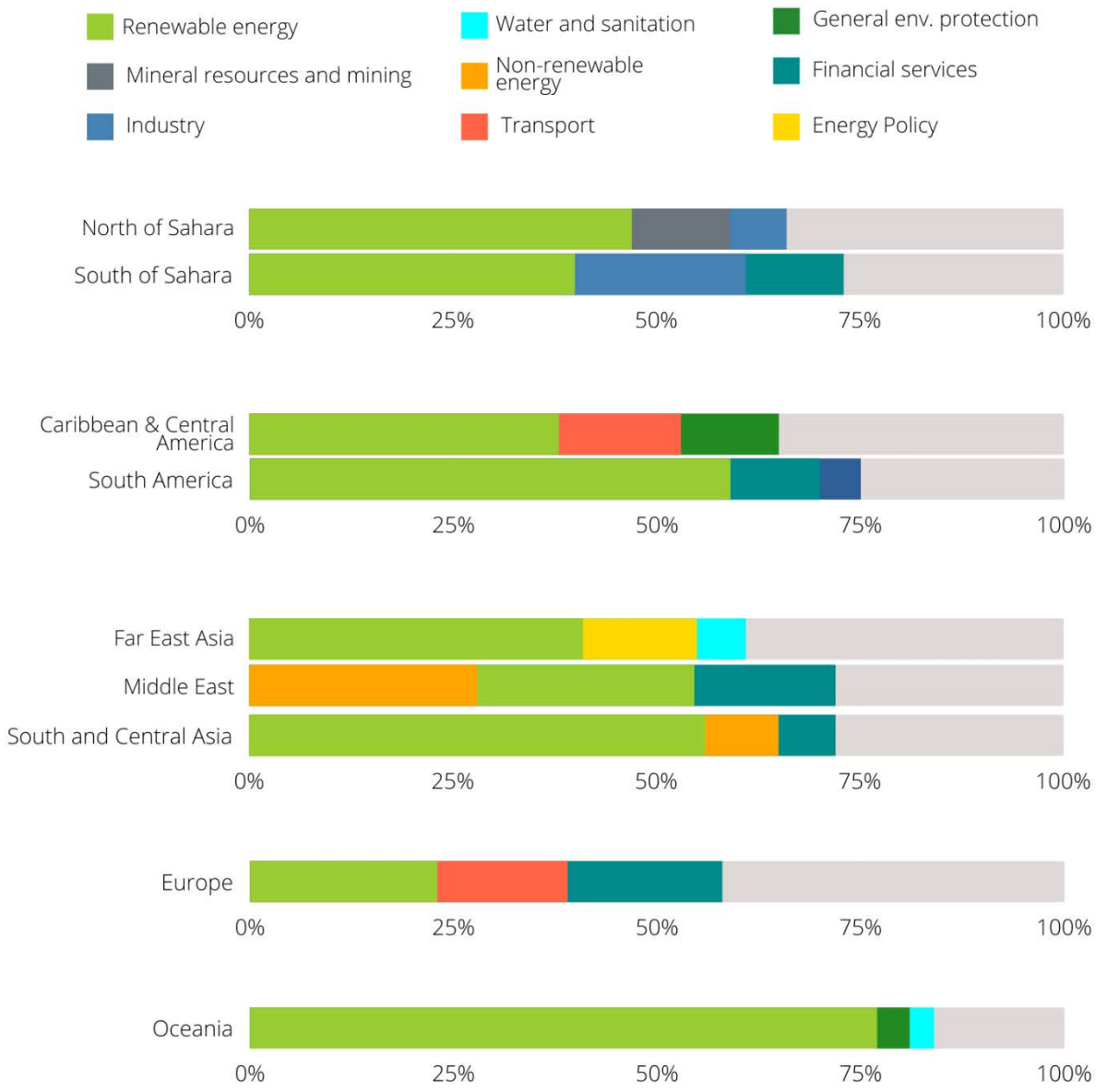
From a geographical region perspective, between 2016 and 2021:

- Asia accounted for largest volumes of private finance mobilised for climate objectives, benefitting from USD 31 billion, or 39% of the total. Within Asia, nearly a third of the total was directed to South and Central Asia (where more than half was concentrated in one single country), nearly a third in Middle East and the rest in the East Asia or unspecified.
- The Americas followed, benefitting from USD 22 billion (27% of the total). Almost three quarters (72%) of private climate finance mobilised in the Americas was in South America.
- Africa benefitted from USD 17 billion (20%). The vast majority (68%) of total mobilised private finance targeting projects in Africa was in sub-Saharan countries.
- Europe and Oceania were the regions that benefitted from the lowest amounts of private climate finance mobilised, at USD 3.7 billion (5%) and USD 62 million (0.08%), respectively. This is to be expected, given the significantly smaller size and populations of climate finance recipient countries of these regions.
- The remaining 9% of total private climate finance mobilised (USD 7.5 billion) was not allocable by region.

Renewable energy was the most targeted sector in all sub-regions, except for the Middle East, where non-renewable energy[6] attracted 21% of all private climate finance mobilised. In Oceania, renewable energy accounted for 77% of total private climate finance mobilised. Beyond renewable energy, the most targeted sub-sectors varied significantly across regions, reflecting different economic, strategic, and climate action priorities, as well as competitive advantages (see Figure 2.3). In particular:

- In the North of Sahara, other social infrastructure and services, and mineral resources and mining accounted for 14% and 12% of total private climate finance mobilised.
- In the South of Sahara, and South America, industry, and financial services were the second and third most targeted sectors (21%, and 5% for industry, and 11% and 11% for financial services, respectively).
- In the Caribbean and Central America, transport and general environment protection make up for 15% and 12% of the total private climate finance mobilised.
- In Far East Asia, energy policy and water and sanitation attracted 14% and 6% of total private climate finance mobilised.
- In Middle East, the second and third most targeted sub-sectors were renewable energy (21%) and financial services (13%).
- In South and Central Asia, non-renewable energy[6] attracted 9% of total private climate finance mobilised, followed by financial services (7%).
- In Europe, financial services and transport accounted respectively for 19% and 16%.

Figure 2.3. Overview of total private climate finance mobilised by sub-region and sector, 2016-21



Source: Based on OECD DAC statistics, and complementary reporting to the OECD.

2.2.3. The role of different development actors in mobilising private climate finance

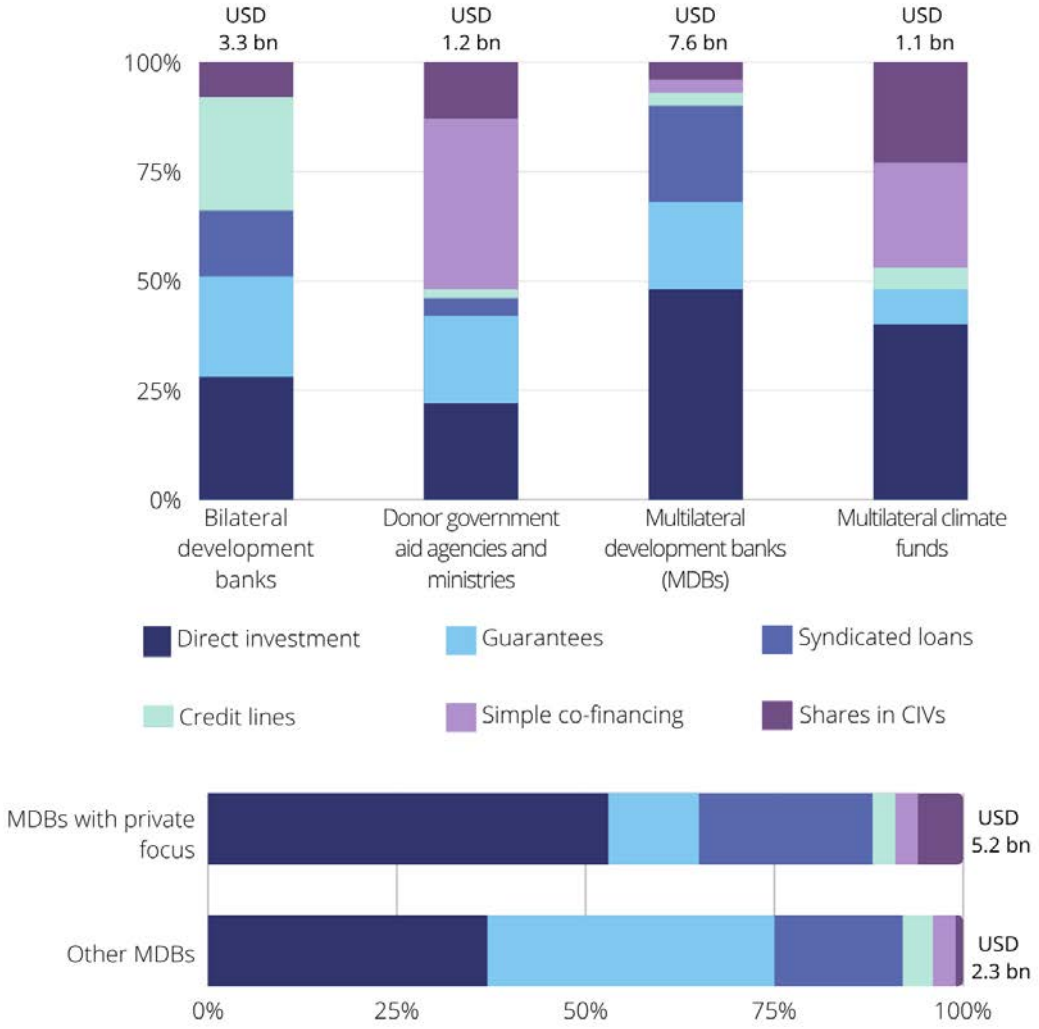
Depending on their mandates and structures, different development actors play distinct roles in the mobilisation of private climate finance (this is further explored in Chapter 3) (Figure 2.4). This analysis considers four broad categories of development actors: donor governments that operate through aid agencies and ministries; donor governments that operate through government-owned development banks; multilateral development banks, and multilateral climate funds. These classifications serve as guidelines for identifying key trends across distinct types of development actors, whilst acknowledging significant intra-group heterogeneity. In particular:

- **Bilateral aid agencies and donor government ministries** mainly mobilise climate finance using simple co-financing (which contributed to 39% of total private climate finance mobilised by these

actors). This could be explained by their business models, which tend to allow for a limited range of financial instruments to be used, mainly standard loans and grants. Simple co-financing is followed by direct investment in companies (22%) and guarantees (20%).

- **Bilateral development banks** use a variety of leveraging mechanisms more evenly, compared to aid agencies and assistance provided directly by government ministries. Almost 30% of the private climate they mobilise is leveraged through direct investment in companies, followed by credit lines (26%) and guarantees (23%).
- **For multilateral development banks (MDBs),** nearly half (48%) of the total private climate finance they mobilise is leveraged through direct investment in companies. This possibly reflects their high degree of involvement in very large infrastructure projects, as outlined in earlier sections. Syndicated loans (22%) and guarantees (20%) follow. Credit lines, simple co-financing and shares in SPVs account for a very small share (3 to 4% each) of total private climate finance mobilised by MDBs. Within MDBs, those that have a private focus mobilise more via direct investment (53%) than those that do not have a specific private focus (37%). In contrast, the latter mobilise significantly more with guarantees (38%).
- **Multilateral climate funds** mobilise most private climate finance either via direct investment in companies (40% of the total) or via simple co-financing (24%). Shares in CIVs (23%) follow. Climate funds make little use of guarantees (8%) or credit lines (5%) and make no use at all of syndicated loans.

Figure 2.4. Private climate finance mobilised by leveraging mechanisms across different development actor, 2016-21 (annual average)



Source: Based on OECD DAC statistics, and complementary reporting to the OECD.

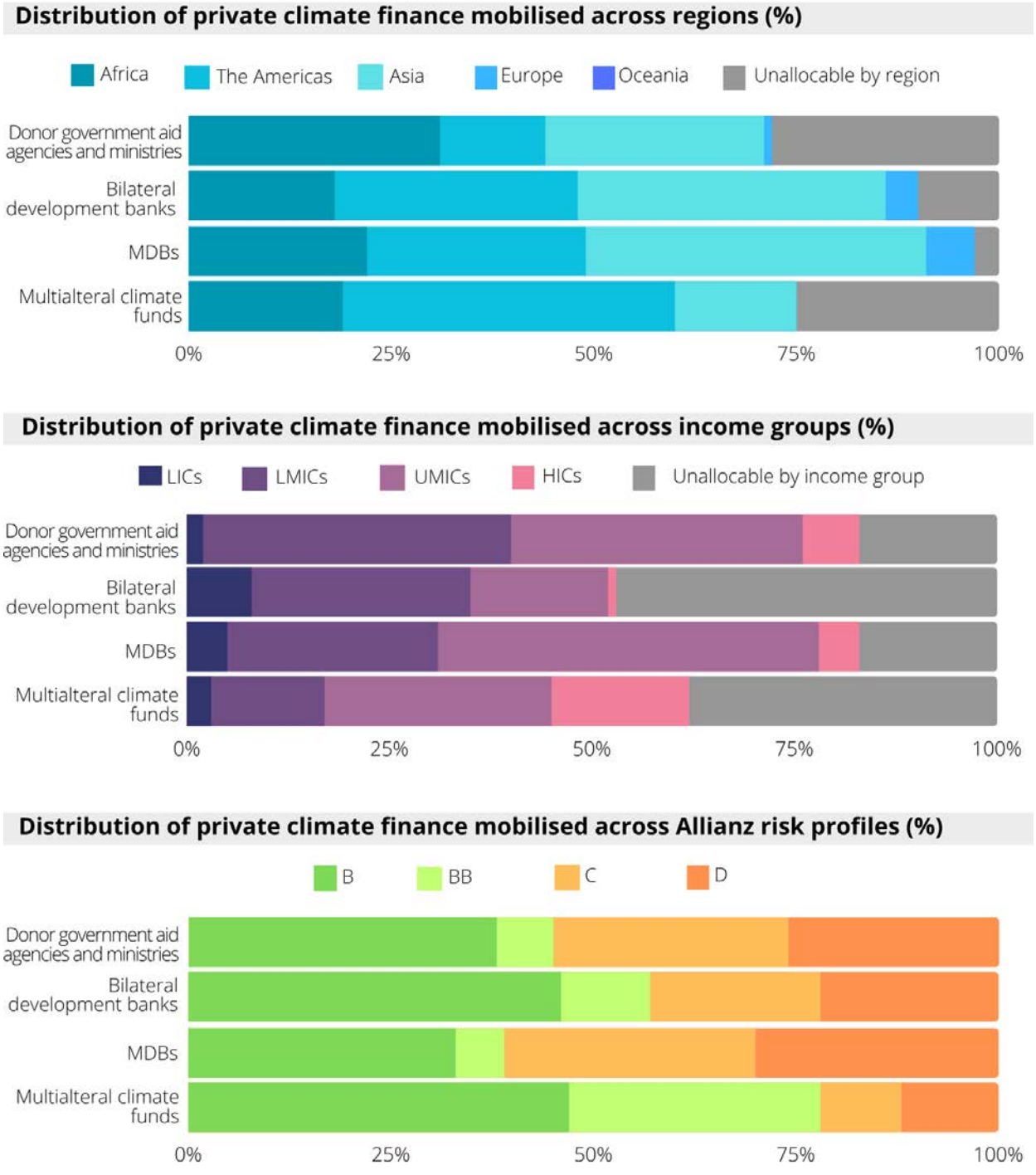
In terms of sector, while renewable energy is the key sector for all actors, the sectoral distributions differ between different types of developmental actors as a result of their different mandates and foci. Relative to other types of actors, national development banks have a higher share in banking and financial services (17% of their total) and the non-renewable sector energy (7%)[6]. In contrast, MDBs mobilise more than other actors in industry (10% of their total) and transport (6%). Finally, governmental agencies and multilateral climate funds have stronger focuses in general environmental protection (12% and 7% of the total private climate finance they mobilise, respectively). The relatively large share in other sectors for MDBs is partly explained by the lack of sectoral reporting in earlier years for one individual large institution.

The roles of the four broad categories of development actors also differ across recipient country regions, income group and risk profiles (Figure 2.5). In particular:

- Bilateral aid agencies and ministries mainly mobilised private climate finance in Africa, low- and lower-middle income countries. More than half of the total private finance they mobilised was in countries with high Allianz risk profiles.

- Bilateral development banks and MDBs show similar trends in terms of targeted developing country regions and profiles. Both mobilised nearly 70% of their respective totals in the Americas and Asia. In terms of income group, bilateral development banks and MDBs mobilised respectively 36% and 47% of their total private climate finance mobilised in upper-middle income countries. However, bilateral development banks tended to mobilise private climate finance in developing countries with lower Allianz risk profiles, compared to MDBs, which mobilised as much as 61% of their total private climate finance mobilised in countries with a C or D Allianz risk rating.
- A large share (30%) of private climate finance mobilised by multilateral climate funds were not allocable by region or income group. Beyond this, they mobilised most finance in the Americas, and upper-middle income and high-income developing countries. Multilateral climate funds were the most risk-averse development actors, mobilising over three quarters of total private climate finance mobilised in developing countries with an Allianz risk rating of B or BB.

Figure 2.5. Private climate finance mobilised by development actor across different developing country profiles, 2016-21



Source: Based on OECD DAC statistics, and complementary reporting to the OECD.

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OECD (2018), *Making Blended Finance Work for the Sustainable Development Goals*, OECD Publishing, Paris, https://doi.org/10.1787/9789264288768-en. [1]

Notes

[1] See “Converged Statistical Reporting Directives for the Creditor Reporting System (CRS) and the Annual DAC Questionnaire”/Chapter 1. Coverage and Key Financial Definitions / Main concepts used in defining flow categories DCD/DAC/STAT(2020)44/FINAL.

[2] At present, however, there is no internationally agreed definition of blended finance. For example, the DFI Working Group on Blended Concessional Finance for Private Sector Projects defines it as “combining concessional finance from donors or third parties alongside DFIs’ normal own account finance and/or commercial finance from other investors, to develop private sector markets, address the Sustainable Development Goals (SDGs), and mobilise private resources” – thus making concessionality a prerequisite for blending. In contrast, the OECD definition focuses on the mandate of the finance provider, as the definition centres on the need for “development finance” – referring to finance (either concessional or non-concessional) deployed for development purposes – to mobilise “additional finance”, which refers to private finance with a commercial purpose. The OECD recognises that a consistent and commonly agreed definition would help development actors align the efforts to make blended finance work better for all countries and sectors (OECD, 2022[12]).

[3] For both multilateral public and mobilised private climate finance, the OECD series of reports on *Climate Finance and the USD 100 Billion Goal* only considers the share of finance that is attributable to developed countries, recognising developing countries’ shareholdings contribute to the financing and operations of multilateral development banks and development finance institutions. The approach of considering only the “attributed” share of these two components is taken in the context of focusing on developed countries’ contributions and their progress towards the UNFCCC USD 100 billion goal.

[4] Climate finance reported as “cross-cutting” relates to projects with both mitigation and adaptation benefits or to climate finance that was not yet allocated to mitigation and/or adaptation at the point of reporting, for example, capacity development grants, the use of which is yet to be decided by the recipient.

[5] The survey was administered through the DAC Working Party on Development Finance Statistics (WP STAT). It was sent to 64 providers, including 36 provider countries (DAC and non-DAC) and 28 multilateral institutions (including the EU Institutions). Responses were received from most of the main actors known to mobilise private finance for development, i.e., 22 countries (of which 21 are DAC members) and 17 multilateral institutions (of which 12 are MDBs, including the EIB).

[6] Climate finance mobilised towards energy generation from non-renewable sources primarily constitutes mitigation activities in a few large natural gas-fired power plants.

3 Geographic, sectoral, and institutional challenges to and opportunities for private finance mobilisation

This chapter draws on the quantitative analysis in Chapter 2 and further empirical evidence to identify barriers to and opportunities for scaling up the mobilisation of private finance for climate action in developing countries. It explores (i) policy, regulatory and wider constraints in recipient countries and their impact on investor perceptions; (ii) hurdles to private investment and possible solutions in two key areas: clean energy, and agriculture and forestry; and (iii) constraints within the multilateral development architecture that limit private capital mobilisation.

Scaling up the mobilisation of private finance requires system-wide action: concerted efforts to improve the conditions for private investment in developing countries; more effective use of public climate finance to crowd-in investment; and strengthening of the international climate finance architecture, notably multilateral development banks, to more effectively partner with the private sector.

The analysis in Chapter 2 highlighted that, in the context of the USD 100 billion goal, relatively little climate finance is mobilised from the private sector. At the same time, the analysis demonstrated the wide differences in private finance mobilisation across sectors, country income groups, and development partners. These differences reflect a multiplicity of factors, notably: commercial dynamics across climate action areas; the enabling conditions for investment in recipient countries; and the objectives, mandates and operating models of development actors deploying international public climate finance.

Chapter 3 draws on the analysis in Chapter 2 to explore these issues in greater detail. Section 3.1 explores some of the cross-cutting and economy-wide barriers to investment in recipient countries. Section 3.2 analyses commercial and other dynamics, barriers to investment, and the climate finance landscape in two core climate action areas: clean energy, and agriculture and forestry. Finally, Section 3.3 explores the specific role of MDBs in mobilising private climate finance.

3.1. Enabling conditions for private climate finance and investment in developing economies

Opportunities for commercial investment in climate action vary markedly across geographies, reflecting unique local conditions, investment climates, and levels of ambition on climate action. The data in Chapter 2 shows that climate finance has mobilised significantly greater volumes of private finance in higher income developing countries as compared to lower income ones (see Figure 2.1). Though this trend applies for most economic sectors and activities, it presents additional complexities for climate action, given the required speed of investment to meet the Paris Agreement goals, and the uneven distribution of investment needs.

This section explores the main economy-wide barriers to investment in climate action, including the differences across country income groups; the impact of policy, regulatory and wider enabling conditions for investment; investor objectives for investment in climate action in developing countries; and information asymmetries that may contribute to distorted perceptions of risk by commercial investors.

3.1.1. Economy-wide risks to commercial investment

The multiplicity of barriers and risks facing investments in developing countries include country risks (macroeconomic stability, political risk, regulatory environments); commercial risks (market risks, operational risks); financial risks (foreign exchange risks, market liquidity risks) and ESG risks (see Table 3.1 below for a typology of different areas and risks investors may be exposed to).

Table 3.1. Typology of risks

Risk area	Type of risk	Example
Country risks	Force majeure risk	Environmental hazard, war, terrorism
	Political risk	Expropriation or nationalisation, breach of contract, unexpected change in government
	Macroeconomic risks	Debt sustainability issues, currency volatility
	Regulatory risk	Changes in laws and regulations, e.g. change in tariffs, permits, taxation, enforceability of contracts and collateral
Commercial risks	Design, construction and completion risks	Delays, cost overruns, changes in land permits
	Operating and performance risks	Cost of operations, technical performance
	Termination risks	Risk of early termination by private party
	Market risks	Change in demand or supply, competition
	Technology risks	Performance risk of a new or unproven technology; obsolescence of utilised technology
Financial risks	Counterparty credit risk	Inability of a counterpart (e.g. off-taker) to honour financial obligations
	Liquidity risk	Inability to sell or exit investment when required
	Foreign exchange risk	Cashflow volatility due to currency fluctuations
	Interest rate and inflation risk	Risk of rising prices and asset replacement costs; increase in real interest rates
ESG risks	Climate and environmental risks	Adverse climate and environmental impacts; cost of due diligence, monitoring
	Social risks	Adverse impacts on workers, communities; cost of due diligence, monitoring
	Governance risks	Reputational risks, corruption

Source: Authors, based on (OECD, 2020[1]).

These long-standing barriers to investment are compounded by the current headwinds facing the global economy. Low-income country (LIC) debt positions have worsened markedly since the onset and in the aftermath of the Covid-19 pandemic and geopolitical instability. The debt-to-GDP ratios of low-income countries were on a downward trend in the early 2000s but have increased in recent years, due to a number of factors: high investment needs, low interest rates over the past decade followed by rising interest rates more recently, limited capacity to raise additional domestic revenues, and weak public financial management systems (IMF, 2022[2]). Developing countries' external debt is increasingly issued in USD and at variable interest rates and is thus greatly exposed to the effects of tightening monetary policy in advanced economies (IMF, 2023[3]). Foreign currency borrowing costs[1] for developing countries have increased, though with wide variations across countries (OECD, 2022[4]). In Sub-Saharan Africa, USD denominated debt issuance experienced the highest costs, with yields above 5% and about one-third with a yield of more than 8%, followed by MENA, where more than two-thirds of USD denominated debt had a yield above 5%. Moreover, increased risk premia have translated into a significant deterioration of the sovereign credit ratings of many emerging markets and developing economies (EMDEs) (OECD, 2022[4]), further increasing sovereign borrowing costs. The creditor landscape has also significantly changed since the 1990s, making debt restructuring potentially more difficult than in the past (ibid).

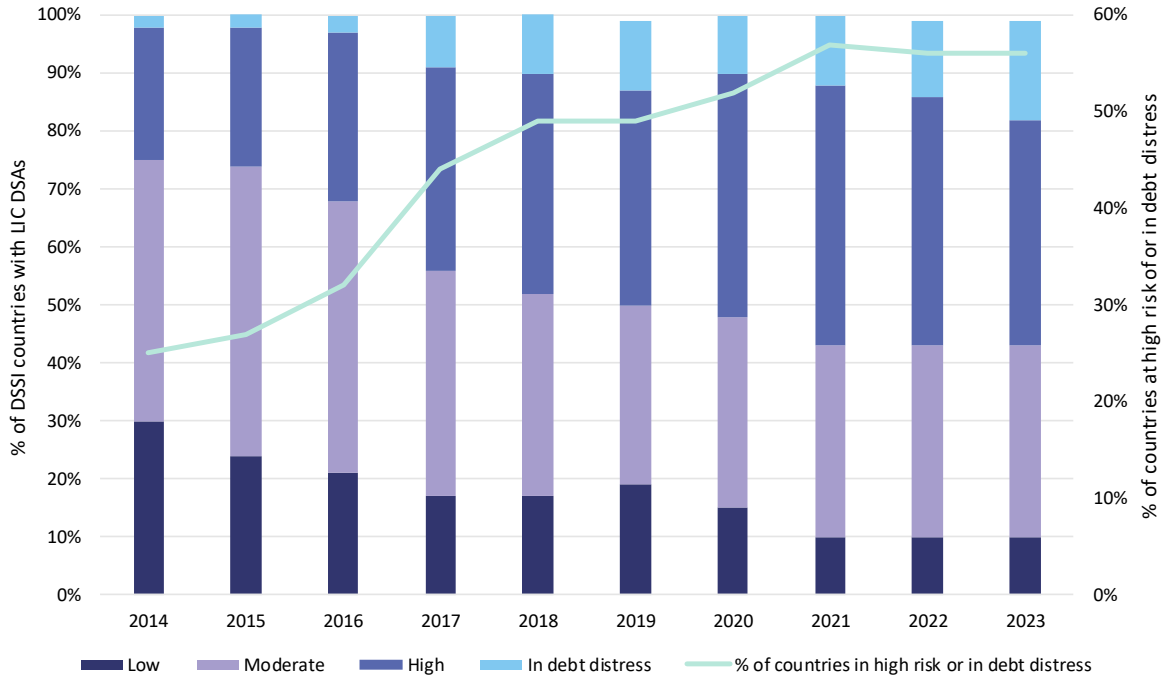
The share of LICs at high risk of or already in debt distress has more than doubled in the last decade from 25% in 2014 to 56% in 2023[2] (as shown in Figure 3.1 below). According to the IMF's Debt Sustainability Analysis applied to LICs, as of May 2023, 11 LICs are in debt distress, 25 are at high risk, 26 are at moderate risk, and seven countries are at low risk of debt distress (IMF, 2023[5]). Moreover, countries at high risk of, or already in, debt distress include about half of the most climate-vulnerable countries worldwide (WRI, 2023[6]). This creates both challenges and opportunities for unlocking finance for climate action in developing countries: high debt levels and risk of debt distress constrain developing countries' ability to fund the transition to low-emission and climate-resilient development pathways. Climate

vulnerability and other environmental challenges can also worsen credit ratings and increase the cost of debt for EMDEs, whilst countries that are more resilient to climate change tend to have on average higher credit ratings, with the magnitude of this effect being particularly large in developing countries (Cevik and Jalles, 2020[7]).

Opportunities exist to better reconcile debt sustainability with climate and environmental priorities in EMDEs. In 2022, the IMF created the Resilience and Sustainability Trust (RST), which mainly channels special drawing rights (SDRs – international reserve assets of IMF member states) to provide policy support and affordable longer maturity financing to help LICs and vulnerable MICs address balance of payments difficulties and build resilience against long-term risks that can impact macroeconomic stability, such as climate change (IMF, 2022[8]). Further progress could be made on the exploration of viable options for channelling SDRs through MDBs, while respecting relevant legal frameworks and the need to preserve the reserve asset character and status of SDRs. In cases where countries have limited fiscal space and face severe climate and/or biodiversity risks, debt-for-climate and debt-for-nature swaps can help governments with limited access to traditional grants, debt relief or restructuring (IMF, 2022[9]). These types of swaps, already used by countries including Barbados, Belize, Seychelles and Ecuador, allow governments to unlock fiscal resources under the condition that they commit to using them for specific climate or environmental purposes (IDB, 2023[10]; IMF, 2022[9]). However, the efficiency and relevance of debt-for-climate swaps is often lower than that of alternative instruments such as grants, concessional loans or more comprehensive debt restructurings. Swaps so far have mainly involved small-scale project-based operations by single creditors, with high transaction and monitoring costs, as well as commitment problems (Chamon et al., 2022[11]). IMF research shows that the relevance of debt-for-climate swaps depends on the specific fiscal position and climate challenges a country faces. Swaps can be efficient when: (i) they are designed in a way that ensures that the climate investment commitment of the recipient country de facto ranks above its commitment to service debt; and (ii) a comprehensive debt restructuring is expected to lead to large economic dislocations and the debt relief associated with a swap is expected to reduce the probability of debt distress (Chamon et al., 2022[11]).

Figure 3.1. Countries' risk of debt distress

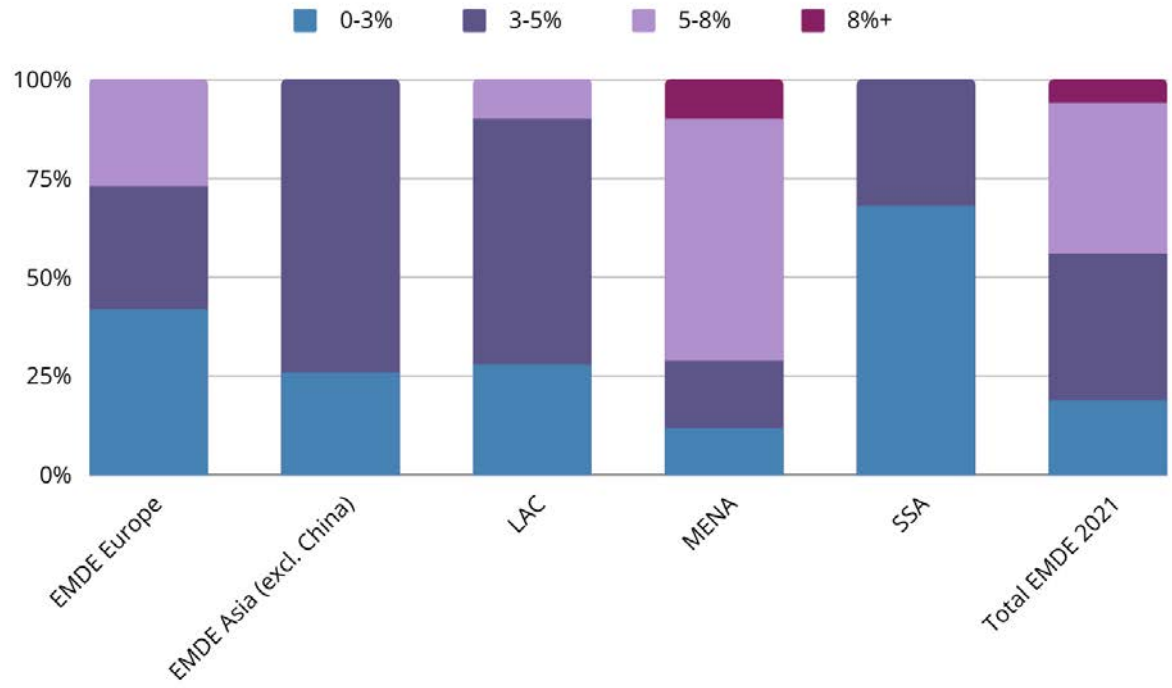
Share of DSSI countries with LIC DSAs, by risk of debt distress, over 2014-2023



Note: As of 31 May 2023. DSSI = Debt service suspension initiative; LIC = Low-income countries; DSAs = Debt sustainability analyses.
Source: Authors based on (IMF, 2022[12]) and (IMF, 2023[3]).

These wider macroeconomic challenges have significant implications for international development and climate finance. As discussed in Chapter 2, most climate finance is provided in the form of loans, whilst debt instruments (direct investment in companies/SPVs, simple co-financing, syndicated loans, and credit lines) account for the greatest share of private finance mobilised across all country income groups (see Figure 2.1). Despite their mobilisation potential, a shift away from debt structures, and greater use of equity-like instruments and guarantees, particularly in the most debt-distressed countries, may therefore be required.

Figure 3.2. Volume share by yield group of fixed-rate USD denominated bond issuance by EMDEs, 2021



Note: Yields are calculated using fixed-rate USD-denominated securities with maturity longer than 365 days. Comparison between EMDE yields between 2020 and 2021 is based on the same 35 EMDE sovereigns who issued fixed-rate USD denominated bonds in 2021 and their corresponding yields in 2020.
Source: (OECD, 2022[4]), based on data from Refinitiv.

As discussed further in section 3.2, economy-wide and general risks manifest in different ways and with varying degrees of intensity across climate action areas and sectors. Further barriers specific to climate investments in EMDEs include first-mover costs; high costs of capital; asymmetric information; lack of investment-ready projects; and high transaction and due diligence costs relative to deal size, again, with wide differences across country contexts and sectors. Even within sectors, similar investments and technologies will face unique constraints across different geographic contexts, affecting their profitability and commercial viability. For example, estimated investors' return expectations from solar PV-based power generation projects can vary widely across developing countries, ranging from 12% in Chile to 52% in Argentina, with countries with poor risk ratings tending to have higher required rate of returns for investors (Songwe, Stern and Bhattacharya, 2022[13]). This reflects the trends discussed in Chapter 2 of higher levels of private finance mobilisation in countries with better risk ratings and business environments.

3.1.2. The role of policy, regulatory and wider enabling conditions for private finance mobilisation

The success of large climate investments is often dependent on a set of parallel policy measures, as well as complementary investments in physical infrastructure. For example, the viability of a new off-shore wind farm may depend on the elimination of fossil fuel subsidies, the establishment of a system of feed-in tariffs, and publicly financed construction of transmission grid and port infrastructure. Individual projects therefore need to be anchored in broader, long-term, economy-wide and sector-level climate action strategies that provide investors with a clear indication of how individual projects are buttressed by wider supporting measures. Linked to the need for policy clarity and stability, private sector actors repeatedly cite the need

for pipelines of investable projects as one of the main prerequisites to scaling of commercial investment in climate action in developing countries (GISD, 2022[14]).

A wide range of policy levers often need to be deployed in order to create the conditions required for commercial investment. Investment policy may need to be recalibrated to ensure transparency, protection of property rights, and non-discrimination. This can be combined with proactive investment promotion and facilitation, for example through incentives to correct market failures (OECD, 2015[15]). Reforms across competition policy, financial market policy, sustainable finance, public governance, and the fiscal regime may also be required to facilitate investments in climate action. In addition to fossil fuel subsidies, other taxes, including corporate income and property taxes may be designed in a way that encourages carbon-intensive activity (OECD et al., 2015[16]), thereby distorting markets and creating disincentives to investment in climate action.

While specific priorities will need to reflect individual countries' circumstances, there is a set of core areas identified by the OECD's *FDI Qualities Policy Toolkit* that can be targeted to improve investment environments (OECD, 2022[17]), including:

- Governance: developing overarching visions for sustainable development and sector-level pathways, underpinned by inclusive inter-ministerial co-ordination mechanisms, public consultations, social dialogues and monitoring and evaluation mechanisms.
- Domestic and international regulation: taking steps to ensure that domestic policy and legal frameworks support positive impacts of investment on sustainable development, including open, transparent, and non-discriminatory policies, domestic legislation that fulfils international standards related to climate action and other development goals, and aligning trade and investment agreements with sustainable investment goals.
- Technical and financial support: targeted support may be needed to address market failures that hinder sustainable investment (for example research and development costs, environmental externalities, skills mismatches, gender disparities in the workplace), but provision of support should be transparent and subject to review. Assistance can include financial support in the form of tax incentives or subsidised loans and grants to promote investment in specific activities, sectors, or locations. Technical support, meanwhile, can be an effective tool to develop domestic capabilities and maximising the potential for FDI spillovers.
- Information and facilitation services: investment promotion agencies are key players and can bridge information gaps that may otherwise hinder foreign investment. Corporate disclosure of environmental impacts, including through ESG reporting frameworks, can help investors assess and communicate their responsible practices and promote due diligence in supply chains.
- Development co-operation: Governments and donors should work together to identify financial and technical assistance solutions to support policy reforms and implementation, promote alignment with international standards, reduce exposure to social and environmental risks, and support the private sector.

In the context of adaptation to climate change more specifically, access to data on climate impacts, provision of economic incentives, and the support of coherent policy and institutions can help address the mispricing of climate risk and provide commercial actors with clarity on the types of investments that can be undertaken to better address them (IFC, 2013[18]). Though an increasing number of countries have developed or are in the process of developing national adaptation plans (NAPs) – 139 out of 154 developing countries as of 2022 (UNFCCC, 2022[19]) – a large number of these do not include information on financing needs (UNEP, 2022[20]); moreover, many countries have not developed national or sectoral investment plans or adaptation project pipelines, limiting the opportunities for donors and private investors to support adaptation efforts.

Governments can take a number of steps to support the development of robust pipelines of projects (OECD, 2018[21]), including:

- linking policymaking to forward-looking objective setting and the programmes and institutions to deliver them, providing overall co-ordination and leadership to champion project pipelines;
- focusing on strengthening the interface and mechanisms that governments employ to disseminate information and convene actors, offering transparent processes and communicating relevant information on projects and the pipeline with the financing and investment community;
- taking a holistic, whole-of-government approach to infrastructure planning and investment, feeding lessons back into policy-making processes to bolster the investment-enabling environment and providing funding or institutional support to projects when appropriate;
- fast-tracking suitable infrastructure project investment in a way that brings the carbon and energy intensities of the country's economy to target levels, prioritising the deployment of "high-value" and strategically important projects and sectors;
- fostering the development of a diverse set of bankable projects and promoting business models suitable for private sector needs, setting strong eligibility criteria to determine which projects should be built and supported and which should not; and
- increasing country resilience to changes in climate and development needs, deploying infrastructure that remains pertinent and relevant over time and tailored to changing external conditions, and avoiding expensive path dependency or lock-in.

While government-led commitment to addressing these challenges and improving enabling environments is critical, technical assistance and capacity development through climate finance can play an important role in galvanising action. In addition to cross-cutting, economy-wide issues and efforts, climate action often presents a unique set of constraints. For example, the rapid transformations required in many sectors, and consequent social and distributional impacts, may require targeted support to help governments manage and mitigate negative effects whilst exploiting the opportunities of the transition. The wide range of complementary actions needed to improve enabling environments need to involve all impacted stakeholders.

The role of country platforms as new models of international partnerships

Alongside technical assistance and capacity development, more robust, systematic efforts to co-ordinate beneficiary governments' domestic efforts, donor assistance, and private investment can help simultaneously provide greater direction for international public and private climate finance and guide domestic policy and reform efforts to reflect investor needs. Renewed models of international partnership, namely country platforms, including *Just Energy Transition Partnerships (JETPs)*, are emerging as potentially promising ways to strengthen cooperation between the public and private sectors at the country level, and mobilise the needed domestic and international finance to support developing countries' transitions to low-carbon and resilient development paths. A common rationale behind the establishment of country platforms is the desire to support programmatic approaches that ensure alignment between national needs and priorities on the one hand, and providers' capacities and mandates on the other, whilst reducing the transaction costs associated with fragmented projects. JETPs are recent examples of country platforms, established in South Africa, Indonesia, Viet Nam and Senegal with donor and MDB support to provide financial and technical assistance to accelerate decarbonisation and clean energy development in those countries. Beyond multilateral platforms, bilateral country platforms and partnerships also exist. For example, Germany established bilateral climate and development partnerships to co-ordinate different parts of governments, businesses, civil society, and academia to support EMDEs in stepping up their efforts to achieve their climate targets (German Federal Ministry for Economic Cooperation and Development, 2023[22]).

These programmatic, multi-stakeholder partnerships can help raise international finance and co-ordinate key domestic and international stakeholders behind shared goals, with strong country ownership and the intent to engage the private sector (ODI, 2022[23]). Experience with country platforms and JETPs so far is limited, thus it is not yet feasible to have meaningful assessments of the results and impact achieved. Some country platforms have been effective in securing more ambitious climate action on the part of beneficiary countries, and concrete commitments to the provision of international climate finance on the part of donors. Although such processes intend to build closer links with commercial investors with a view to mobilising private finance towards country climate action plans – for example through the Glasgow Financial Alliance for Net Zero's efforts to bring financial institutions into the JETPs (GFANZ, 2022[24]; GFANZ, 2022[25]) – their success in doing so has to date been limited. Nevertheless, country platforms offer a promising model of more robust country-level cooperation that can help anchor project-level interventions and transactions in wider, long-term climate action plans.

It is essential for country platforms to be fully country-owned and anchored in strong and credible political agreements on a clearly defined long-term vision and interim targets, in line with the goals of the Paris Agreement (ODI, 2022[23]). Country platforms and JETPs so far have mainly been established in MICs. Moreover, efforts so far have focused on the energy sector, so there is scope for piloting or replicating country platforms in other areas, for example adaptation and resilience and agriculture, forestry and land-use. In 2023, G7 leaders committed to work together to support the protection, conservation and restoration of high-carbon, high-biodiversity ecosystems, including through Country Packages on Forests, Nature and Climate, especially in countries that are home to vital reserves of carbon and biodiversity, with an initial focus on forests (G7, 2023[26]). Though relatively nascent, Egypt's *Nexus on Water, Food and Energy* may provide useful lessons on whether and how multi-sector approaches can work best. To make evidence-based decisions on whether to expand or replicate country platforms to other countries or sectors – and which ones – impact assessments can be conducted to evaluate the results of such initiatives and identify areas for improvement. These should focus on evaluating not only whether the platform was effective in co-ordinating all key stakeholders and mobilising private finance, but also whether the pre-defined climate and energy objectives had been achieved and the extent to which and how any potential negative impact on workers and communities had been mitigated.

Limited collaboration and co-ordination among climate finance providers and financial institutions is a barrier to their ability to mobilise resources (see MDBs' challenges and efforts to enhance collaboration in section 3.3 below). Country platforms so far have mainly involved 'traditional donors' (JETPs have been driven by G7 countries). Widening support from a broader range of donors and international actors, as well as international and domestic financial institutions, can help better integrate the full spectrum of external official and private sector support, and mitigate the risk of incoherence and competition. Beyond governments and the private sector, inclusive and meaningful multi-stakeholder dialogue with all stakeholders involved or impacted by climate action is critical; however, to date, civil society and community engagement with country platforms has been limited (ODI, 2022[27]; Power Shift Africa and Germanwatch, 2022[28]).

In order to effectively mobilise private investors, upfront agreement and transparency on project pipelines is needed, as well as early identification of areas where concessional finance can be most catalytic and where it risks crowding out private finance. Scarce grant resources should be concentrated in areas where it is still too difficult to attract private or domestic finance, such as to address the impacts of the transition on impacted workers and communities, or to strengthen adaptation and resilience. Moreover, partners should devote significant resources upstream to strengthen enabling environments and develop local capacity to identify pipelines of bankable projects. Incentive-based financial instruments and policy-based lending or guarantees that effectively integrate climate objectives can be promising tools to encourage the development of policies to improve the investment enabling environment.

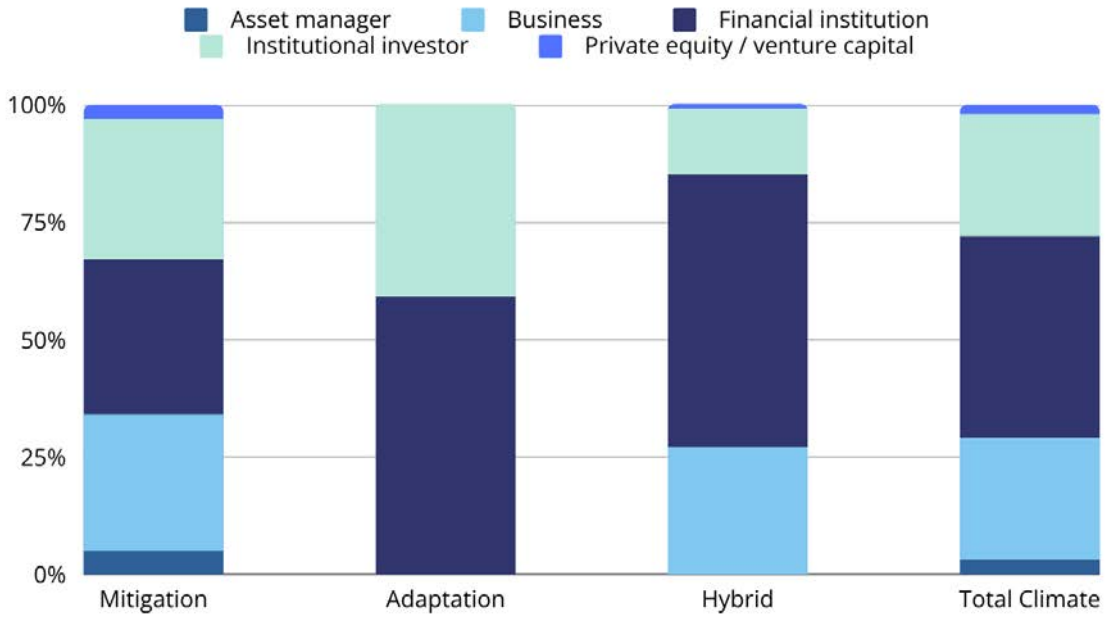
3.1.3. Investor objectives and challenges

There is growing awareness of the impacts of climate change and the need for rapid investment in climate action. The growth of commercial investment in climate action reflects a growing realisation that business as usual is not sustainable, whilst investment in new technologies offers the prospect of stable, secure, long-term returns. But the growth of climate investment has not occurred in a vacuum; new technologies and sectors once at the frontier of commercial viability have become mainstream in many cases due to public support and firm policy steps (IRENA, 2023[29]).

Different types of investors operate under different mandates, risk-return profiles, liquidity and risk tolerance, which in turn affect their portfolio allocations and their ability to engage in blended finance in EMDEs. Institutional investors (pension funds, insurance companies and other asset owners) are one of the largest potential sources of finance; they typically invest in long-term fixed income assets, the majority in investment grade assets, and have smaller allocations for higher-risk and illiquid assets, such as private equity or debt in emerging markets. Institutional investors often lack the capacity to invest in small-scale projects and prefer portfolio investments and more liquid assets. In 2020 institutional investors held and estimated USD 1.04 trillion in infrastructure assets[3], of which only 30% (USD 314 billion) were 'green', mainly towards investments into renewables, despite the fact that they could allocate up to USD 11.4 trillion towards infrastructure, under regulatory limits (OECD, 2020[30]).

Recognising these opportunities, many commercial actors are seeking support from development actors, including through blended finance, to help tip the risk-return calculus in favour of investment. Figure 3.3 below shows the extent to which different types of investors[4] engage in climate-related investments through blended finance, according to Convergence data.[5] Looking at different types of investors' participation, on average over the 2019-22 period, financial institutions (mainly commercial banks) accounted for the largest share climate blended finance transactions (43%), followed by businesses and institutional investors (26% each), whereas asset managers, private equity (PE) and venture capital (VC) funds engaged the least (respectively at 3% and 2%). One explanation of the limited engagement of institutional investors is the lack of pooled portfolios of sizeable and liquid deals that would match their ticket size appetites. Moreover, in renewable energy investment, institutional investors tend to prefer already-operating assets to avoid early-stage risks associated with the structuring and construction phases of greenfield assets (OECD, 2020[30]) (IRENA, 2020[31]), whereas commercial banks frequently engage in blended finance for renewable energy projects, often providing project finance debt (Convergence Blended Finance, 2022[32]).

Figure 3.3. Blended finance transactions for climate action in developing countries, by type of commercial investor and climate objective, 2019-22 (% average)



Source: Authors, based on data provided by Convergence.

There remain significant challenges to efforts to mobilise private finance. In an OECD DAC survey of development finance providers' experiences of mobilising private finance, most institutions surveyed underlined the persistent challenges they meet in general when co-investing in developing countries (OECD, 2023[33]). The most commonly cited challenges included the risk and return expectations of investors, and limited investment opportunities. Other significant challenges included limited local capacity amongst commercial investors, and adverse internal incentives and limited expertise amongst climate finance providers (ibid).

To address these challenges, several respondents confirmed their intention to make greater use of guarantees and other innovative mechanisms, while others mentioned the funding of new blended finance vehicles or programmes specifically set up to mobilise private investments, albeit with varying degrees of maturity. More advanced examples include the recent accreditations of the Korea International Cooperation Agency (KOICA) and the Spanish DFI, COFIDES, to become Green Climate Fund (GCF) implementers, one pillar of which is to mobilise private finance at scale for climate mitigation and adaptation through de-risking investment (OECD, 2023[33]).

The limited engagement of commercial investors in blended finance is supported by an independent evaluation of the World Bank's private capital mobilisation efforts, which found that IFC's mobilisation approaches are not consistently aligned with investors' risk profiles. In particular, institutional investors have limited risk appetite to co-finance the unlisted infrastructure and financial sector projects that IFC typically supports (World Bank, 2020[34]). According to Convergence, the most pressing concern for institutional investors when considering engaging in climate blended finance relates to country risks, rather than climate-related risks. This finding is supported by OECD survey data, which suggest that investment decisions by pension funds and insurance companies are largely influenced by risks associated with macroeconomic and political instability, as well as institutional and governance issues (for example, corruption) in beneficiary countries (OECD, 2021[35]). The positive impacts of development interventions designed to address these country-wide risks, for example Multilateral Investment Guarantee Agency's (MIGA) political risk insurance and credit enhancement products, are well-documented; but the data in

Chapter 2 (see Figure 2.1) shows that guarantees account for only around 25% of private finance mobilised in low income, low-middle income, and upper-middle income countries.

In addition, evidence suggests that domestic commercial investors' participation in climate blended finance is still rare (Convergence Blended Finance, 2022[32]; World Bank, 2020[34]). This could be partly due to weak financial development, governance and reporting challenges faced by domestic providers of climate finance, including national development banks. Such limited participation is a key barrier to scaling up blended finance, as local investors' deep knowledge of the domestic investment landscape and regulatory environment makes them well-suited to assessing local risks and conducting due diligence, while their ability to invest in local currency can provide financing solutions that are more flexible and appropriate for projects generating local currency revenues (Convergence, 2021[36]). Moreover, some evidence suggests that projects with domestic investors' participation had greater success (80%) than those with overseas investors only (60%) (World Bank, 2020[34]). This underscores the importance of upstream support for financial development and deepening of local capital markets, including through grant-financed technical assistance and capacity development.

To address local currency risks, the Currency Exchange Fund (TCX), an offshore currency fund founded by a group of development finance providers, develops markets for long-term exchange rate and interest rate risk hedging products in EMDEs, where such products are not available, or they are limited. By contributing to the reduction of currency risks, the fund eases borrowers' access to long-term financing in local currencies and exchange risk management products (OECD, 2016[37]). The main drawbacks are that there must be a short–term benchmark rate available for pricing and that the resulting financing solution can be ultimately more expensive than MDB own funding (EBRD, 2022[38]). Another approach that has proven effective in mobilising domestic institutional investors is the involvement of domestic guarantee providers such as GuarantCo in Nigeria (OECD, 2020[1]; World Bank, 2020[34]). The Infrastructure Credit Guarantee Company Limited (InfraCredit) was established by GuarantCo and the Nigeria Sovereign Investment Agency (NSIA) to provide credit enhancements for Nigerian local-currency debt instruments for infrastructure financing. InfraCredit's capital structure is composed of three tiers of capital, namely core, paid-in capital by NSIA and other institutional investors, callable capital by GuarantCo and subordinated capital by KfW and AfDB (InfraCredit, 2023[39]). InfraCredit is working on creating strategic partnerships with donors and DFIs and MDBs that could unlock new sources of early-stage capital for well-structured, bankable infrastructure projects (World Bank, 2023[40]).

A further issue that is often cited by investors as dampening mobilisation of private finance relates to the effects of international financial regulation on developing countries. Prudential requirements of the Basel III regulation for commercial banks (tightening of the large exposure rule, of capital requirements and liquidity requirements) and the Solvency II regulation for insurance companies set high risk and capital charges for high-risk investments in developing countries (CGD, 2018[41]; OECD, 2020[42]; OECD, 2021[35]; World Bank, 2020[34]). Earlier OECD analysis shows that Basel III leverage ratio requirements have had the unintended consequence of constraining access to long-term financing for capital-intensive renewables projects. Moreover, fair value International Financial Reporting Standards accounting rules for financial institutions can lead to shorter-term investing (World Bank, 2020[34]).

3.1.4. Information asymmetries

Notwithstanding the prevalence of real barriers to investment in developing countries, there is evidence that perceptions of risk are overstated. For example, infrastructure default rates in Africa are amongst the lowest in the world (Moody's Analytics, 2021[43]), yet the region attracts considerably less commercial finance for infrastructure investment (itself likely a contributing factor to low default rates). This gap between perceptions and reality, as well as wider information asymmetries, can dampen cross-border investment. This is compounded by uncertainty around the direction of policy, which can significantly constrain investment and raise the cost of capital (IEA, 2022[44]).

Granular portfolio statistics, such as the historical track records of investments across sectors, countries and financial instruments can help prospective investors to undertake more accurate assessments of the potential risks of assets. In developed countries, investors can rely on several decades of statistics over various dimensions to calculate the expected risk/return profile of investments with a high degree of certainty, limiting the required risk premia to cover for residual uncertainty. In contrast, in developing countries, limited evidence of historic performance is available, reflecting both a smaller number of commercially financed projects brought to completion, and weaker institutional capacity to assess past performance (OECD, 2020[1]; IEA, 2021[45]). Some credit risk statistics from the Global Emerging Markets (GEMs) Risk Database Consortium – which captures historical default rates, recovery rates and rating migrations from MDBs and DFIs towards public, private and sovereign counterparts – has been publicly released (GEMs Consortium, 2021[46]; GEMs Consortium, 2023[47]). However, it provides only default rates at a fully aggregate level. Recovery rates, rating migrations, and more granular statistics (for example statistics per sector and country), that put default rates into perspective, have not yet been published. Moreover, the GEMs database only captures loan transactions, while information on the performance of MDB/DFI equities remains limited (Gregory, 2023[48]). Addressing this by drawing on development finance providers' extensive internal databases to provide more granular credit risk statistics to the private sector could provide valuable insights on past project performance at the country level, helping to better align perceptions of risk with reality (see Recommendation 10 in Chapter 4). In 2023, a G20 Roadmap recommended that MDBs accelerate efforts to work together for transforming GEMs into a stand-alone entity (G20, 2023[49]); this is scheduled to take effect by early 2024.

3.2. The composition and distribution of public finance within and across climate action areas

The potential for public climate finance to mobilise private finance varies significantly across different climate action areas, reflecting inherent sector-specific commercial dynamics and myriad other factors. The analysis in Chapter 2 demonstrates that mobilisation is more difficult at the technological (i.e. in more nascent sectors) and geographic (i.e. in lower income countries) frontiers. From the perspective of commercial investors, the key determination is whether investments will yield a favourable financial return at an acceptable level of risk. From that perspective, policy has played a critical role in shifting commercial dynamics and shaping markets in recent years (IRENA, 2023[29]), including through increasing clarity on the long-term direction of travel through economy-wide and sector-level net zero targets, and through more tangible measures – for example carbon pricing mechanisms, regulation, subsidies, and public investment in innovation – to boost the competitiveness of climate investments relative to business as usual.

Nevertheless, the value proposition for investors in some climate action areas remains lower than what is needed in order to attract private finance at scale: prospective returns are often deemed to be too low relative to potential risks. Many investments in climate action present significant decarbonisation and adaptation opportunities on aggregate – for example investments in off-grid renewables, energy efficiency, and agricultural resilience for smallholders – but are often comprised of projects that are too small individually to secure large-scale commercial investment. This section will draw on the data presented in Chapter 2 to further analyse:

- the current composition of international public finance in the context of the USD 100 billion goal deployed towards two of the main climate action areas comprising the vast majority of mitigation needs: clean energy, and agriculture and forestry (a parallel paper discusses challenges and opportunities for adaptation finance (OECD, 2023[50]));
- some of the commercial dynamics underlying these climate action areas, including some of the barriers and risks facing commercial investment, and outline some of the public financing

interventions, including the instruments, leveraging mechanisms and blended finance structures that can be deployed by development actors to address these barriers and risks; and

- climate action area- and sector-specific climate finance data to assess how the current composition and distribution of public climate finance compares to the challenges and solutions identified, with a view to identifying opportunities for greater private finance mobilisation.

The available data on public climate finance provided by bilateral and multilateral institutions does not include explicit information on whether individual public climate finance interventions were designed with the explicit goal of mobilising private finance. This presents limitations in relating levels of private finance mobilisation to overall providers' portfolios, as well as on the ability to draw concrete lessons on the relative and combined effectiveness of different types of public finance instruments in leveraging private investment. Examining the composition firstly of the international public climate finance flows on the whole, and private climate finance mobilised by leveraging mechanisms at the sector level can nevertheless provide insights to policymakers to help deepen their understanding on the relative merits of different types of interventions.

3.2.1. Clean energy

Investment in clean energy in developing countries will need to be rapidly scaled by the end of this decade, from around USD 200 billion invested annually in 2022 to over USD 1.7 trillion a year by 2030 (IEA, 2022[51]). This includes investment in renewable power, which accounts for over half of investment needs, transmission, distribution, storage, and wider investment in energy efficiency, decarbonisation of industry and transport, and electrification.

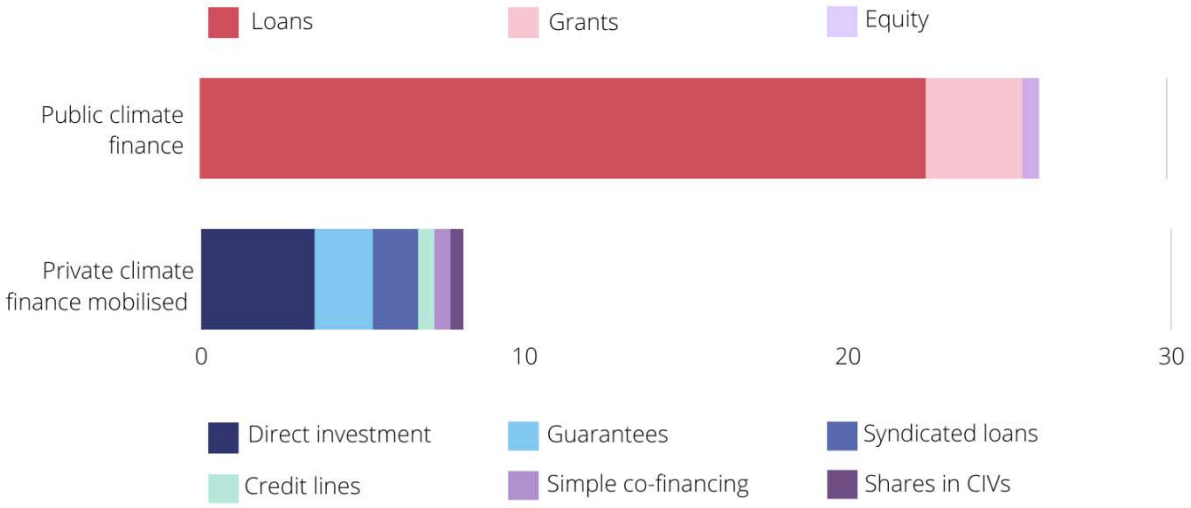
Beyond their positive climate impacts, investments in clean energy will be critical to meeting economic and social development priorities in developing countries. An estimated 675 million people globally do not have access to electricity, and 2.3 billion people lack access to clean cooking (IEA, IRENA, UNSD, World Bank, WHO, 2023[52]). These pressures are likely to grow alongside rapid population growth in many developing countries. Scaling electricity supply will also be central to many developing countries' wider economic strategies, for example industrial development strategies, as well as wider efforts to electrify transport and other sectors.

Current composition of climate finance for clean energy

In the context of the USD 100 billion goal, USD 26 billion of international public climate finance was provided towards clean energy (energy policy, renewable power, transport and storage, energy distribution and industry[6]) in developing countries on average annually between 2016 and 2021. Over that period, USD 8 billion of private finance was mobilised annually for clean energy. Within public climate finance provided for clean energy, loans and debt instruments accounted for by far the greatest share (85%) whilst grants (12%) and equity (2%) accounted for much smaller shares.

Given the low volumes of private finance mobilised by public finance, and against the backdrop of rapidly improving commercial dynamics underlying many clean energy investments, there is considerable scope to reorient development interventions to more effectively leverage private investment. This requires a more comprehensive understanding of commercial dynamics in the sector, including the barriers and risks facing private investment, and the specific public finance solutions that can help overcome them.

Figure 3.4. Climate finance provided and mobilised for clean energy by public finance instrument and leveraging mechanism, 2016-21 (yearly average)



Source: Based on Biennial Reports to the UNFCCC, OECD DAC statistics, and complementary reporting to the OECD.

Commercial dynamics and barriers to private investment in clean energy

The potential for public climate finance to mobilise private finance reflects the underlying commercial dynamics of investments. Some clean energy sectors offer increasingly attractive investment prospects. The economics of the power sector have evolved rapidly in recent years; renewable power generation, which makes up over half of clean energy investment needs in developing countries (IEA, 2021[53]) is now the cheapest energy source in countries accounting for two-thirds of the world's population (BloombergNEF, 2022[54]). Renewable power offers increasingly attractive prospects for commercial investors, with evidence that it has outperformed fossil fuel investment in terms of returns globally over the past decade (albeit with the lowest differential in performance in emerging and developing economies (IEA, 2021[55]).

More nascent clean energy technologies, for example green hydrogen, remain further along the technological and commercial viability frontier, but are increasingly being supported by both policy signals that provide investors with a degree of certainty on the direction of demand for clean energy products and services, and by more tangible support measures, including public subsidies and other investment-supporting measures (OECD, 2022[56]).

Despite these positive trends, investment in clean energy in developing countries remains significantly below the levels needed to meet the Paris climate goals. Developing countries accounted for only a fifth of global investment in clean energy in 2022, and per capita investment is around a tenth of that in advanced economies (IEA, 2022[57]).

Amongst commercial investors, higher real and perceived risks, as well as a bias against investment in foreign jurisdictions, contributes to higher costs of capital. The cost of capital – generally across developing countries and in the energy sector specifically – remains a significant barrier to investment and can be up to seven times higher than in the US and Europe (IEA, 2021[53]). Higher costs of capital are priced into projects, for example through higher electricity tariffs passed onto utilities and consumers; if the cost of capital is too high, projects may fail to reach financial close at all. At the economy-wide level, higher costs of capital for clean energy investments significantly dampen investment and delay the speed of countries' transitions below their potential (Ameli, 2021[58]).

Development finance can be deployed to effectively manage economy-wide, sectoral, and project-level barriers to investment risks, thereby bringing down the cost of capital and making projects viable for commercial investment. Doing so in a targeted way, that addresses specific risks at particular points of the project cycle, can help minimise the call on scarce public finance, preserving it for other development and climate priorities where commercial solutions are less viable. Table 3.2 below sets out some of the sector- and project-specific challenges facing investments in a selection of clean energy sub-sectors and sets out public finance interventions that can help address them. These are based on the OECD's *Blended Finance Guidance for Clean Energy* (OECD, 2022[59]).

Table 3.2. Clean energy sector-specific challenges and leveraging mechanisms

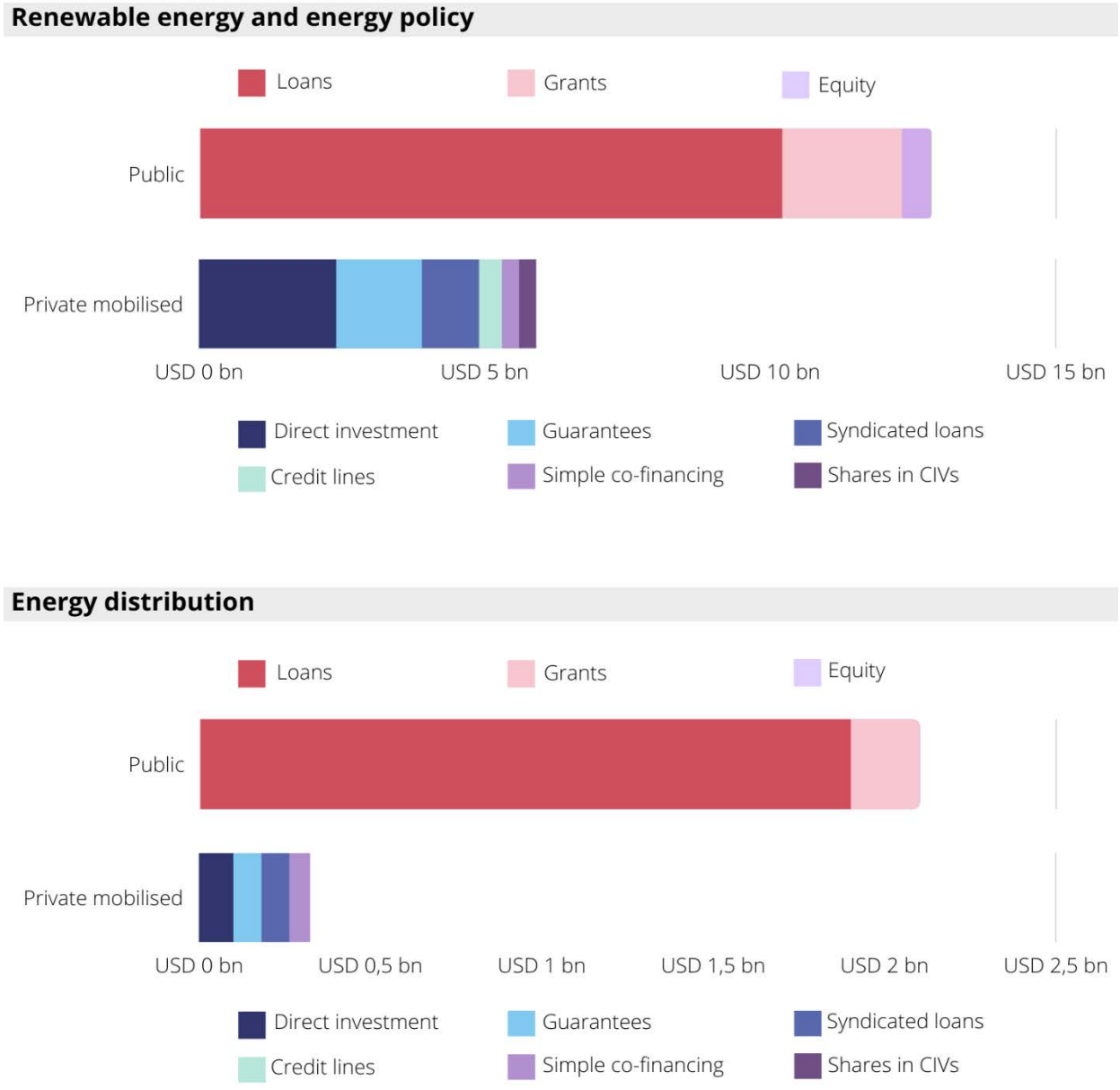
Clean energy sub-sector	Barriers to commercial investment	Possible climate finance responses (technical assistance and blended finance)
Cross-cutting	Country-specific features, including the regulations governing and design of energy systems – e.g. financial regulation limiting bank exposure to single entities, and fossil fuel subsidies, can have a significant bearing on levels of commercial investment (IEA, 2022[44]).	Grants to finance technical assistance to support policy and regulatory reforms, for example sectoral strategies, energy market design, and the phasing out of fossil fuel subsidies, can help governments address sector-wide barriers to investment.
Utility-scale renewables	**Long planning and construction phases:** Large energy projects are typically subject to long planning, development and construction phases, exposing investors to a high degree of political, policy, construction, permitting and other risks. Moreover, projects may take several years before yielding returns for investors.	**Direct investment:** Direct investment can help address early-stage risks during the development and construction phases, in turn bringing down the weighted average cost of capital.
		Guarantees and performance insurance: Guarantees can provide a safety net for investors against financial loss and mitigate against the long development periods of large-scale projects.
	Counterparty, off-taker and transmission line risk: Larger energy projects are often dependent on purchase agreements from local entities with weak creditworthiness. Renewable power generation projects also often depend on the construction of new grid infrastructure in time for generation.	**Political risk insurance:** Political risk insurance can protect against a wide range of risks that may delay or put off indefinitely such parallel policy steps. This helps isolate specific risks, minimising the public support required to cover them and for a limited period of time until they pass.
	Exchange rate: Exchange rate volatility can create mismatches between obligations priced in foreign currency and revenues denominated in local currency (e.g. in power purchase agreements).	**Currency risk hedging instruments:** Hedging instrument (e.g. forward contracts and swaps), can be used to convert foreign currency-denominated loan payments into local currency obligations.
Off-grid renewables	**Scale and transaction costs:** Small absolute returns, and the relatively high cost of conducting due diligence on projects, mean that projects are often too small to attract the attention of commercial investors.	**Aggregation and securitisation:** Project aggregation and securitisation can help address the lack of capacity and interest of large institutional investors by pooling projects into much larger, more attractive and rateable assets. These can be comprised of assets from across different jurisdictions for collective de-risking, underpinned by standardised contracts and harmonisation of regulatory frameworks.
	Information asymmetries – project viability: Commercial viability of projects can be difficult to assess, compounded by lack of capacity or willingness among financial institutions to invest in small projects.	
	Stability of revenues: Off-grid renewables do not benefit from the stability of power purchase agreements or other pricing structures such as net-metering, which allow producers to sell excess capacity to the grid.	**Guarantees:** Revenue guarantees and partial risk guarantees can be used to protect investors against the risk of revenue shortfalls, particularly in the early stages of distributed renewables projects when the risk of misalignment of demand and supply is higher.
	Information asymmetries – developer profiles: Investments often undertaken by individual households and businesses, who lack the capital base necessary to access affordable debt finance.	**Grants**: Grants can be used to finance technical assistance to support project preparation to improve their bankability, providing legal and financial services to small developers, to help close information gaps for investors.
Energy efficiency	**Scale and transaction costs:** Small projects with varying characteristics have relatively high transaction costs for investors. Energy efficiency projects may also be considered unique in nature with varying project characteristics, given the wide sector coverage.	**Asset-backed securities:** Energy efficiency project loans (including mortgages on certified buildings or mortgage financing for energy efficiency upgrades) can be pooled together to create asset backed securities to free up capital for additional lending.
	Information asymmetries – confidence of savings: The performance of energy efficient equipment can be impacted by operational know-how and local climate and resource aspects, as well as consumer behaviour, which can lead to differences between actual and expected performance.	**Partial risk guarantees or first-loss facilities:** Risk sharing mechanisms that provide partial coverage to partner financial institutions or take first-loss in case of non-performance can help to overcome issues of information asymmetry and lack of adequate performance data.
	Collateral requirements: Many SMEs, including small energy service companies (ESCOs), lack the capital base needed to access affordable debt finance	**Equity capital funds for energy efficiency:** To help SMEs overcome barriers to adequate equity capital requirements, equity funds can be used to provide a share of the capital or collateral requirement to access financing.

Source: Adapted from OECD (2022), *Blended Finance Guidance for Clean Energy*.

Opportunities for greater private finance mobilisation in clean energy

Between 2016 and 2021, in the context of the USD 100 billion goal, an annual average of USD 26 billion of international public climate finance was provided for clean energy (energy policy, renewable power, transport and storage, energy distribution and industry), mobilising just USD 8 billion of private finance annually. These relatively small sums suggest a shift in the direction of international public finance targeting clean energy investment towards private finance mobilisation, including through greater use of blended finance, is required. This requires development actors to tailor interventions to the underlying commercial dynamics in the sector, including the remaining risks and barriers to investment as they apply in different geographic contexts.

Figure 3.5. Climate finance provided and mobilised for renewable energy and energy policy and energy distribution, by financial instrument and leveraging mechanism, 2016-21 (annual average)



Source: Based on Biennial Reports to the UNFCCC, OECD DAC statistics, and complementary reporting to the OECD.

Exit projects once commercial viability is established: For renewable power, which represents the lion's share of investment needs in clean energy, the most significant barriers to investment will often be disproportionately skewed towards the development and construction stages of projects, reflecting uncertainty around approvals, permitting and policy, as well as high upfront investment costs (OECD, 2022[59]). Targeted development finance interventions can address early-stage risks, and should aim both to exit early once projects are operational, and for higher leverage ratios to finance design and construction, as compared to technologies and investments with less proven commercial track records (OECD, 2020[42]). Increasingly, if any public support is needed at all, blended finance or concessionality may only be needed to support project development and tendering. In the context of the USD 100 billion goal, the highest proportion of private finance mobilised towards renewable energy was by direct investment in companies and special purpose vehicles (43%) (see Figure 3.5, above).

One key consideration for public climate finance providers is the duration of these investments. Loans provided to the energy sector between 2016 and 2021 had an average maturity of 20.8 years. Shifting towards an "originate to distribute" model – originating and developing projects, and transferring ownership to the private sector at the earliest opportunity once projects are past their riskiest stages (i.e. during development and construction) and begin yielding returns – can help free up public finance for other climate or wider development interventions. Similarly, guarantees, which account for the second largest volumes of private finance mobilised towards renewable energy (27%) can be very effective in de-risking projects, but should be time-limited and reallocated to riskier projects where opportunities for commercial financing are more constrained.

Other clean energy priorities, including decarbonisation of industry and transport, can also have a strong commercial rationale and yield higher returns for investors; where there remain gaps in viability, various blended finance and other supporting measures can help tip the balance. As with renewable energy, direct investment in companies and special purpose vehicles accounted for the largest share of private finance mobilised for both industry and transport (51% and 62% respectively – see Figure 3.6, below). Again, providers should consider the duration of these deployments to ensure rapid exit and transfer to the private sector where possible and appropriate.

Figure 3.6. Climate finance provided and mobilised for industry and transport, by financial instrument and leveraging mechanism, 2016-21 (annual average)

Source: Based on Biennial Reports to the UNFCCC, OECD DAC statistics, and complementary reporting to the OECD.

Reorienting lending: An average of USD 22.5 billion of loans were provided through climate finance between 2016 and 2021, accounting for the vast majority – 86% – of international public climate finance, towards clean energy. However, an average of only USD 5.9 billion per year of private finance was mobilised by lending instruments (deployed in the form of direct investment in companies and special purpose vehicles,[7] simple co-financing, syndicated loans, and credit lines) towards clean energy. This suggests that a relatively small share of lending instruments have the objective of mobilising private finance.

Debt instruments accounted for almost all private finance mobilised towards industry (around 95%). Credit lines accounted for 13% of private finance mobilised, higher than in other sectors, possibly reflecting a high share of investment in energy efficiency in the sector, where credit lines can be particularly conducive to market-creation in the context of low demand for investments that do not yield direct returns (Wu, Singh and Tucker, 2018[60]).

Reorienting lending instruments presents significant opportunities to increase private finance mobilisation. Even simple, conventional loans can be designed in a way that crowds-in private investment. JICA's *Energy Efficiency and Conservation Financing Promotion Project* in Bangladesh, for example, provides direct loans to finance investments in energy efficiency equipment, while indirectly stimulating commercial investment in associated efficiency investments in construction and renovation (OECD, 2022[59]).

More complex debt structures, such as subordinated debt can also be used to insulate senior debt investors from risks and reduce the cost of capital; this can be combined with convertible grants – grant financing that is converted to subordinated debt once certain project milestones have been met – in order to reduce climate finance providers' exposure to less risky projects and free up public climate finance for other uses (IRENA, 2016[61]). Syndicated loans (which include subordinated debt) accounted for around a quarter of private finance mobilised by debt structures apart from direct investment in companies and special purpose vehicles, but the absolute volumes of private finance mobilised remain low (USD 1.4 billion on average annually) relative to overall loans provided, suggesting there is considerable scope to use lending in a more effective way that explicitly seeks to target private finance mobilisation.

Establishing scale: A number of financial innovations that seek to tap into global capital markets to finance clean energy projects in developing counties have developed in recent years. Investors have repeatedly called for the development of so-called secondary assets in developing countries, to aggregate a number of smaller constituent assets and projects into larger, rateable, tradeable assets (Global Investors for Sustainable Development Alliance, 2021[62]). As set out in Table 3.2 above, structured finance, including aggregation and securitisation, alongside technical assistance to standardise contacts, can address capacity constraints amongst commercial investors, including lack of capacity to undertake due diligence on individual projects, that dampen foreign direct and portfolio investment towards clean energy in developing countries. These are particularly relevant to sectors characterised by small-scale investments, for example off-grid renewables and energy efficiency, but also apply to smaller utility-scale renewables projects (OECD, 2022[59]). Relatively small amounts of public climate finance can be used to support such innovative structures, with a view to unlocking considerably greater volumes of private finance.

One recent example is the UK's *Mobilising Institutional Capital Through Listed Product Structures (MOBILIST)* programme, which aims to catalyse pools of institutional investment into developing countries by supporting the development of products that are listed on public markets (Mobilist Global, 2023[63]). Similarly, USAID's *Blended Finance for the Energy Transition (BFET)* programme provides catalytic co-funding to support the development of blended finance structures, including portfolios of clean energy companies and assets in developing countries, that aim to unlock capital from institutional investors (USAID, 2023[64]). Yet a relatively small share of private finance mobilised towards clean energy appears to be dedicated to the development of such instruments: shares in collective investment vehicles (CIVs) accounted for 5.5% of private finance mobilised towards renewable energy, 1% for industry, and around 3% for transport. This possibly reflects the relative novelty of these approaches. Though the data suggests their use has steadily increased in recent years, they nevertheless remain relatively niche. There is therefore significant scope to increase public support towards such structures.

Supporting commercial viability for more nascent sectors: Total international public climate finance flows towards more difficult energy decarbonisation challenges, including industrial decarbonisation and the development of green hydrogen, remain relatively low; average annual flows towards support for industry in developing countries were under USD 1 billion annually, which in turn mobilised a further USD

1 billion of private finance. Total investment towards industrial decarbonisation will need to ramp up rapidly over the next decade: industry accounts for 24% of greenhouse gas emissions (IPCC, 2023[65]), yet accounted for around only 2% of climate finance provided and mobilised in the context of the USD 100 billion goal in 2016-21. Investment will need to be scaled up across all areas, including in industrial efficiency, electrification, and in more nascent technologies foreseen to play an important role in climate mitigation strategies, such as green hydrogen, that are at the early stages of commercialisation and deployment (OECD, 2022[56]). The current small transaction sizes of investments in such technologies presents challenges for commercial investors, underscoring the need for public finance to support project development, as well as structured finance (see above). Blended finance, including viability gap funding in the form of grants or concessional loans for first movers and pilot projects can be effective in making projects more attractive to commercial investment (ibid). The relatively small sums of private finance mobilised suggests there is scope to significantly scale up the use of such instruments towards more nascent clean energy sectors.

Wider considerations for private finance mobilisation towards clean energy

The scope for private finance mobilisation towards clean energy will remain limited for many investments and in certain geographic contexts. There remain significant parts of the clean energy ecosystem where the scope for private finance mobilisation will be more limited, and that will continue to require more conventional forms of development assistance and direct public support, such as network assets with strong features of public goods. Even project types that have proven to be commercially viable in some geographic contexts will not be in others, particularly in frontier markets due to a multiplicity of economy-wide barriers to investment (see section 3.1).

In most geographic contexts, irrespective of levels of development, public support will also be needed for infrastructure investments that are more difficult to commercialise, for example transmission grid infrastructure. In addition, there will remain large parts of the world where the development impact of clean energy far outweighs the commercial case, for example in rural areas of the least developed countries that stand to benefit greatly from investment in off-grid renewables. Though commercial solutions may be possible in such instances, the overriding development imperative of energy access may justify much greater use of conventional forms of development finance, at more concessional terms, and with lower private sector participation.

Climate finance and mobilising efforts need to be deployed and co-ordinated among a broader suite of policy and support measures, including to ensure a just transition: Efforts to secure greater private sector participation at the asset and project level cannot happen in a vacuum. Commercial investment in clean energy is often constrained by unfavourable policy, fiscal and regulatory systems, for example the prevalence of fossil fuel subsidies. Technical assistance towards addressing these constraints and to improving enabling environments, including the policy and institutional settings governing energy systems in developing countries, can have an outsized development impact compared to their relatively low cost.

Moreover, decarbonising energy systems is often an economy-wide endeavour, with implications for energy access for households and businesses, livelihoods and employment for workers in incumbent industries, and for industrial competitiveness. Large network challenges, for example in the transmission and distribution of electricity generated from new renewables plants, and the need for charging infrastructure for electric vehicles, means clear direction and effective co-ordination by governments is critical. A number of policy levers – including public spending, tax, regulation, and competition policy – need to be carefully calibrated in a concerted way to mitigate negative impacts and exploit the synergies and opportunities of the transition. This requires governments to set clearly-defined long-term climate action strategies at the sector level, to co-ordinate these various levers and provide clear signals on the shape of the transition to the private sector.

Public climate finance must operate with a clear view of this wider context. This requires development actors to ensure coherence between private finance mobilisation approaches and the country-wide and sector-specific context in which it operates. Mobilisation-focused interventions often need to be paired with more conventional development interventions to minimise negative spill-overs (for example, financing the reskilling of workers in incumbent industries), as well as capacity development to create the wider enabling environments that are required for commercial investment (for example, by supporting the deepening of local capital markets). This reinforces the need for strong cooperation platforms, for example the *Just Energy Transition Partnerships (JETPs)* currently in place in Indonesia, Senegal, South Africa, and Viet Nam.

3.2.2. Agriculture and forestry

Agriculture and forestry[8] remain the most important economic sectors for many developing countries, representing a significant share of their GDP and supporting livelihoods worldwide (World Bank, 2021[66]; FOLU, 2019[67]; Li, Mei and Linhares-Juvenal, 2019[68]). However, the unsustainable intensification of agriculture and forestry, together with the homogenisation of crops and lack of sustainable management practices, has led to the degradation of agricultural and livestock lands, directly affecting their productive capacity and social and economic welfare (Blaquier, 2019[69]). Importantly, without conducive enabling environments and increased investment, the ability to halt and reverse these trends, while promoting low-emission and climate-resilient economic development, will be severely hindered.

These sectors are on the front line of climate change, contributing to almost a quarter (21%) of global greenhouse gas (GHG) emissions (Nabuurs et al., 2022[70]) – mainly driven by the conversion of natural ecosystems and deforestation – as well as being exposed to climate impacts. Consequently, agriculture, forests and other natural ecosystems are uniquely positioned to deliver significant climate mitigation benefits, and some of these abatements could be achieved relatively quickly and at a low-cost (Nabuurs et al., 2022[70]). IPCC models estimate that they have the potential to account for 20-30% of the global mitigation needed to be in line with a 1.5°C or 2°C pathway towards 2050, through a variety of land management and demand-side measures that reduce GHG emissions and enhance carbon sequestration within land systems (Rogelj et al., 2018[71]; OECD, 2022[72]). Yet, the largest mitigation potential would come from the protection and restoration of forests and other natural ecosystems (Box 3.1), followed by contributions from the agricultural sector (OECD, 2022[72]), while investing in disaster risk reduction and response – including through ecosystem-based adaptation initiatives – is seen as a cost-effective approach to preparing for risks and improving absorptive capacity (OECD, 2020[73]).

At the same time, even with sufficient mitigation measures, these sectors are highly vulnerable to the impacts of climate change. Climate-induced changes in weather patterns and extreme events (including increased frequency and intensity of storms, droughts and flooding), affect cropland and grassland productivity, tree mortality, soil fertility and water resources. This has the potential to damage the natural resource base on which agriculture and forestry production depend, with grave implications for agriculture and freshwater fisheries, inflicting economic losses, particularly in low- and middle-income countries, and triggering migration (FAO, 2018[74]). In addition to mitigation efforts, producers in vulnerable regions will therefore need to adapt and adjust technologies and practices to increase their resilience and reduce their exposure to climate impacts, as well as to continue meeting both development and productivity objectives.

As such, methods of food production, land-use and the use of other natural resources are an essential part of the solution towards a climate-positive pathway in which people and nature can coexist and thrive (FAO, IFAD, UNICEF, WFP and WHO, 2021[75]). Growing global demand for food, feed, material and bioenergy, against a backdrop of increasingly scarce resources and climate risk, mean that unlocking investments in highly productive, climate-resilient agriculture and forestry activities is a pre-condition for delivering human well-being and sustainable development (Falconer et al., 2015[76]; Nabuurs et al., 2022[70]). Against this setting, the rapid deployment of finance for climate mitigation and adaptation in these sectors, coupled with

a concerted effort to conserve biodiversity, is critical to help align with the 1.5°C Paris Agreement target, as well as with the Kunming-Montreal Global Biodiversity Framework (UN CBD, 2022[77]) and the Land Degradation Neutrality goal (UNCCD, n.d.[78]), while fostering the development of climate-biodiversity synergies Box 3.1.

Box 3.1. The importance of mobilising resources for climate-biodiversity synergies

Given the strong co-benefits and economic potential of addressing climate change and biodiversity simultaneously, including through forests (i.e. beyond forestry production) and other natural ecosystems (Nabuurs et al., 2022[70]), efforts to leverage private sector finance (including through blended finance) should target wider nature-related goals, including the conservation, sustainable use and restoration of natural resources, as well as minimising trade-offs (CBD, 2022[79]). Indeed, it is increasingly recognised that climate-related efforts can only be successful if biodiversity is appropriately accounted for (OECD, 2023[80]).

There are significant synergies that can be harnessed between policy instruments and programmes targeting climate goals and those targeting biodiversity conservation (for example payments for ecosystems services to reduce GHG emissions by halting or reversing deforestation and forest degradation, such as REDD+, or Law Nº 26.331 of Native Forests in Argentina to promote reforestation and restoration of degraded native forests and the implementation of sustainable territorial management (Blaquier, 2019[69])). Importantly, combined efforts to address both challenges, including through nature based-solutions (UNEP, 2022[81]), hold the potential to provide integrated climate change mitigation and adaptation action, while offering a pathway towards more effective and sustainable development outcomes.

However, current policies often fall short of realising this potential (Essl et al., 2018[82]), and the lack of long-term funding and support further hampers the success and implementation of related projects. Importantly, most biodiversity and natural resource challenges are location-specific, and solutions – in particular those targeting climate change adaptation – need to be tailored to individual conditions (World Bank Group, 2020[83]). This creates challenges in both identifying a problem and then replicating a solution.

According to OECD data (OECD, 2023[84]), private finance mobilised by official providers towards climate change and general environment protection represented USD 316 million on average over 2016-21, mainly targeting environmental policy and administrative management activities, followed by activities related to biodiversity and biosphere protection. Despite increasing over this period, figures are relatively small for the climate-biodiversity nexus, highlighting the need to scale-up support towards these objectives. These findings are in line with recent analysis showing that, though biodiversity-related mobilisation efforts are evolving, they would benefit from greater transparency on private finance mobilisation and more granularity in reporting to the OECD, as well as to ensure appropriate government policies and incentive frameworks are in place to attract further private capital (OECD, 2023[80]).

Current composition of climate finance for agriculture and forestry

Current levels of finance towards agriculture and forestry are dwarfed by the estimated needs to place the sectors on a pathway compatible with the Paris Agreement: up to USD 150 billion for agriculture (Songwe, Stern and Bhattacharya, 2022[13]) and USD 178 billion for forestry (Austin et al., 2020[85]) on average annually. Bridging the substantial investment gap and meeting these needs requires significant efforts to mobilise finance from all sources.

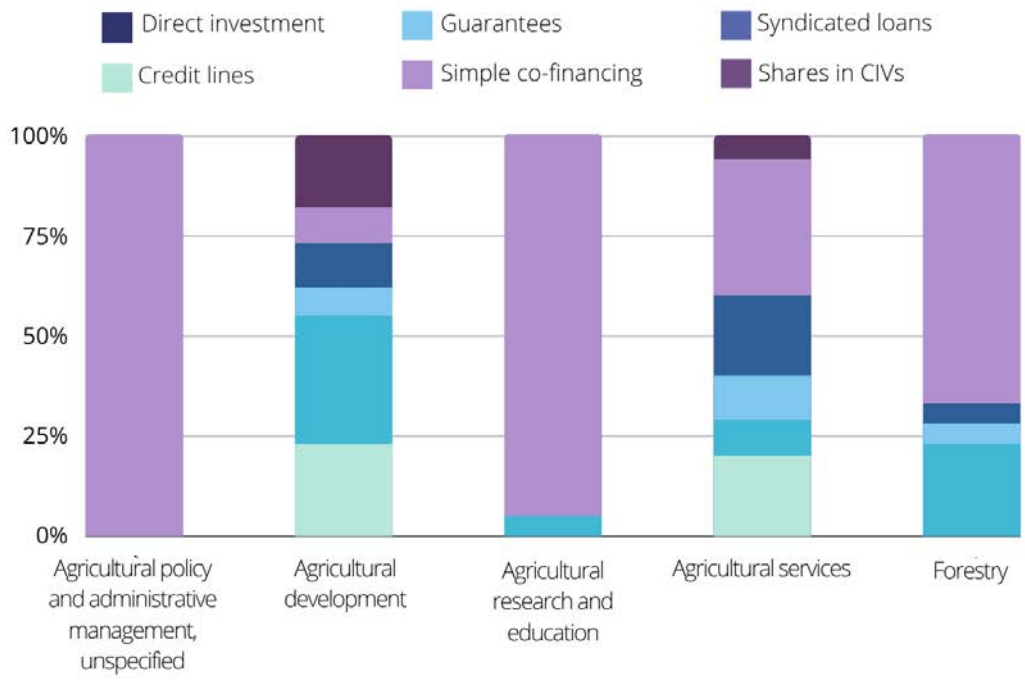
Contributions from international public climate finance are important to support the alignment of agriculture and forestry with sustainable development (around USD 5 billion and USD 1 billion, respectively, on average annually over 2016-21). Yet public finance alone cannot remediate this shortfall, underscoring the need to scale up the mobilisation of private finance for climate action. However, in the context of the USD 100 billion goal, public climate finance towards these sectors have mobilised relatively small volumes of private finance: USD 557 million on average annually over 2016-21.

Overall, the mobilised private climate finance in the agriculture and forestry sectors exhibited significant differences. In agriculture, the share of mobilised private climate finance was considerably larger (85%) compared to forestry (15%), reflecting the fact that forestry and agroforestry-related activities tend to be less profitable than agriculture (Ginbo, Di Corato and Hoffmann, 2021[86]). Additionally, private finance for climate objectives accounted for 35% in agriculture and 97% in forestry out of the total mobilised private finance for each sector (OECD, 2023[87]). The relatively low shares of climate considerations in private finance towards agriculture indicates the potential opportunities of redirecting and increasing finance towards climate-related activities in this area.

Most private climate finance mobilised towards agriculture and forestry was in upper-middle income and lower-middle income countries (83% and 94%, respectively), while much less (16% and 6%, respectively) was mobilised in low-income countries, on average over 2016-21. At the local level, recipients of finance for agriculture and forestry activities also vary within and across sectors. For example, recipients of financing for agriculture include smallholder farmers, co-operatives, SMEs for agriculture and agribusiness, large companies, foreign direct investors, and agricultural commodity traders. In contrast, forest operations can range from small-scale informal loggers to vertically integrated harvest, transport, milling and processing firms (World Bank, 2022[88]).

Most private climate finance mobilised through public finance to developing countries towards the agriculture sector targeted development activities (74%), followed by agricultural services (19%) and agricultural policy, administrative management and unspecified activities (7%) over 2016-21 (see Figure 3.7 and (OECD, n.d.[89]) for more information on sectoral descriptions). Relatively less finance was directed towards education, training and research in both the agriculture and forestry sectors. These findings highlight the specific areas of focus and potential gaps in the allocation of private climate finance within the agriculture and forestry sectors.

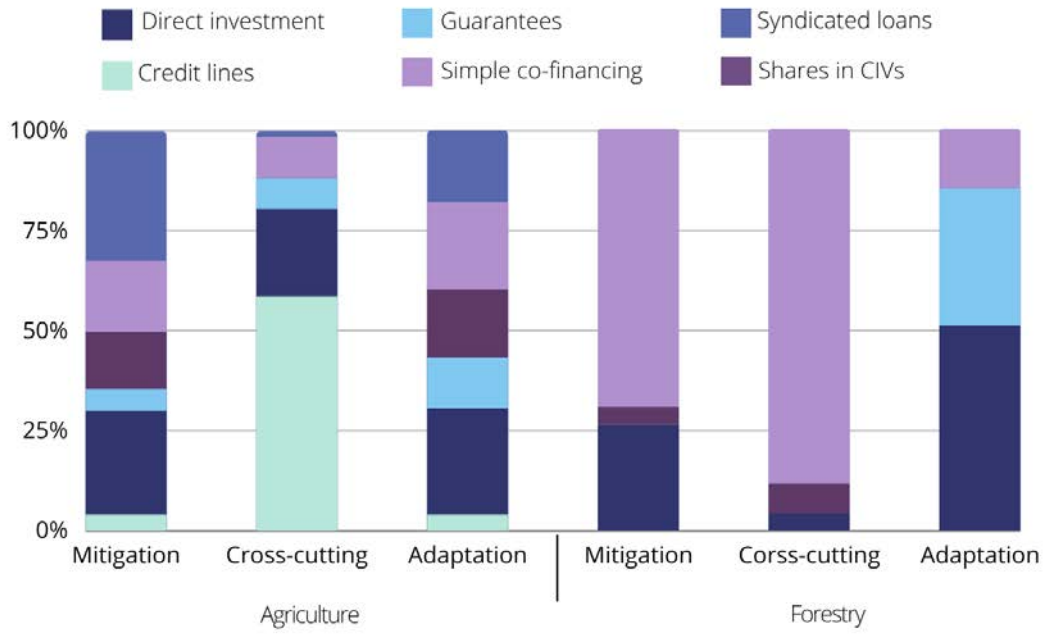
Figure 3.7. Private climate finance mobilised in agriculture and forestry by sectors and leveraging mechanisms, 2016-21 (annual average)



Note: Due to data limitations, the private finance mobilised to the forestry sector cannot be further disaggregated into targeted activities.
Source: Based on OECD DAC statistics, and complementary reporting to the OECD.

Looking into the climate objectives (Figure 3.8), the majority of private finance mobilised for climate action in the agriculture and forestry sectors targeted mitigation (55% and 52%, respectively), whilst a much smaller share targeted pure adaptation activities (24% and 14% respectively). Redressing this imbalance would require systematic action through a number of complementary interventions: scaling up international climate finance towards adaptation in developing countries; promoting the development of adaptation strategies and integration into development planning (including through National Adaptation Plans) (UNFCCC, 2021[90]); aligning interventions with ecosystem restoration principles (UNEP, 2021[91]); and, promoting insurance solutions against climate-related and environmental losses (for example yield-based insurance, weather index insurance, indemnity payments based on satellite imagery) (IFC, 2015[92]). Furthermore, the relatively high share of private finance simultaneously targeting both climate change mitigation and adaptation activities across agriculture and forestry projects (21% and 34%, respectively), points to the opportunity to maximise co-benefits by investing in these sectors.

Figure 3.8. Private climate finance mobilised by climate objective and by leveraging mechanism, 2016-21

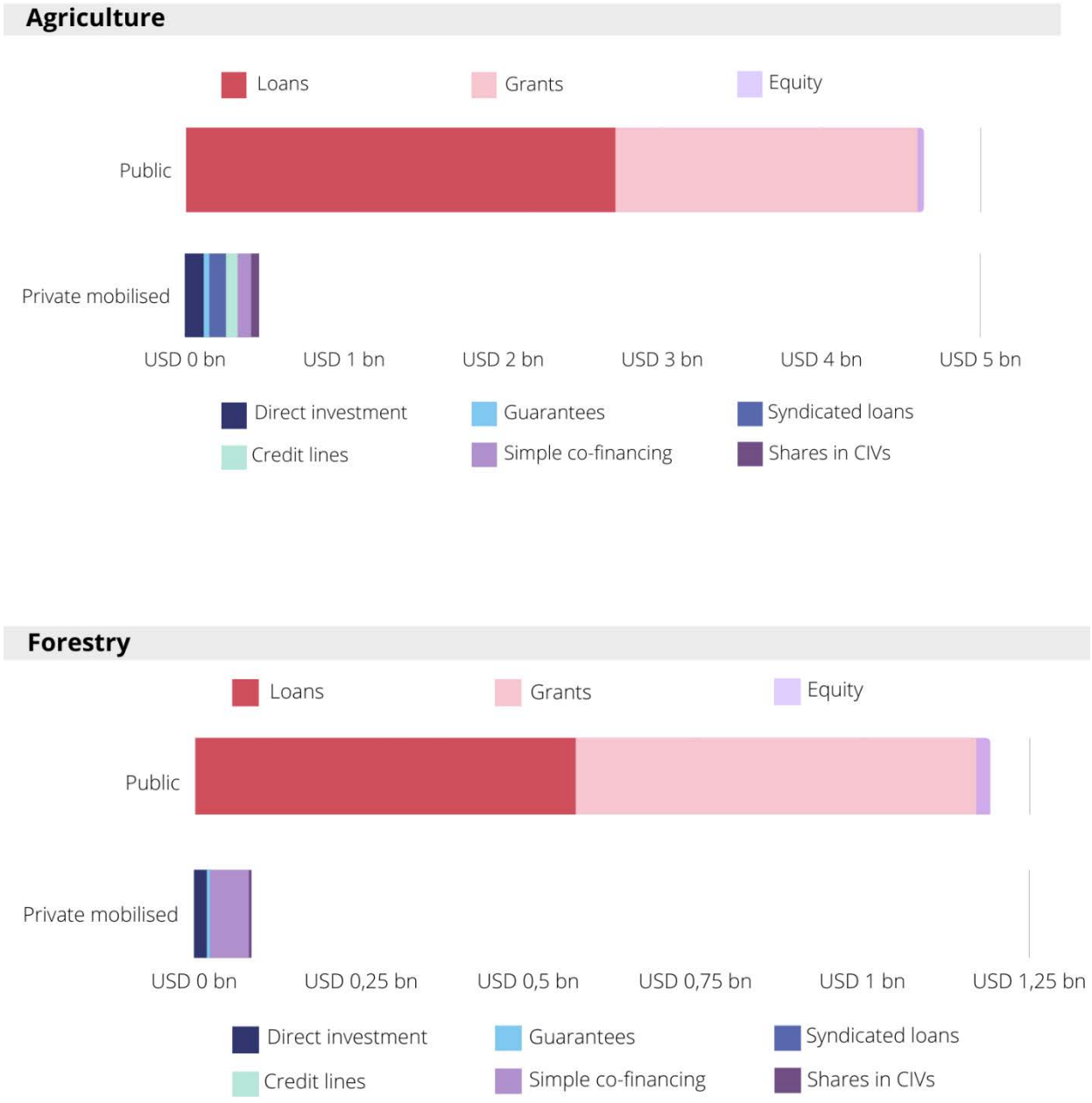


Source: Based OECD DAC statistics, and complementary reporting to the OECD.

The use of public finance leveraging mechanisms to mobilise private finance for climate action varied across agriculture and forestry sectors, yet in both cases with a strong predominance of simple co-financing and direct investment in companies and special purpose vehicles (SPVs), and a relatively low share of guarantees (see Figure 3.9). In agriculture, the main leveraging mechanisms were direct investments (25%), followed by syndicated loans (22%) and simple co-financing mechanisms (17%) on average over 2016-21. Credit lines (16%) and CIVs (12%) and guarantees (8%) mobilised the lowest volumes of private finance towards agriculture. In contrast, total international public finance for climate action in agriculture was delivered through debt instruments (59%), followed by grants (40%); only 1% was provided in equity instruments.

Looking into the forestry sector, most private finance for climate action was mobilised through simple co-financing mechanisms (68%), followed by direct investments (22%); much smaller volumes were mobilised by guarantees (5%) and shares in CIVs (5%). In comparison to leveraging mechanisms used in the agriculture sector, syndicated loans and credit lines were not reflected in the private finance mobilised for climate objectives in the forestry sector. Overall, most total international public finance towards climate action in forestry was delivered through grants (50%) and debt instruments (48%), while equity accounted for a much smaller share (2%). As such, across both sectors, the existing toolkit of international public finance is mostly composed of debt and grant instruments, and relatively little equity is used. This points to the possibility of repurposing the former financial instruments towards mobilising private finance, assisting to scale up further finance from all sources for climate action in these fields, as well as to make a more efficient use of scarce development finance.

Figure 3.9. Climate finance provided and mobilised across agriculture and forestry, by public financial instrument and leveraging mechanism, 2016-21 (annual average)



Source: Based on Biennial Reports to the UNFCCC, OECD DAC statistics, and complementary reporting to the OECD.

Commercial dynamics and barriers to private investment in agriculture and forestry

There is a wide range of barriers to scaling up private investment in agriculture and forestry. Understanding these barriers is a critical pre-condition to tailoring international public finance interventions in order to address them effectively and crowd-in private finance. Barriers can relate to a lack of suitable policy frameworks, lack of market formality, enabling environments, information on institutional structures and financial instruments, and implementation capacity (Kato et al., 2014[93]). As with other sectors, private investments in the agriculture and forestry sectors can be discouraged by real and perceived risks,

expected risk-adjusted returns, competitiveness, upfront and transaction costs, small-scale projects, long pay-back periods and low returns, as well as high country and sector specific risks (CPI, 2022[94]; Apampa et al., 2021[95]; SAFIN, 2019[96]). These can affect expected revenues and widen viability gaps; where viability gaps are not addressed (i.e. negative returns on investments), the private sector will not invest at all (Falconer et al., 2015[76]).

Overall, the capacity of agriculture and forestry to attract finance from a range of sources is affected by their exposure to a range of risks and uncertainty, some of them specific to the sector, others common to other sectors. Investment risks prevent public and private entities from providing climate finance and can include price risks, environmental risks, production and technology risks, knowledge risks, political risks, financial risks and social risks. These risks increase the cost of financing and of executing land-use activities, and uncertainty can further delay the decision to invest (Ginbo, Di Corato and Hoffmann, 2021[86]). Table 3.3 shows some of the key barriers that impede the flow of finance towards lower-emission and sustainable land-use activities, in particular in developing countries.

Table 3.3. Risks and uncertainty in the agriculture and forestry sectors

Risks	Description
Price-related risks	Price-related risks can depend on the product or commodity and market context. Changes in the quality of natural resources, transportation, storage, and input costs (e.g. labour, seeds, fertilisers, chemicals, tools and machinery) also add to local price variability (World Bank, 2022[88]). Prices of agricultural commodities that are widely traded among countries are particularly subject to world market conditions. Currency risk is closely associated with price risk, and affects both domestic and international financiers and investors (SAFIN and Convergence, 2021[97]; IFC, 2015[92]).
Climate and environmental risks	Agriculture and forestry production are characterised by high dependence on environmental and climate conditions. Natural hazards (including unpredictable weather events, earthquakes and landslides), as well as the limitations of forecasting both their magnitude and impact, increase the uncertainty of expected returns. In addition, climate change can have cascading effects across supply chains, amplifying the risks throughout the sector. Smallholder and subsistence farmers, pastoralists and artisanal fisherfolk are particularly exposed to the complex and localised impacts of climate change, and are disproportionately affected by extreme climate events (Easterling et al., 2007[98]). Moreover, the continued loss of biodiversity and ecosystem functioning makes landscape ecosystems less resilient to climate change extremes (see Box 3.1), further jeopardising agriculture and forestry climate-related efforts.
Production and technical risks	Production and technical risks (e.g. reduced or unpredictable yield) are primarily caused by disease and extreme climate conditions including drought, flooding, frost, appearance of invasive species or hailing. Approaches to reducing emissions, especially in agriculture, may require new or different technologies that involve significant time or financial investments by the implementing landholders, yet adoption rates are often slow due to risk-aversion among agricultural operators (Nabuurs et al., 2022[70]). Moreover, unproven/early-stage business models with long development lead times and technical assistance requirements, and uncertain financial/environmental upside – particularly within the smallholder farmer context in developing countries – reduce investor appetite for opportunities outside of business-as-usual agriculture and forestry investments (Millan, Limketkai and Guarnaschelli, 2019[99]).
Knowledge risk	Closing knowledge gaps and narrowing uncertainties (e.g. accounting and monitoring of land-based emissions and sinks; impact of land degradation and restoration efforts; cost efficiency of novel and emerging climate-related efforts; and policy options to enable the use of land-use carbon as offsets (Nabuurs et al., 2022[70])) are crucial to advancing agriculture and forestry-related climate interventions. In particular, financial services providers face these risks when there is a lack of in-depth knowledge of the sector or capillary presence in rural areas, mainly due to the geographical fragmentation and/or remoteness of rural clients, and the high costs of maintaining an efficient client information infrastructure for financiers, especially when lacking digital systems (Millan, Limketkai and Guarnaschelli, 2019[99]). In turn, this presents constraints in identifying where donor or government interventions are required and how they should be designed (Aceli Africa, 2020[100]). Consequently, financiers face significant risks and costs in knowing their customers, managing collateral requirements, and estimating likely returns to investment in specific business models, as well as in properly pricing risks and return expectations (SAFIN and Convergence, 2021[97]).
Policy and regulatory risks	A major disincentive for farmers and the private sector to invest in the climate-smart management and use of agriculture and forestry is uncertainty regarding law enforcement and legitimacy of tenure rights and duties of land-use and natural resources (Laing, 2015[101]) (FAO, 2013[102]). The risk of expropriation of natural resource property rights, as well as uncertainty regarding the implementation of sustainability policies (e.g. carbon leakage risk, rebound effect, and business-as-usual lock-in over time (Falconer et al., 2015[76])), further hamper investments in alternative and additional production opportunities. In addition, agricultural and forestry production firms may be subject to various liabilities resulting from environmental degradation, noise and air pollution, wrongful termination, injury, and contract fulfilment (IFC, 2015[92]).
Financial risk	Expected returns can present a challenge for lending or investing in agriculture and forestry. Returns to investments in these sectors and related value chains vary greatly, with higher returns often being associated with better-functioning markets, high-value commodities, well-structured value chains and larger companies or project sizes (SAFIN and Convergence, 2021[97]). Indeed, a key challenge with agriculture and forestry-related investments, and notably in biodiversity-related projects (Box 3.1), is their small size and non-commercial nature, as well as a lack of a pipeline of investment opportunities (Apampa et al., 2021[95]; World Bank Group, 2020[83]). Financial institutions are also constrained from investing in small-scale enterprises and producers, due to: lack of knowledge and capacity on the financial institutions' side; high real and perceived risks; high transaction costs (OECD, 2021[103]); erratic and infrequent income (CGAP, 2016[104]); geographically remote or informally structured, and highly variable business models (Havemann, Negra and Werneck, 2020[105]).
Social risk	Differences in cultural values and social acceptance are also important barriers (e.g. traditional values, local norms, different epistemic/ontological views of forests and nature (Vidal et al., 2022[106]) (Schulte et al., 2022[107])). Historical practices, including long-standing tradition may pose strong barriers to adoption of climate measures in land-based activities (e.g. shifting cultivation, swidden or slash-and-burn practices for clearing lands, or smoking of wood pest management (Acero, 2020[108])). However, adoption of new practices may proceed quickly if the technologies can demonstrate the improvement of crop yields, costs reduction, or improvement of livelihoods (Nabuurs et al., 2022[70]). In addition, producers' decisions can consider competition and be affected by the actions and decisions of their neighbors (Ginbo, Di Corato and Hoffmann, 2021[86]). Long-standing consumption and dietary traditions within most cultures may also present strong barriers for efforts to change diets and reduce food waste.

Source: Author's literature review.

Opportunities for greater private finance mobilisation in agriculture and forestry

Investment in sustainable agriculture and forestry-related activities in developing countries is often perceived to be risky and therefore beyond the investment mandate of most private investors (Apampa et al., 2021[95]). Nevertheless, blended finance can support the development and expansion of commercial financing solutions in the sector, including by improving financial inclusion, stimulating new markets and value chains, and assisting to establish proof of concept and demonstration effects regarding sustainable agriculture and forestry approaches (OECD, 2021[103]; Apampa et al., 2021[95]). While available evidence on the effectiveness of and results achieved by private finance mobilisation is currently limited, a number of leveraging mechanisms and blended finance instruments have proven to be successful in addressing these risks and unlocking commercial investment.

Reorienting lending: Loans constituted the greatest share of international public climate finance flows towards agriculture and forestry (56% across both sectors). Similarly, debt instruments (simple co-financing, credit lines, direct investments in companies/SPVs and syndicated loans) accounted for a relatively larger share (80%) on average of private finance mobilised to these sectors. This demonstrates the importance of lending instruments in both directly financing and mobilising private finance towards climate-related projects in the agriculture and forestry sectors.

While credit lines account for a sizeable proportion of private climate finance mobilised towards the agriculture sector (16% on average over 2016-21), there is still scope to promote their use within the forestry sector, where there is no reported use. Credit lines can be used to enable farmers and producers to access capital for purchasing equipment, initiating seasonal campaigns, managing risks or investing in technology such as improved irrigation systems or sustainable forestry practices. For example, the GIRSAR programme in Argentina is a USD 187.5 million credit financing programme (USD 150 million from the IBRD, and USD 37.5 million from both public and private sectors) that supports improvements in climate-related and market risk management in the rural agro-industrial system, including actions to mitigate and reduce the vulnerability to climate change, respond to emergencies and transfer agri-climatic risks, while promoting private investments (for example smart climate technologies for sugar cane production and water use efficiency, satellite forage systems to mitigate risks and promote adaptative livestock management) (GIRSAR, n.d.[109]). Similarly, the Bunge, Banco Santander and The Nature Conservancy partnership to launch a USD 50 million credit financing line supports deforestation-free soybean expansion in degraded areas in Brazil's Cerrado (The Nature Conservancy, 2020[110]; Reuters, 2018[111]).

The issuance of impact bonds can also contribute to financing upfront investment, or act as the outcome funder to subsidise private investment into an instrument, while subordinated loans can also be effective in de-risking and crowding-in private debt finance. For example, the Eco.business Fund provides a mix of senior and subordinated debt to its financial institution partners, enabling them to increase their loan portfolio to sustainable businesses, such as shade-grown coffee producers, sustainable fisheries, certified producers, and other investments in line with the fund's mission. The subordinated loans, in particular, provide the banks a form of regulatory capital that further enables them to grow their loan book in a sustainable way while adhering to their capital requirements (Eco.business Fund, n.d.[112]). In addition, Aceli Africa is a financing facility that covers the first losses across the lender's portfolio of loans while also facilitating technical assistance (Aceli Africa, n.d.[113]; SAFIN and Convergence, 2021[97]); and Agronomika provides loans to smallholder cocoa farmers in the Philippines, receiving a long-term loan from the Dutch development bank (FMO), which is supported by a first-loss guarantee of IDH (FMO, n.d.[114]). Given the potential impact of such instruments, and their applicability to agriculture and forestry sectors, the data outlined in Figure 3.9 suggests there is significant scope to gear lending instruments towards private finance mobilisation, including through greater use of credit lines, impact bonds, and subordinated debt.

De-risking and strengthening investments through grants: Grants constituted the second largest share of international public climate finance towards agriculture and forestry (42% across both sectors). However, the data does not provide insights into how much of this targeted private finance mobilisation. Nevertheless, there is significant scope to use grant finance to support private investment, including by providing capacity development for producers and labourers, structuring local institutions, and developing business models. For example, the IDB and the Forest Investment Programme have provided a small grant to cover the costs associated with legal structuring and knowledge, co-ordination, and partnerships for scaling investments to support the sustainable development of silvopastoral systems and value chains in Brazil (IDB, 2017[115]). DESNZ (UK's Department for Energy Security and Net Zero), together with FMO, have established a programme on Mobilising Finance for Forests (MFF) to combat deforestation and other environmentally unsustainable land use practices in tropical forest regions, aiming to allocate up to £150m mainly as development grants (FCDO, 2023[116]; FMO, 2022[117]), helping to enhance the viability of marginally commercial investee projects and improving the investment pipeline for sustainable land use funds. In addition, MFF will provide capital as technical assistance (including feasibility studies) to support the commercial scale-up of projects and convene key stakeholders to share knowledge and experiences.

Technical assistance can also be provided as grants to strengthen the design of projects, to help de-risk investments and facilitate finance among land managers, supply chain providers, or intermediaries. In addition, and as seen in the following examples and in others mentioned throughout this section, technical assistance and capacity development support are often provided as a complement to financial support. For example, the African Risk Capacity (ARC) provides grant funded technical assistance in addition to index-based weather insurance pools, risk transfer and early climate response systems (African Risk Capacity, n.d.[118]). The Caribbean Catastrophe Risk Insurance Facility, a multi-country risk pool, offers a technical assistance programme to provide grant support to develop projects for improving the effectiveness of disaster risk management, while also providing climate-related parametric insurance products and short-term liquidity when a policy for climate hazards is triggered (CCRIF, n.d.[119]).

Uncertainty, as illustrated in Table 3.3, also presents challenges for the development of climate-related financial instruments, particularly in the case of parametric insurance, which can help build resilience against climate impacts in agriculture and forestry. Barriers, including data availability and quality for accurate historical weather data, the complexity of reliable forecasting models, limitations in the reinsurance market, and the need for long-term financial commitment due to climate impacts, can hinder the availability of parametric insurance instruments. In this context, grants can play a role in supporting their development by funding efforts to improve data collection and analysis, raising awareness among potential buyers such as famers and local communities, and providing capacity development for insurers and reinsurers. These efforts could promote the growth of climate-related parametric insurance and strengthen financial resilience against climate impacts.

Scaling equity investments: Equity constituted a very small share of international public finance towards agriculture and forestry (1% on average for both sectors). At the same time, equity-like instruments – represented in direct investment in companies and special purpose vehicles – may have accounted for a proportionally larger share of private finance mobilised (36%, though this figure also includes debt instruments). Wider evidence suggests equity is under-utilised in the sector (SAFIN, 2019[96]). Direct investment in projects through equity can be used to finance the more expensive portion of the capital stack, whilst providing a strong signal to investors on international support for projects, thereby helping to attract private finance. There are a number of promising examples of the use of equity: AFD and EIB committed up to USD 300 million including junior equity (subordinated equity) to the Land Degradation Neutrality Fund, managed by Mirova (Natixis) with support from the Governments of France, Luxembourg, Norway, and the Rockefeller Foundation, to restore degraded lands in developing countries and promote sustainable farming and forestry (Mirova, 2022[120]; SAFIN, 2019[96]; One Planet Summit, n.d.[121]). British International Investment (BII, formerly CDC), the UK's development finance institution, provided USD 8 million of equity financing while AgDevCo contributed USD 3.5 million as debt and preference shares to

help the agribusiness Jacoma in its farming operations in Malawi (BII, 2017[122]). The Climate Resilience and Adaptation Finance and Technology Transfer Facility (CRAFT) is structured as a private equity fund to offer climate resilience solutions (for example catastrophe risk modelling) in priority sectors including agriculture, supported by the Nordic Development Fund's contribution of EUR 8.5 million concessional equity (NDF, n.d.[123]).

Expanding the use of guarantees: Guarantees accounted for a relatively low share of private climate finance mobilised for agriculture and forestry (8% and 5% respectively, on average over 2016-21), in line with wider OECD findings that suggest that there are currently limited development finance providers extending guarantees for mobilising private finance overall (OECD, 2023[124]). Nevertheless, guarantees are important blended finance instruments (Garbacz, Vilalta and Moller, 2021[125]) that can be used to protect investors or lenders from possible risks associated with investing in sustainable land-based production (see Table 3.3) in turn stimulating commercial lending in the agriculture and forestry sectors.

In particular, guarantees can play a significant role in: addressing the high upfront costs associated with technology adoption and innovation for improving productivity, sustainability and competitiveness in agriculture and forestry; covering policy and regulatory risks, including changes in land tenure, taxation, environmental regulation and trade policies; overcoming the barrier of long payback periods due to the nature of these sectors and encouraging patient capital commitments; and acting as risk mitigation tools, including for climate and production-related risks, by providing financial security against potential losses. For example, the &Green fund receives contributions from different stakeholders, including grants from DESNZ's MFF programme channelled through FMO, and in turn provides long-term credits or guarantees for projects related to inclusive agriculture and forest protection in landscapes (FCDO, 2023[116]; &Green Fund, n.d.[126]); and the Nigeria Incentive-Based Risk Sharing System for Agricultural Lending provides a credit risk guarantee to protect agribusiness loans against losses with a limit of a pre-agreed rate (NIRSAL, n.d.[127]).

In addition, the Agri3 Fund – with support from UNEP, Rabobank, FMO and Dutch Ministry of Foreign Affairs, and the Sustainable Trade Initiative (IDH) – mainly provides guarantees, and subordinated loans in exceptional cases, to promote sustainable agricultural production and land-use, and protect forests, while aiming to mobilise USD 1 billion by de-risking transactions (Agri3 Fund, n.d.[128]). Further, Agri3 Fund has established a technical assistance facility to increase investment opportunities and facilitate the provision of the financial instruments. The EU's European Fund for Sustainable Development Plus (EFSD+) provide guarantees, followed by grants blended with bank loans, as well as technical assistance to support the conceptualisation of projects including to promote the conservation, restoration and sustainable management of natural resources to strengthen climate and biodiversity actions across different dimensions – also encompassing agriculture and forestry (European Commission, n.d.[129]).

There is therefore opportunity to increase the use of guarantees and to further explore why their use remains limited. In addition, development finance providers can strengthen the institutional capacity to provide guarantees (providing technical assistance such as financial and risk-management expertise, harmonising processes, and ensuring further co-ordination among different blended finance stakeholders), while ensuring that guarantees are deployed only for uses where commercial financing is not available (Garbacz, Vilalta and Moller, 2021[125]).

Establishing scale: establishing financial mechanisms that can bridge the gap between financing requirements and investment appetites, could serve as a solution to address small-scale financing needs in agriculture and forestry (i.e. typically ranging from USD 50 to USD 10 000), while catering to the preferences of commercially-oriented investors (for example those seeking opportunities of USD 15 million to USD 50 million at minimum) (SAFIN and Convergence, 2021[97]) (Millan, Limketkai and Guarnaschelli, 2019[99]). This could be achieved through the creation of investment platforms that aggregate and package smallholder financing needs into larger, investment-grade assets. By bundling smaller deals, these platforms provide investment opportunities with the desired size and liquidity features sought by investors.

Additionally, the development of securitisation mechanisms can enhance the appeal of these investment-grade assets by transforming bundled smallholder financing deals into tradable securities. In this context, collaboration between development co-operation providers, financial institutions, private philanthropy and other stakeholders, is essential to design and implement appropriate financial structures, establish risk-sharing mechanisms, and provide capacity development to farmers, producers and investors. For example, Gaia Agro Sec, Felsberg Advogados, Agrosecurity, and WWF-Brazil have established a partnership to provide guarantees for securitisation of deliveries backed by owners' assets, requiring compliance with environmental terms including deforestation-free production through Green Agribusiness Receivables Certificates (CRAs) (GIZ, 2022[130]; Forbes, 2021[131]; WWF, 2017[132]).

Wider considerations for private finance mobilisation towards agriculture and forestry

As with other sectors, mobilising private finance towards agriculture and forestry requires establishing conducive enabling environments, including through effective economy-wide and sector- and region-spefic climate change adaptation and mitigation strategies, as well as providing other positive incentives and alleviating the wider constraints to private investment (see section 3.1). These wider steps are essential for maximising the mobilisation potential of international public climate finance, as well as domestic spending and other fiscal incentives.

Policies and financial incentives could be used to encourage the implementation of wider climate-related initiatives, with the involvement of the private sector. For example, this could include the development of climate-smart agriculture (CSA) (FAO, 2013[133]), high integrity forest and land use credits in the voluntary carbon market, carbon offset schemes, and payments for ecosystem services mechanisms complemented through high forest low deforestation (HFLD) and biodiversity outcomes/credits. Moreover, as noted in the United Nations Environment Assembly (UNEA) Resolution 5, nature-based solutions across the agriculture and forestry sectors have the potential to address both climate and environmental challenges, while simultaneously providing well-being and biodiversity benefits. In this context, biodiversity benefits are a prerequisite for nature-based solutions, requiring the implementation of environmental and social safeguards, which must be designed on a context-specific basis to achieve multiple benefits effectively (UNEP, 2022[81]).

At the same time, reforming market-distorting and environmentally harmful support in the agricultural and forestry sectors is key to addressing mis-alignment with the land-use, biodiversity, climate and food nexus, and can provide opportunities to avoid unsustainable production practices and further exacerbating climate change (OECD, 2020[134]). Support measures should then be repurposed to support positive incentives for climate-resilient and sustainable development activities, that also benefit biodiversity. These reforms can also be complemented with investments in social, development, and job creation programs (World Bank Group, 2020[83]). Reinforcing land ownership also has potential to mobilise private finance. Yet no single strategy provides a silver bullet; rather a combination of different policies and financial instruments should be developed to ensure the viability of an intervention (Falconer et al., 2015[76]).

Given the nature of agriculture and forestry activities, such measures will be highly context-specific, and need to be designed and implemented accordingly. This requires careful consideration of recipient (including farmers, producers, land-owners, wider communities, and business) needs, and promoting integrated land-use and food system strategies (for example efficient and resilient systems, conservation and restoration of biodiversity, food security and healthy diets) while ensuring sustainable trade and supply chains (FABLE, 2019[135]). In addition, it is crucial to carefully address the issue of temporal mismatch between financial provisions and specific seasonal production demands, particularly during the start of production campaigns, which can determine whether to initiate a cycle or not. Additionally, adequate support must be provided for longer turnaround crops and plantations, especially within the forestry sector, by offering loans with extended tenures. In this endeavour, the Agri3 Fund partners with Brazilian banks by providing guarantees to extend loans being offered to the forestry sector. By assuming the risk

associated with these extensions, the Fund ensures that loans are granted with the necessary tenor, while simultaneously facilitating the adoption of sustainable management practices within the sector.

To address the scarcity and fragmentation of data on private sector finance regarding land-use activities (Falconer et al., 2015[76]), it is crucial to implement solutions that establish systematic measurement frameworks. Standardisation of climate-related solutions and consistent data disclosure from both public and private sectors, including through the OECD DAC creditor reporting system, can be useful to fill existing data gaps (UNFCCC, 2022[136]; CPI, 2022[94]). Closing knowledge and information limitations can foster transparency and accountability, as well as better informed decision-making in agriculture and forestry, ultimately contributing to more effective climate action and sustainable land management.

Finally, the relatively low volumes of private finance towards agriculture and forestry underscores the need to further engage with a wide range of stakeholders, including the private sector, private philanthropy, and civil society, to support partner countries in establishing the enabling conditions required to increase private investments, as well as to improve the capacity of development finance institutions to expand the use of private finance leveraging mechanisms. In turn, increasing and strengthening partnerships and collaboration among stakeholders may unblock barriers to mobilising private finance within these sectors. In this regard, for example, the Partnerships for Forests programme supports the development of partnerships between private and public actors that depend on forests for their livelihoods including between governments, smallholders and private companies), enabling the catalysation of investments in forests and sustainable land use (P4F, n.d.[137]).

3.3. Multilateral development bank (MDB) business models and implications for private climate finance mobilisation

MDBs play a central role in the international climate finance architecture. As shown in Chapter 2, they are a key channel of public climate finance, provide the largest volumes of international public climate finance, and mobilise the largest amounts of private climate finance amongst development providers, with a strong focus on middle-income countries and commercially viable sectors such as renewable energy.

Shareholders, recipient countries, and the private sector have long called for MDBs to enhance the use of their considerable resources and balance sheets to maximise development impact. In 2023, G20 leaders urged MDBs to step up the implementation of the recommendations of the G20 Independent Review of MDBs' Capital Adequacy Frameworks within their own governance frameworks (see Box 3.2 below for an overview of these recommendations) (G20, 2022[138]; G20, 2023[139]).[9] At the fourth G20 Finance Ministers and Central Bank Governors Meeting in 2023, members encouraged MDBs to "enhance private capital mobilisation through supporting enabling conditions, innovative risk-sharing instruments and new partnerships to maximise their development impact" (G20, 2023[139]). In 2023, G7 leaders encouraged "MDBs and DFIs to accelerate their efforts to increase their capacity to leverage private finance, including through implementing MDB reforms" (G7, 2023[26]). Building on this increased momentum to rethink the role of MDBs within the wider international financing architecture, in 2023 the Indian G20 Presidency commissioned an Independent Expert Group (IEG) to provide a roadmap for strengthening the MDB ecosystem. The Review recommends that MDBs place the mobilisation and catalysation of private capital at the core of their sustainable development strategies and set ambitious mobilisation targets reflecting specific institutional contexts (G20 Independent Experts Group, 2023[140]).

Beyond efforts at existing multilateral fora, a number of national leaders have sought to escalate the prominence of this agenda. Ahead of COP27 in 2022, the Prime Minister of Barbados called for a major reform of the international financial architecture in her Bridgetown Initiative, which has further helped accelerate momentum on the issue (Ministry of Foreign Affairs and Foreign Trade of Barbados, 2022[141]). At the Summit on a New Global Financing Pact that France hosted in 2023, participating countries called on MDBs to develop relevant and harmonised metrics for private capital mobilisation and set quantified

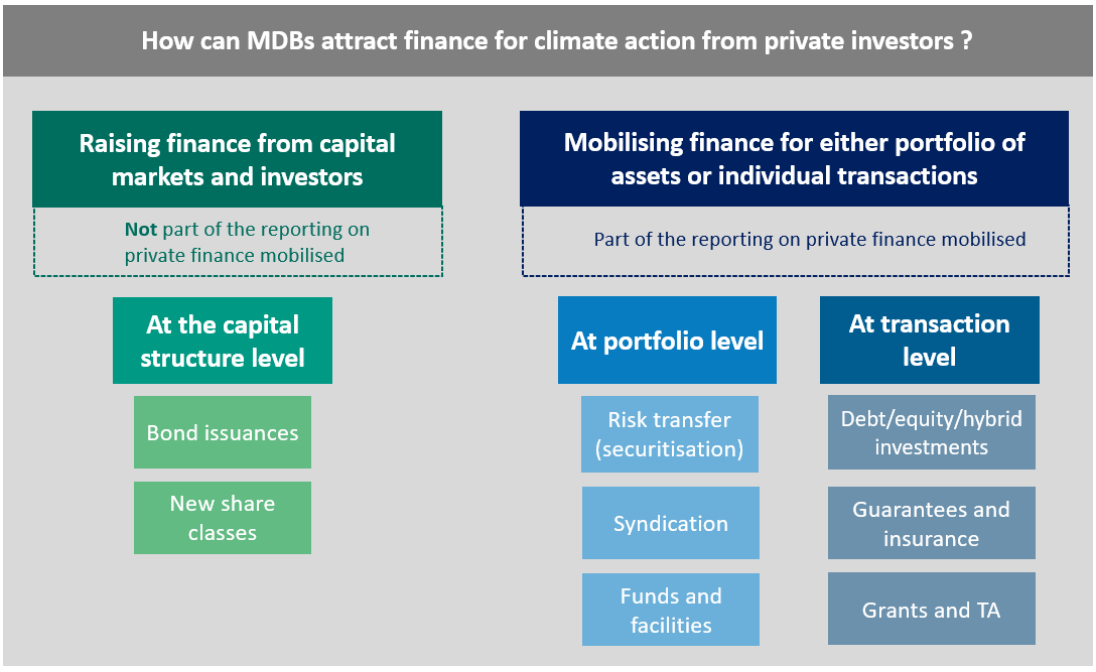
targets that reflect their ambition, while also establishing incentives for staff to mobilise international and local private capital (Summit for a New Global Financing Pact, 2023[142]).

Some MDBs have long leveraged their own balance sheets to raise funds from the capital markets. Despite growing calls for MDBs to leverage public finance more effectively to mobilise private capital, however, aggregate private climate finance mobilisation remains relatively low, when compared to the amounts of private capital globally available. According to a survey conducted by the Overseas Development Institute (ODI) across partner countries' governments and MDBs' officials[10], almost 80% respondents reported that MDBs are perceived as being effective at providing long-term, predictable and flexible financing, but only 42% of respondents positively rated MDBs' ability to catalyse private finance (Prizzon, Josten and Gyuzalyan, 2022[143]).

MDBs can attract resources from capital markets and private investors at different levels, depending on the specific financing need, through a combination of different types of blended finance instruments and leveraging mechanisms[11] (see Figure 3.10 below). At the capital structure or balance sheet level, MDBs can leverage their (member government) shareholder equity and raise financing from private investors by issuing bonds in capital markets, or through hybrid capital. The resulting balance sheet allows MDBs to then make investments or issue guarantees and potentially mobilise private finance further downstream, either at portfolio or at individual transaction level. At the portfolio level, MDBs can bundle multiple investments or transactions (for example through a fund or facility) and mobilise commercial investment from private investors into a portfolio of assets. At individual transaction level, MDBs can bring in private capital into individual investments. Raising finance from private investors at the capital structure or balance sheet level is not part of the reporting on private finance mobilised (neither the reporting to the OECD, nor MDBs/DFIs own joint reporting), whereas mobilisation at portfolio or transaction level is. Moreover, portfolio- and transaction-level approaches are not mutually exclusive, and several leveraging mechanisms can be used at both levels. Overall, in terms of magnitude of the mobilisation potential of these different approaches, balance sheet mobilisation portfolio-level instruments tend to mobilise larger volumes of capital as they are able to attract institutional investors and match their risk-return and liquidity requirements. However, while potential mobilisation volume at the level of single transactions might be more limited, including due to higher transaction costs, they may offer significant climate and development impacts, for example where projects serve vulnerable or underserved geographies and communities.

The following sections further analyse challenges and opportunities for MDBs to mobilise private climate finance at different levels. Differences in MDB mandates, geographic foci, shareholdings and capital structures, client types, size, and institution-specific business models and incentives partly explain their varying degrees of success in engaging with the private sector and mobilising private resources. This section explores some of these features in greater detail, and their implications for private climate finance mobilisation by MDBs.

Figure 3.10. Examples of mechanisms used by MDBs to attract private finance



Source: Authors.

3.3.1. MDB capital structures and funding models

MDBs' funding models rely on contributions from their shareholder governments as well as, to different extents, their ability to raise finance from international capital markets at competitive rates. This allows them to lend at favourable, including concessional, financial terms to their borrowers. MDBs typically have strong, often triple-A, credit ratings. This key feature of MDBs allows them to safely access capital markets even during times of crises, allowing them to fulfil a critical role in providing counter-cyclical financing. This places a high premium on MDB credit ratings. In turn, the pressure to maintain triple-A ratings can lead to conservative lending and capital adequacy approaches, restricting MDBs' overall capacity to make effective use of their balance sheets and limiting their risk tolerance (Boosting MDBs' investing capacity, 2022[144]; OECD, 2022[145]).

MDBs are able to maintain strong credit ratings as a result of two main features: (i) their preferential creditor treatment (PCT), i.e. the de facto practice of conferring MDBs priority for repayment of debt in the event of a (sovereign) borrower experiencing financial stress; and (ii) strong capitalisation (paid-in and callable capital from shareholder governments[12]). A recent preliminary assessment of PCT found that MDBs have a probability of default from borrower countries roughly three times lower than commercial lenders from the same borrowers (0.37%, compared to 1.13% for bank loans and 1.37% for sovereign bonds) (Boosting MDBs' investing capacity, 2022[144]). Loss given default was roughly ten times lower (about 5%, compared to 50%–51.8% for commercial creditors). Limited availability and access to MDB credit risk data might lead to underestimation of these benefits by credit rating agencies, in turn unduly limiting MDBs' risk exposures.

However, MDBs' PCT is informal and does not have binding statutory or contractual status, making it generally difficult to quantify in MDB capital adequacy frameworks or credit rating agency methodologies. Similarly, valuing callable capital is difficult, because no MDB ever had a call on capital so far.[13] In addition, MDBs are subject to statutory lending limits, such as nominal leverage ratios that constrain the overall loan portfolio volume to a multiple of capital (including callable), to in most cases 1:1, though several MDBs are in the processes of revising these limits (G20, 2023[49]). Moreover, capital adequacy challenges vary across

MDBs, as do the implications for risk appetite. For example, PCT mainly applies to MDBs' sovereign operations. According to Standard and Poor's (S&P) methodology for assessing MDB credit ratings, MDBs with high private sector exposures cannot benefit from PCT, though S&P still applies a risk-weighted adjustment in the financial risk assessment, recognising that in case of a private sector borrower's financial distress, the government might still be able to grant the concerned MDB preferential treatment (S&P, 2021[146]). Moreover, MDBs that lend mainly to the private sector have other distinctive features, such as lower single-name concentration risk (as their client base is much larger) and absence of callable capital (in the cases of IDB Invest and IFC).

Recognising that the capital adequacy constraints of the MDBs may hinder their ability to address the persistent and increasing financing needs for sustainable development and climate action in developing countries, in 2021 the G20 commissioned an independent review of MDBs' capital adequacy frameworks (CAF). The independent review provided an overview of current challenges, and recommended actions that MDB management, shareholders, and credit rating agencies could take to better draw on MBD resources to stretch their balance sheets and leverage greater volumes of finance from commercial markets (see Box 3.2 below for an overview of the review's recommendations). In 2023, the G20 endorsed a Roadmap that takes stock of the status of implementation of CAF recommendations by each MDB and provides guidance on how to accelerate implementation (G20, 2023[49]).

Box 3.2. Recommendations of the 2022 Independent Review of Multilateral Development Banks' Capital Adequacy Frameworks (CAFs)

The Independent Review of MDBs' CAFs commissioned by G20 finance ministers and central bank governors put forward recommendations below for MDBs, shareholders and credit rating agencies, to boost MDBs' financial capacity while maintaining robust credit ratings and preferred creditor status:

1. **Redefine the approach to risk appetite for MDB capital adequacy frameworks**
   - Define MDB risk appetites prioritising shareholder-specified limits rather than external criteria.
   - Ensure that MDB CAFs account adequately for preferred creditor treatment and the concentrated nature of MDB portfolios.
   - Relocate specific numeric leveraging targets from MDB statutes to MDB CAFs.
2. **Incorporate uplift from callable capital into MDB capital adequacy frameworks**
   - Incorporate a prudent share of callable capital into MDBs' own calculation of capital adequacy, following the approach validated by all three credit rating agencies (CRAs).
3. **Implement innovations to strengthen MDB capital adequacy and lending headroom**
   - Endorse MDB consideration of non-voting capital classes to contribute to available capital.
   - Scale up the transfer of risks embedded in MDB loan portfolios to private sector counterparties by accelerating the development of funded and unfunded instruments.
   - Encourage shareholder guarantees of sovereign repayments on loans.
   - Support collective shareholder commitments of temporary pools of callable capital to help MDBs mount strong countercyclical responses in periods of global or regional crisis.
   - Call on MIGA and MDBs to collaborate on transferring portfolio risk from MDB balance sheets.
   - Explore ways of providing MDBs with access to central bank liquidity, including pooled agreements under the supervisory umbrella of one central bank.
4. **Improve CRA assessment of MDB financial strength**
   - Strengthen communication of G20 members and other shareholders to inform CRAs' views of MDBs with respect to the importance of MDBs and shareholder support.
   - CRAs can take steps to strengthen their MDB evaluation methodologies.
   - CRAs and MDBs should work together to develop common standards for evaluating the risk weights of ESG-related assets on MDB balance sheets.
5. **Improve the enabling environment for capital adequacy governance**
   - Consider measures to strengthen shareholders' ability to undertake their responsibilities in setting risk appetite and capital adequacy policies and overseeing implementation.
   - Prepare regular capital benchmarking reports on each MDB' CAFs in a comparable format employing harmonised definitions and support regular MDB reviews of capital resources.
   - Establish enhanced arrangements on capital adequacy and risk management to promote ongoing MDB benchmarking, share best practices and facilitate discussions.
   - Endorse and support efforts to transform the Global Emerging Markets Risk Database (GEMs) into a stand-alone entity with legal status and secured budget.

Note: As per its Terms of Reference, the Review is neutral on the question of MDBs capital increases.
Source: (Boosting MDBs' investing capacity, 2022[144]), An Independent Review of Multilateral Development Banks' Capital Adequacy Frameworks, https://www.dt.mef.gov.it/export/sites/sitodt/modules/documenti_it/news/news/CAF-Review-Report.pdf.

Some MDBs have developed approaches to mobilise new forms of capital or enhance their capital efficiency, with implications on their ability to scale up financing for climate investments. Some MDBs have tested ways to bring in new types of investors into their capital structures, by creating new classes of shares for non-sovereigns. For example, the Trade and Development Bank (TDB) has created new dividend-paying, voting share classes (called 'Class B shares') targeted at institutional investors. However, such types of new shareholding could have significant implications for MDB governance, as they could dilute effective governance control of the MDBs by existing shareholders (Humphrey, 2021[147]). Moreover, new shareholders could weaken incentives for shareholder governments to contribute capital themselves. A further consideration relates to uncertainty surrounding the ways in which credit rating agencies would count such types of 'hybrid capital' (Boosting MDBs' investing capacity, 2022[144]). Some of these concerns could be overcome by offering non-voting shares. For example, at COP27, TDB launched a new type of non-voting share, called 'Class C Green+ Shares', designed to attract risk capital from investors to scale up investments for climate action (TDB, 2022[148]).

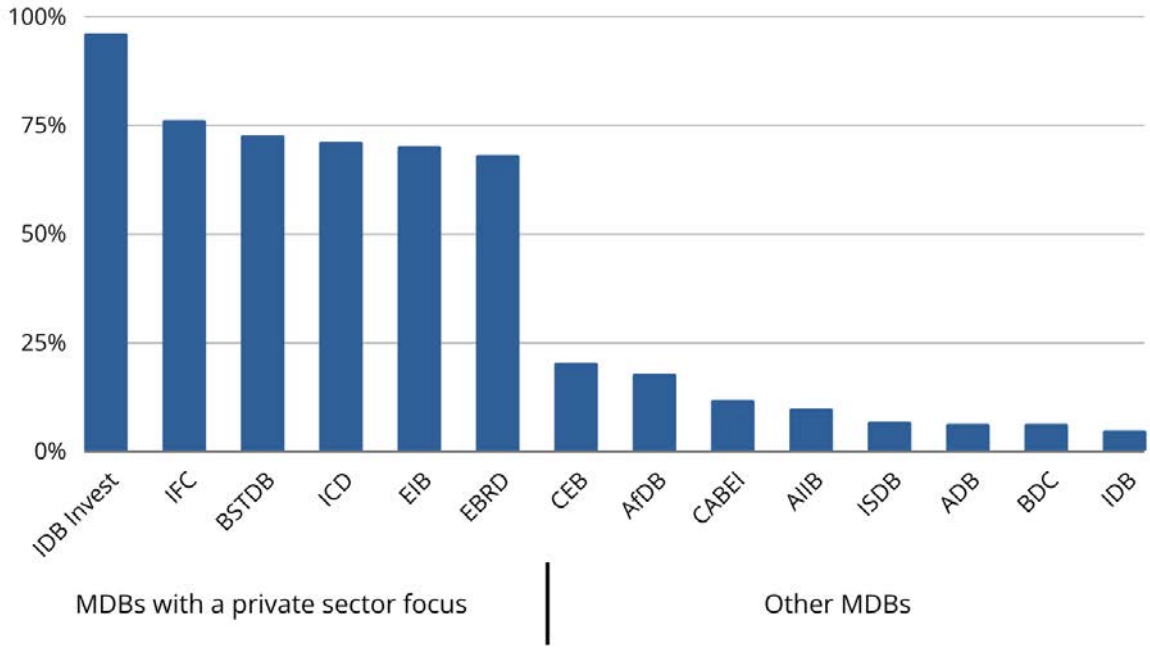
Beyond issuing vanilla bonds and hybrid capital, MDBs have been at the forefront of the development of the green, social and sustainability (GSS) bond market, which allows them to raise financing to be used for specific green, social and sustainability projects. The EIB issued the first ever green bond in 2007 and, until 2012, MDBs had been the sole issuers of green bonds (OECD, 2023[124]).[14] While MDBs generally follow available green bond standards and criteria (for example ICMA Green Bond Principles or Climate Bonds Initiative Standards and Certification) to guide their green bond issuances, different institutions interpret and apply existing guidance in different ways, adapting their green bond frameworks to specific internal and client needs or priorities.[15] There remains scope for harmonisation of green bond frameworks across MDB issuers, which would facilitate comparability of financed projects and increase transparency for investors and the public, especially on results and impact.

3.3.2. MDB approaches towards private sector operations and mobilisation of private finance

Different MDBs have different organisational approaches with respect to private sector operations[16], with three main models (ADB, 2018[149]; ODI, 2018[150]; OECD, n.d.[151]). First, private sector operations can be conducted by the same entity, with no organisational separation of private- and public-sector operations. This is especially the case for banks with a strong private sector focus (such as the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB)) and for smaller banks. Second, MDBs can have a separate legal entity for private sector operations; this is the case for Inter-American Development Bank (IDB), the Islamic Development Bank (IsDB) and the World Bank Group (WBG), which have established, respectively, IDB Invest, the Islamic Corporation for the Development of the Private Sector (ICD) and the International Finance Corporation (IFC), as independent private sector arms. The WBG also established a separate entity to provide guarantees to promote foreign direct investment to developing countries, the Multilateral Investment Guarantee Agency (MIGA). Third, some MDBs have special units dealing with private sector operations within the main entity, such as the cases of African Development Bank (AfDB) and Asian Development Bank (ADB), amongst others.

MDBs balance sheets are heavily dominated by public sector exposures, while private sector operations constitute a relatively small share of their activity (see Figure 3.12, below), except for those MDBs that have an explicit private sector focus, such as IFC and EBRD. Those MDBs that mainly lend to governments or public entities tend to have loan portfolios that are highly concentrated in a small number of borrowers. This is especially the case for regional development banks, where the number of beneficiary countries is lower, compared to banks with an international exposure (Boosting MDBs' investing capacity, 2022[144]) and thus have higher concentration risk. MDBs with high private sector exposures, on the other hand, rely on a larger client base but are subject to a higher degree of commercial risk. This generally makes it easier for them to originate diversified portfolios of assets compatible with the risk-return expectations of institutional investors (Gregory, 2023[48]).

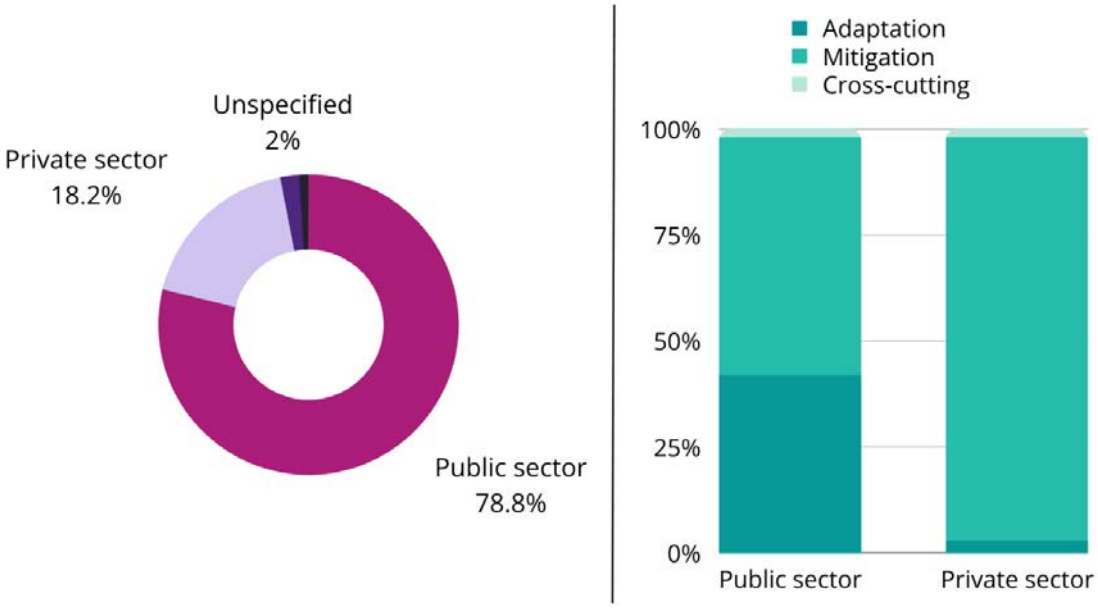
Figure 3.11. MDB private sector loans as a share of total purpose-related exposures, 2020-21 average (%)



Note: Private-sector loans do not include the equity investments which are part of purpose-related exposures. MDBs' loans to the private sector do not necessarily mobilise third-party, commercial private finance. The acronyms in the figure refer to: IDB Invest, International Finance Corporation (IFC), Black Sea Trade and Development Bank (BSTDB), Islamic Corporation for the Development of the Private Sector (ICD), European Investment Bank (EIB), European Bank for Reconstruction and Development (EBRD), Council of Europe Development Bank (CEB), African Development Bank (AfDB), Central American Bank for Economic Integration (CABEI), Asian Infrastructure Investment Bank (AIIB), Islamic Development Bank (IsDB), Asian Development Bank (ADB), Inter-American Development Bank (IDB) and Caribbean Development Bank (CDB).
Source: (S&P, 2022[152]).

When looking at the delivery channels of MDBs' climate finance outflows to developing countries, a similar picture emerges (Figure 3.12 below). Over the 2018-20 period, approximately 77% of total MDBs' climate finance outflows[17] were deployed to the public sector on average, and 18% to the private sector.[18] The main MDBs extending finance to the private sector were IFC (35%), EBRD (26%), EIB (14%), IDB Invest and ADB (10% each).[19] MDBs outflows deployed to the private sector targeted almost entirely mitigation purposes (94% of the total), and those deployed to the public sector targeted mitigation and adaptation almost equally (56% and 42%, respectively).[20]

Figure 3.12. MDBs' climate finance outflows by delivery channel, 2018-21 (average)



Source: Authors, based on OECD Creditor Reporting System (CRS) database (OECD, 2023[153])

MDBs' private sector operations (that is, providing financing and technical resources to support private sector actors and private sector development) do not necessarily translate to mobilisation of additional private finance. However, there is evidence that MDBs with a private sector focus tend to mobilise the largest volumes of private finance for climate action (see Figure 2.4 in Chapter 2).

MDBs' traditional business models are based heavily on fully funding and holding loans on their balance sheets to maturity, which is capital intensive and runs counter to efforts to mobilise private finance (Boosting MDBs' investing capacity, 2022[144]; CPI, 2023[154]). One issue that hinders MDB's mobilisation is the lack clear corporate strategies and incentives related to mobilisation (OECD/The World Bank/UN Environment, 2018[155]). An independent evaluation of the EBRD's mobilisation efforts highlighted the following corporate challenges (EBRD, 2020[156]):

- lack of a mobilisation strategy at the corporate level[21] and limited consideration for mobilisation in country- and sector-specific strategies;
- the main metrics used in corporate scorecards to incentivise staff do not capture mobilisation. The prioritisation of measures of direct own-financing (mainly loan approvals) to maximise the use of own capital acts as a disincentive to mobilisation efforts;
- the number of staff directly involved in mobilisation as a proportion of total Bank staff is low.

According to an independent evaluation of the World Bank Group's approaches to private capital mobilisation, even though the IFC has mobilisation-related targets that cascade to various units, definitional issues hinder measurement of mobilisation results and reduce the effectiveness of aggregate results in the Bank's corporate scorecard (World Bank, 2020[34]). Moreover, the evaluation pointed out that the World Bank Group has inadequate incentives to mobilise private finance, lacks financial structuring skills and has limited collaboration between the structuring and operational teams.

In addition, evidence suggests that MDBs do not often work together to pool project pipelines, share due diligence, or create investment products that crowd-in institutional investors at scale (Lee, 2017[157]; Gregory, 2023[48]). The Master Cooperation Agreement (MCA) is an example of cross-MDB collaboration. The MCA is a streamlined lending framework that allows private firms in developing countries to obtain

loans from multiple development finance institutions at once. IFC designed the MCA and acts as lead arranger, by using its existing syndication platform, deal-structuring expertise and due diligence processes and negotiating loan documents in cooperation with other DFIs and MDBs. Since its launch in 2008, borrowers in developing countries received loans of more than USD 10 billion under this framework (IFC, 2023[158]). However, while the MCA includes several bilateral DFIs across many different countries as signatories, the extent of MDB participation remains limited (IFC, 2023[159]). Further harmonisation of ESG due diligence and impact assessment and reporting is another area where collaboration could reduce transaction and information costs for both MDBs and private investors. A further example of good cross-MDB collaboration include the harmonisation of ESG risk management practices through the adoption of the Equator Principles.

Portfolio level

One approach to mobilise private finance at the portfolio level is the use of credit risk transfer mechanisms, which include a subset of financial instruments that enable the transfer of assets (for example infrastructure loans) or the associated credit risks from the financing provider (i.e. lender or originator) to a third party in order to free up regulatory risk capital, mitigate credit risk to certain exposures (potentially freeing up room for new lending), or provide additional liquidity to the financing provider.[22] A wide range of mechanisms are available for climate finance providers to share and transfer credit risks stemming from their respective loan portfolios, including securitisation, co-lending and syndication approaches and portfolio guarantee and risk-sharing facilities (OECD, 2021[160]). In particular, MDBs have mostly used direct investment in companies and special purpose vehicles (which, in the latter form, can involve forms of securitisation), guarantees and syndicated loans, which mobilised respectively 51%, 21% and 19% of private finance for climate actions with MDBs' interventions (on average over the 2016-20 period), as shown in Figure 2.4 in Chapter 2. These leveraging mechanisms can be used both at portfolio and transaction/investment level (the latter are explored in the following sub-section). Through risk transfer, MDBs can either share credit risk stemming from their operations with commercial actors, thus freeing up risk capital for new lending or investment in climate projects or taking on credit risks originated by commercial institutions and thus allowing them to provide additional lending. It is important for MDBs to pool projects in geographically and sectorally diversified portfolios, as climate projects, especially for adaptation, are typically too small in size to attract institutional investment.

Securitisation is used as a risk transfer mechanism at the portfolio level; it is used share the credit risks originated in MDBs' own portfolios with commercial investors. The African Development Bank (AfDB)'s Room2Run transaction was the first-ever portfolio risk transfer mechanism by an MDB, in the form of a synthetic securitisation of its portfolio of private sector loans worth USD 1 billion, which allowed the bank to free up financing for new infrastructure lending (AfDB, 2018[161]; AfDB, 2018[162]). This transaction had significant advantages as well as shortcomings. Benefits included the ability to attract different types of investors in different tranches while allowing the AfDB as the originator to remain the lender of record and keep control and relationships with the borrowers. Building on the success of the Room2Run, in 2022 the AfDB, together with the UK FCDO and three insurance companies closed an innovative risk transfer transaction, Room to Run Sovereign, based on a subset of the Bank's portfolio of sovereign loans (AfDB, 2022[163]). Notwithstanding their advantages and potential, these types of mechanisms may also bear risks and are not suitable for all MDBs. They are complex mechanisms to structure, have high transaction costs (including for legal and technical expertise), are relatively small in size, and require a homogenous portfolio. Risk transfer could affect MDB net income, depending on how freed-up capital is used for more lending, and could have the unintended consequence of promoting origination of relatively less risky investments which are better suited for risk transfer, but which may have a lower development impact. Moreover, it is not clear how different risk transfer operations would be rated by credit agencies, as there have been few such transactions so far, rated on a case-by-case basis through lengthy negotiations.

Co-lending approaches and syndication platforms are useful mechanisms that MDBs use to attract institutional investors' capital. MDBs' typical roles as lead arrangers in syndications and their due diligence strengthen commercial investors' confidence and allow for risk diversification. Pooled arrangements at portfolio level can be effective in attracting commercial investment at scale by reducing the transaction costs incurred in risk-sharing arrangements of individual investments. An effective example of a syndication structure at portfolio level is IFC's Managed Co-Lending Portfolio Program (MCPP), a pooled syndication arrangement allowing different types of investors to invest alongside IFC in developing countries, for example in clean energy infrastructure investments. With an eight-year long track record and USD 10 billion of funds raised from 11 commercial investors, in 2021 IFC launched the MCPP One Planet, a new USD 3 billion iteration that specifically target investments that are aligned with the Paris Agreement (see Box 3.3 below for further details on MCPP) (World Bank, 2023[164]).

Box 3.3. Syndication platforms to attract institutional investors' capital into sustainable development investments in EMDEs: the case of IFC's Managed Co-Lending Portfolio Program (MCPP)

The IFC's Managed Co-Lending Portfolio Program (MCPP) is a syndication platform that creates opportunities for commercial investors to invest alongside IFC in a diversified portfolio of loans that mimics IFC's own portfolio.

Investors agree on loan eligibility criteria and portfolio concentration limits through an upfront agreement with IFC. Investors then pledge funding and, as IFC originates new transactions, financing from investors is allocated alongside IFC's own funds. IFC conducts project appraisal, approval, commitment, and supervision, which provides significant transaction cost reductions for investors. The MCPP has several different investment structures which cater to specific investors' needs, regulatory requirements and risk-return profiles, such as trust funds for public investors, B Loans for institutional investors and credit insurance to distribute risk to private insurance companies on an unfunded basis.

In some cases, IFC can provide first-loss coverage on the portfolio by taking a junior tranche in order to reduce investors' risk exposure to an appropriate level. As a result, any loss stemming from the underlying portfolio of loans is attributed to the first-loss tranche before the senior tranche. This allows institutional investors to invest at investment-grade in senior tranches. Moreover, the first-loss tranche can be credit-enhanced by a guarantee, for example that provided by the Swedish International Development Cooperation Agency (Sida) to the MCPP infrastructure fund.

These types of syndication platforms bear several advantages for all partners involved: (i) borrowers can receive larger volumes of investments at the same financing terms that IFC offers, often with longer tenors than is available through purely commercial investment and with reduced complexity compared to traditional syndications, as IFC is the sole interface for the borrower; (ii) investors can increase their exposure or get first-time entry into a diversified portfolio of investments in EMDEs; (iii) IFC can mobilise commercial investment at greater scale.

With an eight-year long track record of self-reported USD 11.5 billion of funds raised from 11 commercial investors, in 2021 IFC launched the MCPP One Planet, a new USD 3 billion iteration that specifically targets cross-sectoral investments that are aligned with the Paris Agreement. MCPP One Planet will aim to aggregate capital from both public and private investors using a combination of trust funds and B Loan funds. To-date, IFC has raised USD 2.5 billion for One Planet collectively from the Hong Kong Monetary Authority, Allianz Global Investors and the State Administration of Foreign Exchange of the People's Bank of China. To assess and report on investments' alignment with the Paris Agreement, IFC uses the Anticipated Impact Measurement and Monitoring (AIMM) system, which is an ex-ante impact assessment tool, as well as their own ESG standards. This allows investors to report on their sustainable finance disclosure requirements, especially those at EU level.

Source: (IFC, 2022[165]; IFC, 2021[166]), complemented by an interview with IFC officials.

Moreover, MDBs are increasingly acting as investors and managers of blended finance funds and facilities in the form of collective investment vehicles (CIVs), in which different actors pool their resources to subsequently own equity and invest in a diversified portfolio of securities (Dembele et al., 2022[167]). However, private finance mobilised by MDBs through shares in collective investment vehicles remain relatively low, as shown in Figure 2.4 in Chapter 2. Some of the MDB-managed collective investment vehicles targeting climate action are financed by earmarked contributions by individual bilateral development actors. Examples include the Canada-IFC Blended Climate Finance Program, the IDB-

managed Canadian Climate Fund for the Americas, as well as the Canadian Climate Fund for the Private Sector in Asia.

In recent years, some MDBs have also created and designed new climate-focused funds which are then bid out and managed by private funds or asset managers (Gregory, 2023[48]). MDBs, as well as other climate finance providers, can invest in equity tranches of such funds, taking first-loss positions or providing credit enhancements, which would reduce risks and allow private investors to come in at senior, less risky tranches. For example, in 2018, IFC and Amundi launched the Planet Emerging Green One Fund (EGO fund) which reported to have raised USD 1.42 billion from institutional investors to invest in green bonds. IFC selected Amundi to manage the structured fund, which is expected to deploy USD 2 billion into emerging markets green bonds over its lifetime, as proceeds are reinvested over seven years (IFC, 2018[168]). IFC participated as the anchor investor with a USD 256 million commitment, EIB and EBRD provided investments of USD 100 million and USD 68 million respectively (part of which was invested in the junior tranche) and Proparco also invested in the mezzanine tranche, thus lowering the risk for institutional investors to invest at senior tranches of the fund. The private investor base consists of capital raised from pension funds, insurers, asset managers, international development banks, and other financial institutions.

Another portfolio approach consists of the use of blended finance vehicles such as fund-of-funds. In 2017, the EIB and the government of Luxembourg created the Luxembourg-EIB Climate Finance Platform (LCFP), which makes equity investments in junior tranches of different layered funds, which then invest in companies in emerging markets with climate change mitigation and adaptation projects (EIB, 2021[169]). See Box 3.4 below for further details on the LCFP.

Box 3.4. The Luxembourg-EIB Climate Finance Platform (LCFP)

The LCFP is a single contributor trust fund funded by the Government of Luxembourg and the first fund established under the EIB Partnerships Platform for Funds in September 2017. With the signature of the Second Contribution Agreement between the EIB and the Luxembourgish Ministries in February 2021, the LCFP was extended until 2024 and its fund size increased by EUR 40 million, thus bringing the total mandate to EUR 70 million. The LCFP makes equity investments in junior tranches of different layered funds, which then invest in companies in emerging markets with climate change mitigation and adaptation projects, thus aiming to increase the impact of climate financing by mobilising private sector investment, thereby acting as a catalyst for additional financing.

According to publicly reported EIB data, the Platform approved six operations that provide fully concessional finance amounting to EUR 40 million from the government of Luxembourg, with an additional EIB target investment EUR 292 million, mobilising in total EUR 16.6 billion in project investments. According to the EIB, the concessional resources reduced the risk of investments in senior tranches of the fund for private investors to come in at portfolio level.

The various funds the LCFP invested in make investments in a wide range of developing countries across Africa, Asia and Latin America, and in different sectors, such as renewable energy, energy efficiency, urban mobility, agroforestry and forestry.

Source: Interviews with EIB staff.

The 2022 Independent Review of MDBs' Capital Adequacy Frameworks lays out additional innovative options that could be considered to either free up capital or mobilise more private finance for climate and broader development objectives, such as portfolio guarantees by shareholders for sovereign loan portfolios to free up risk capital for additional lending (for example for climate mitigation and adaptation), as well as

greater use by MDBs of portfolio insurance via MIGA (to reduce political risk and concentration risk), amongst others (Boosting MDBs' investing capacity, 2022[144]). However, such approaches are relatively less tested than those presented above. Moreover, in general, rating agencies' methodologies to evaluate such innovations are not uniform and still unclear, mainly because MDBs represent a small portion of rating agencies' activities and the innovations that have taken place so far have been few and MDB-specific.

Transaction level

MDBs can deploy the whole set of leveraging mechanisms discussed in Chapters 2 and 3 to mobilise private finance for specific, individual investments or transactions in climate action. It is generally more difficult to mobilise private capital at scale from individual bespoke investments, unless aggregated, and MDBs' traditional focus on disbursing loans for relatively large-scale projects and holding them until maturity can come at the expense of prioritising mobilisation of private capital for small-scale ones. However, mobilisation in individual transactions remains critically important, as it can provide for additional resources for projects with significant climate and development benefits. Increased institutional prioritisation and consideration for the mobilisation potential of the full range of financing instruments that MDBs already have at their disposal is necessary to attract private capital.

Guarantees and credit risk insurance are increasingly used by all major MDBs to leverage private finance (Garbacz, Vilalta and Moller, 2021[125]). However, their use remains overall relatively limited (accounting for approximately 21% of private finance mobilised by MDBs, as shown in Figure 2.4 in Chapter 2) and they represent a small fraction of MDB's commitments. One notable limitation regarding the use of guarantees (by all development finance providers, not only MDBs) relates to the fact that under the current reporting methods for private sector instruments agreed by the Development Assistance Committee (DAC), guarantees are not ODA-eligible except to the extent that guarantees are called and payments are made, in which case payments are measured on a cash flow basis (OECD, 2023[170]).

In addition, technical assistance and capacity development plays a key role in mobilising private finance, often accompanying and complementing other blended financial instruments in individual transactions. Technical assistance remains crucial both at the capital provider level (including to build capacity of local financial institutions and project developers) at the project level (including to build and strengthen project pipelines) as well as to improve the wider enabling environment (including to increase local actors' absorption capacity). For example, ADB is administering a technical facility (accompanying a blended finance loan) that aims to enhance the knowledge of industry experts and housing developers to create climate resilient affordable housing projects as well as to conduct market research and testing of innovative technologies for green construction (OECD, 2022[171]). A further example is ADB's provision of technical assistance funded by the Clean Technology Fund and focused on the development of an electric vehicle ecosystem, which generated a pipeline of potential close-to-commercial sustainable private sector transport transactions and opportunities to crowd-in private capital (ADB, 2023[172]).

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Notes

[1] Domestic currency securities have dominated EMDE issuance in the last decade, suggesting a deepening of local currency bond markets and an improvement in currency risk exposures in EMDEs. While foreign currency denominated debt is often avoided due to the risk of potential currency mismatch on sovereign balance sheets, issuing foreign-currency securities in international markets allows EMDE sovereigns to borrow in longer maturities and face lower refinancing risk, and alleviate the pressure on domestic investors particularly when funding needs surge suddenly.

[2] As of 31 May 2023 (IMF, 2023[3]; IMF, 2023[5]).

[3] Excluding direct investment in corporate stocks.

[4] The typology of investors shown in Figure 3.3 and in the related analysis reflects Convergence Blended Finance's categorisation: financial institutions mainly refer to commercial banks; institutional investors include asset owners such as pension funds, insurance companies and sovereign wealth funds; asset managers include those that invest institutional or retail capital on behalf of their clients; and businesses refer to non-financial corporates.

[5] Convergence is a global network for blended finance, comprised of membership from public, private, and philanthropic investors, as well as sponsors of transactions and funds. The Convergence database includes historical blended finance transactions. Whereas the OECD data on private finance mobilised draws from the annual reporting exercise undertaken as part of the OECD DAC statistics, Convergence collects information from other credible public sources (including press releases, case studies, news articles), as well as through data-sharing agreements and validation exercises with its members. To be included in Convergence's database, the transaction must use concessional capital (public or philanthropic), whereas the OECD's scope extends to all development finance, independent of the terms of its deployment. As a result of these differences, Convergence and the OECD will often capture different levels of blending, which makes the two databases complementary. Another important difference is that Convergence captures the total deal size (including the development finance deployed), while the OECD accounts only for the amount of private finance mobilised in each operation (OECD/UNCDF, 2020[175]).

[6] The sectoral definitions provided in DAC climate finance statistics do not perfectly align with technical definitions of sectors. These figures do not exhaustively include all clean energy activities funded by international climate finance, for example support for energy efficiency. "Energy policy" includes direct support for energy infrastructure projects, as well as technical assistance and capacity development.

[7] In addition to standard loans, mezzanine finance, bonds, and other debt instruments, direct investment in companies and special purpose vehicles also includes equity investments.

[8] In this context, forestry relates to the economic activity of forestry production.

[9] In the context of MDB operations, capital adequacy is a measure of an MDB's ability to "meet its obligations relative to its exposure to risk and the base for assessing its financial strength" (Boosting MDBs' investing capacity, 2022[144]).

[10] This survey analysis is based on responses from 352 government officials and 135 officials from MDBs in 73 countries, approximately half of the countries that can in principle borrow from MDBs (Prizzon, Josten and Gyuzalyan, 2022[143]).

[11] For an overview of the wide range of existing blended finance instruments and mechanisms, please see (OECD, 2018[173]).

[12] Paid-in capital is the portion of an MDB's subscribed capital the shareholders have paid in any convertible currencies and their national currency based on a predetermined percentage. Callable capital is the portion of an MDB's subscribed capital not paid in by shareholders, and subject to call by an MDB only in the event that they are unable to meet their financial obligations. Callable capital is not considered as equity or quasi equity in MDB articles of agreement or financial statements. None of the main MDBs have ever had to draw on their callable capital (Boosting MDBs' investing capacity, 2022[144]).

[13] The methodology used to attribute climate finance from MDBs and specialised multilateral climate funds to developed countries takes into account the differences between paid-in and callable capital when estimating the proportion of outflows from a given MDB's non-concessional activity that can be credibly attributed to developed countries. Recognising that paid-in capital has substantially more value in terms of providers' effort than callable capital, a weight of 10% is applied to the callable-capital portion of the calculation versus a weight of 90% for paid-in capital (OECD, 2019[176]).

[14] MDBs play several different roles in the GSS bond markets. Beyond their role of issuers, they can also act as (i) anchor investors for GSS bonds issued by others; (ii) guarantors, enhancing the risk/return profile of specific projects that the GSS bonds' proceeds are used for, for example through the use of guarantees; and (iii) enablers, for example by providing technical assistance for entities' first entrance in GSS bonds or by supporting regulators in developing national GSS bond frameworks.

[15] Please see (OECD, 2023[177]) for a detailed overview of green, social and sustainability bond frameworks of different MDBs.

[16] These are sometimes referred to as 'non-sovereign operations'.

[17] This refers to finance attributed to developed countries.

[18] The rest was either deployed to other channels (NGOs, research institutes, PPPs and multilateral organisations) or unspecified.

[19] It is recalled that these shares are significantly affected by the attribution mechanism to developed countries.

[20] The rest targeted both mitigation and adaptation.

[21] This is not the case for the World Bank Group, which does have corporate targets for private capital mobilisation (even though they differ across WBG institutions).

[22] MDBs have three main entry points to transfer risk, namely as: (i) originators of loans (or risk sellers), thus freeing up capital for new lending (for example, for additional climate projects); (ii) investors into credit risks originated by other financial institutions (or risk buyers); and (iii) facilitators, for example to enable structuring of risk transfer transactions (OECD, 2021[160]).

4 Recommendations for policymakers

This chapter draws on the challenges and solutions identified in Chapters 2 and 3 to set out recommendations to increase and accelerate the mobilisation of private finance, and the role that international public finance providers can play to this end. The chapter identifies three key action areas that policymakers should prioritise: i) tailoring project- and country-level interventions to de-risk projects and markets; ii) scaling up the use of cross-border financing mechanisms and improving co-ordination to channel global finance; and iii) enhancing international institutions to maximise the mobilisation potential of public climate finance.

The analysis presented in Chapters 2 and 3 suggests there is considerable scope to improve the effectiveness of public climate finance in mobilising larger volumes of private finance. Climate finance cannot operate in a vacuum; as highlighted throughout this report, a wide range of country-specific, sectoral, and project-level factors affect the potential for private finance mobilisation. The scope of this report, and the recommendations below, however, are primarily focused on the actions that bilateral and multilateral providers of climate finance can take by shifting the nature and direction of their financing and technical assistance. These will need to be co-ordinated with action from a wide set of stakeholders across partner countries and the private sector.

The recommendations below are presented in general terms. Their applicability will, however, vary considerably across different contexts, reflecting different provider mandates and priorities, beneficiary country-specific challenges and priorities, and varying challenges across different climate-relevant sectors and technologies. Their ease of application, impact in mobilising additional private finance for investment in climate action, and timescale of impacts will also vary, as set out in the indicative judgements presented in Figure 4.1, below.

4.1. Action area 1: Tailor project- and country-level interventions to de-risk projects and markets

Recommendation 1: Tailor public finance interventions to reflect the rapidly-shifting commercial dynamics in key sectors, including scaling up blended finance and other mobilisation approaches in more mature sectors

There is evidence that many critical investments in decarbonisation, particularly in clean energy, are already or close to being commercially viable in some developing countries. Meanwhile, there remain significant investment needs in climate action areas where the potential for commercial investment is much more limited, including investments in adaptation which are difficult to commercialise, and investments in agriculture and forestry where the climate imperative is often misaligned with commercial opportunities.

Private finance mobilisation should become the default approach for public finance directed towards climate investments in sectors where the commercial dynamics have evolved to improve the prospects of private sector participation, for example where new technologies have become more mature and risks and returns better understood. A large portion of international public climate finance remains dedicated to clean energy investments, notably renewable power generation, with the vast majority of this finance provided in the form of conventional loans, which mobilise relatively small volumes of private finance. Notwithstanding the urgency and importance of scaling up investment in clean energy, the rapidly shifting commercial dynamics of energy investments open the opportunity to reorient public climate finance to more effectively crowd-in private finance (see Recommendation 2). Specifically, climate finance providers should consider private finance mobilisation as the default approach for their support in renewable power, and consider, where appropriate, whether any direct public support remains required at all. In turn, much greater volumes of public climate finance could then be dedicated towards the development of blended finance instruments that crowd-in private finance in other sectors, including industry, transport, agriculture, and forestry, or in low-income countries. Given mobilisation approaches aim to reduce public finance deployed over time, such a shift has the potential to free up capital for a larger number of interventions, including wider climate investments in sectors and markets where commercial options are more limited, such as least developed countries, and towards wider sustainable development objectives.

International public climate finance should be used to de-risk sectors and asset classes that are currently beyond the scope and investment criteria of commercial finance. As set out in the complementary paper (OECD, 2023[1]) on *Scaling up adaptation finance in developing countries: challenges and opportunities for international providers*, bilateral and multilateral public climate finance providers should take steps

towards increasing the mobilisation of private finance towards adaptation, including by (i) allocating their development finance with a clear objective to mobilise private finance for adaptation, particularly in sectors favourable to private sector engagement, such as agriculture; (ii) exploring, piloting, and subsequently scaling tailor-made approaches, such as portfolio approaches, risk-sharing mechanisms, and the issuance of bonds like Green, Social, and Sustainability (GSS) bonds; (iii) considering the unfamiliarity of private financiers with adaptation and the challenges of small-scale transactions, utilising intermediaries, such as development actors and private fund managers, to unlock private finance for adaptation projects through portfolio approaches and risk-sharing mechanisms; and (iv) adjusting currently bankable projects with cash-flow certainty to contribute more to adaptation, for example by integrating climate resilience into the design of new infrastructure. Increased efforts in mobilising private finance for adaptation should be anchored by the development of standardised metrics for blended finance transactions that are capable of effectively monitoring and evaluating their impact on climate adaptation (OECD, 2023[1]).

Recommendation 2: Within more mature sectors and markets, reorient loans and other debt instruments towards private finance mobilisation

Loans account for the vast majority – a yearly average of USD 43.6 billion between 2016 and 2021, or 71% – of public climate finance provided by developed countries through bilateral and multilateral channels; yet only USD 12.3 billion per year of private finance was mobilised by leveraging mechanisms that involve debt-related public finance instruments (including direct investment in companies and special purpose vehicles, simple co-financing, syndicated loans, and credit lines). This points to the potential of reorienting lending to more effectively mobilise private finance, including through shorter loan tenors where appropriate (see Recommendation 5), and scaling up the use of other non-debt blended finance approaches where appropriate.

Syndicated loans, including subordinated debt, can be particularly effective in mobilising private finance in many climate action areas, for example towards large clean energy projects with high up-front costs. However, such loans currently mobilise relatively small sums, suggesting they are underutilised. Credit lines are another form of debt instrument that have the scope to be significantly scaled up. They are particularly applicable to smaller projects with investments undertaken over a longer time horizon, for example investment in energy efficiency and sustainable agriculture.

Recommendation 3: Scale up the use of guarantees at the project and portfolio levels, and enhance providers' institutional capacity to provide guarantees

Guarantees have demonstrated strong private finance mobilisation potential, mobilising an average of USD 2.6 billion yearly between in 2016 and 2021. Along with equity investments, scaling up the use of guarantees, including to optimise the terms and conditions of debt through extended maturities and lower interest rates, can help address the high cost of capital in contexts where debt distress and wider risks deter private investment.

Specific structures that have demonstrated a strong record in mobilising private finance include MIGA's various forms of guarantees against a range of political and credit risks. Guarantees can be particularly impactful when combined with other mobilisation approaches, for example the Swedish International Development Cooperation Agency's (SIDA) guarantee of the first-loss tranche in the IFC's Managed Co-Lending Portfolio Program (MCPP).

In April 2023, members of the OECD's Development Assistance Committee adopted new rules to better reflect donor effort in measuring credit guarantees in official development assistance (ODA). This methodology is expected to open to the door to a greater use of guarantees to mobilise private finance for development and climate. Continued discussions should ensure revised ODA directives give clarity on the

full breadth of guarantees provided by donors, including in relation to the operations of MDBs and other multilateral institutions.

Recommendation 4: Provide tailored capacity-building to support improved enabling conditions for investment and the development of project pipelines

There is a need to address the persistent institutional and capacity challenges that limit the scope for private finance mobilisation in many developing countries. While these efforts need to be country-led, international climate finance providers have a critical role to play in supporting the creation of the required enabling environments for investment by scaling up policy support and technical assistance through the provision of grants and concessional finance where appropriate. Such support is particularly appropriate in sectors and countries where attracting private capital is still too challenging, such as in low-income countries and fragile contexts, and areas such as adaptation and resilience, biodiversity, and social sectors, amongst others. Governments and climate finance providers also need to ensure that capacity development and policy reforms are systematically undertaken with a view to maximising the flow of finance towards climate projects.

Even in more mature sectors and markets, technical assistance to further improve enabling environments and support project demonstration can help maximise the subsequent private finance mobilisation potential of public climate finance at the portfolio and project levels. As outlined in Chapter 3, the availability of projects with balanced risk-return profiles remains a major impediment to private investment in climate action; technical assistance for project pipeline development can support private finance catalysation. Additionally, in the context of rapidly evolving technologies and markets for climate action investments, regulatory policy and frameworks need to keep pace; technical assistance is critical in supporting developing countries to this end.

The relatively small sums of private finance mobilised towards low-income countries underscores the need to start by supporting capacity development, in order to improve their enabling conditions for investment. Such support should be closely linked to wider assistance for broader sustainable development objectives, which are themselves critical to improving investment conditions, capital market development, and stimulating cross-border and domestic private sector investment in climate action.

Recommendation 5: Progressively exit projects once they become commercially viable to free up financial resources for new climate change mitigation and adaptation priorities and projects

Traditional infrastructure development finance has largely been characterised by an “originate-and-hold” model, with development finance providers supporting and financing project origination, development, and construction, and then holding assets in order to recoup their investments and make a return. Loans, which comprise the vast majority of international public climate finance, have an average maturity of 23 years. This approach, however, is capital intensive and locks significant volumes of limited public climate finance into projects that may have achieved commercial viability.

Linked to Recommendation 1, development finance providers should routinely and frequently assess the commercial landscape of their investments and explore opportunities to reduce their financial exposure by bringing in greater volumes of commercial investment when the conditions allow, in line with the OECD’s *Blended Finance Principles* (OECD, 2020[2]). This could include selling their equity exposures at the project level entirely, securitising multiple exposures (through the structures discussed in Recommendation 6), or selling parts of their loan books to the private sector.

4.2. Action area 2: Scale up the use of cross-border financing mechanisms and improve co-ordination to channel global finance

Recommendation 6: Expand the use of public climate finance to support the development of financing structures that crowd-in institutional investment at scale

The small scale of projects and transactions and information asymmetries remain major barriers to cross-border investment towards developing countries across all climate action areas. The nature of many climate investments, for example off-grid renewables, energy efficiency, and agriculture, are small in scale individually, but have major climate mitigation and adaptation potential collectively. International investors lack the in-country presence and local experience, due diligence capacity, as well as financial appetite to invest in small projects.

Investors have, therefore, repeatedly called for the development of secondary assets that aggregate a number of smaller constituent projects in developing countries into larger, rateable, tradeable assets. Relatively small amounts of public climate finance can be used to support structured finance, including aggregation and securitisation, alongside support for standardisation of contracts and project documentation, to address capacity constraints amongst commercial investors and mobilise private finance. Such instruments can support climate finance providers to more rapidly exit projects once they are commercially viable (see Recommendation 5).

However, such instruments (shares in collective investment vehicles), accounted for only 7% of private finance mobilised towards climate action, suggesting they remain underutilised. This reflects the relative novelty of these approaches, but nevertheless suggests there is significant scope to increase public support towards such structures. These efforts should be combined with support for local capital market development, to draw on and expand the critical role of local financial institutions in deploying international finance for climate action on the ground.

Recommendation 7: Strengthen co-ordination and collaboration between bilateral and multilateral climate finance providers, domestic actors, and the private sector

A range of international partnerships have been trialled over time. Country platforms are emerging as potentially promising new ways to strengthen collaboration between the public and private sectors at the country level and mobilise the needed domestic and international finance to support developing countries' transitions to low-carbon and resilient development pathways. Collaboration between and amongst bilateral and multilateral providers can be scaled up, including by increasing co-investment approaches between bilateral and multilateral providers, as well as standardising processes and project documentations and sharing pipeline development and due diligence.

Experience with country platforms, including *Just Energy Transition Partnerships (JETPs),* so far is fairly limited. Nevertheless, some partial lessons learnt have emerged. Strong country ownership, in line with best practice on development effectiveness, and credible political commitment by all parties are essential to establishing clearly-defined, ambitious long-term visions and interim targets, as well as to sustaining platforms or partnerships over time. Country platforms need to be initiated, designed, and implemented ensuring inclusive, meaningful dialogue with and participation of all stakeholders involved or impacted, including civil society organisations.

Upfront transparency on project pipelines is required in order to effectively mobilise private investors, alongside efforts to develop those pipelines (see Recommendation 4). Early identification of areas where concessional finance can be most catalytic versus where it might crowd-out private finance, in line with the sector- and project-level considerations outlined in Recommendation 1, should inform the early conception, design and composition of country platforms.

The sectoral scope of country platforms, most prominently the JETPs, has been limited to the energy sector in middle-income countries. There is, therefore, scope to consider using similar models in other countries and sectors, including adaptation and nature, tailoring the partnership to the specific needs the target country and sector(s). Moreover, financial and other support through JETPs has to date been dominated by G7 donors; this should be expanded to bring in a wider range of development partners.

4.3. Action area 3: Enhance international institutions to maximise the mobilisation potential of public climate finance

Recommendation 8: Request clearly-defined institutional private finance mobilisation targets from MDBs, while safeguarding development objectives and avoiding unintended consequences

As shareholders of multilateral development banks (MDBs), bilateral providers should request MDBs to explicitly define private finance mobilisation corporate strategies and incentives as part of their core mandates. As mobilisation is not an end in itself, but rather a means to increase the resources available to support development, climate, environmental and social objectives in partner countries, mobilisation targets should have differentiated objectives for specific sectors and country contexts, and be revisited on a regular basis to adjust and, where appropriate, reduce, the role of public finance as the commercial landscape for investment improves over time. Such objectives should also define specific mobilisation targets, taking into account that the scope for the mobilisation of private investment might be limited in sectors and regions that face relatively high barriers to investment, for example low-income countries, investment in nascent technologies and public goods. Mobilisation targets will, therefore, need to be made with careful consideration of wider MDB mandates, ensuring that greater efforts to mobilise private finance do not come at the expense of supporting sustainable development objectives more broadly, including fulfilling basic development needs in the poorest countries. Moreover, scaling up mobilisation requires enhanced collaboration between different specialists within MDBs, bringing together corporate strategy, structuring, operational and climate teams.

Recommendation 9: Encourage MDBs to further use or develop risk transfer mechanisms and provide local currency financing

MDBs can use risk transfer mechanisms to free up risks from their balance sheets and increase lending in development priority areas, such as climate-related investments. Co-lending approaches and syndication platforms are useful mechanisms that MDBs can use to attract institutional investors' capital.

Approaches to optimise the capital efficiency of MDBs, however, should not be considered as a substitute for capital increases[1] where needed, especially to support the investments and activities of MDBs' concessional operations. These efforts would be complemented by enhanced dialogue and knowledge-sharing among MBDs as well as with shareholders, credit rating agencies, commercial and institutional investors.

Recommendation 10: Further improve data disclosure and transparency on accounting methodologies relating to public climate finance and the private finance it mobilises

There remain significant data gaps, which limit the ability to assess the private finance mobilisation record and potential of international public climate finance, including in the data and analysis presented in this paper. This presents major impediments to policymakers seeking to understand what has worked in various sectors and geographies. More granular data reporting on the nature of public climate finance – including on whether interventions are expressly designed and *intended* to mobilise private finance,

through which leveraging mechanisms, and the role of complementary technical assistance – would help provide a more complete picture both of private finance mobilised on aggregate, as well as the merits of individual transactions.

As a complement, efforts should be made to share the data that does exist. For example, the Global Emerging Markets Risk (GEMs) database could be improved (including with more data on recovery rates, adding equity transactions and providing more granularity on project-, sector-, and country-level characteristics) and made public in full. This would help close information asymmetries on country-specific investment risks in developing countries by giving investors access to historic data on development finance providers' transactions.

Figure 4.1. Summary of recommendations

Challenges	Recommendations and delivery channels	Applicability to challenges	Type of impact	Timescale of impact
Project and country-level challenges • Public climate finance does not currently reflect commercial dynamics in many climate action areas. • Mobilisation approaches/ blended finance make up a relatively small share of interventions. • Enabling environments in many developing countries remain weak, stifling investment in climate action. **Private sector challenges** • Scale and accessibility of investments in developing countries remains limited. Governments, climate finance providers, and private finance remain disjointed.	**Action area 1: Tailor project- and country-level interventions to de-risk projects and markets**			
	1. Tailor public finance interventions to reflect the rapidly-shifting commercial dynamics in key sectors. ***climate finance providers***	●	**Mobilisation**	Short term
	2. Within more mature sectors and markets, reorient loans and other debt instruments towards private finance mobilisation. ***climate finance providers***	● ●	**Mobilisation**	Short term
	3. Scale up the use of guarantees at the project and portfolio levels, and enhance providers' institutional capacity to provide guarantees. ***climate finance providers***	● ●	**Mobilisation**	Short term
	4. Provide tailored capacity-building to support improved enabling conditions for investment and the development of project pipelines. ***climate finance providers***	● ●	**Catalytic effect**	Medium-long term
	5. Progressively exit projects once they become commercially viable to free up financial resources for new climate change mitigation and adaptation priorities and projects. ***climate finance providers***	● ●	**Mobilisation**	Medium term
	Action area 2: Scale up the use of cross-border interventions and improve international co-operation to channel global finance			
	6. Expand the use of public climate finance to support the development of financing structures that crowd-in institutional investment at scale. ***climate finance providers with financial intermediaries***	●	**Mobilisation**	Short term
	7. Strengthen co-ordination and collaboration between bilateral and multilateral climate finance providers, domestic actors, and private sector. ***recipient governments, climate finance providers, private sector***	● ●	**Catalytic effect**	Medium term

Challenges	Recommendations and delivery channels	Applicability to challenges	Type of impact	Timescale of impact
Institutional challenges • Mobilisation is not a core objective for most MDBs. • Mobilisation approaches are under-utilised relative to potential. • Data on public finance and mobilisation is misaligned and weak.	**Action area 3: Enhance international institutions to maximise the mobilisation potential of public climate finance**			
	8. Request clearly-defined institutional private finance mobilisation targets from MDBs, while safeguarding development objectives and avoiding unintended consequences of such incentives. ***MDB shareholders, MDBs***	●	**Catalytic effect**	Medium term
	9. Encourage MDBs to further use or develop risk transfer mechanisms and provide local currency financing. ***MDB shareholders, MDBs***	● ● ●	**Mobilisation**	Short term
	10. Further improve data disclosure and transparency on accounting methodologies relating to public climate finance and the private finance it mobilises. ***climate finance providers***	●	**Catalytic effect**	Medium term

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Boosting MDBs' investing capacity (2022), *An Independent Review of Multilateral Development Banks' Capital Adequacy Frameworks*, https://www.dt.mef.gov.it/export/sites/sitodt/modules/documenti_it/rapporti_finanziari_internazionali/rapporti_finanziari_internazionali/CAF-Review-Report.pdf. [3]

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Note

[1] A capital increase is an increase of shareholders capital subscription, usually including both paid-in capital and callable capital, to enable an MDB to increase its lending. A general capital increase occurs when all shareholders increase their subscriptions while keeping the same shareholding structure. A selective capital increase for a subset of shareholders increases the MDB's available capital while changing shareholders' relative weight in their voting power (Boosting MDBs' investing capacity, 2022[3]).

Annex A. Country groupings

Developed and developing countries

For the purpose of this report's analysis and figures, the following classifications are used:

- "Developing countries", which refer to countries and territories included on the DAC List of ODA Recipients for 2018 development finance and/or on the non-Annex I list of Parties to the UNFCCC.
- "Developed countries", which include Annex II Parties to the Convention, the Member States of the European Union, Liechtenstein, and Monaco.

Countries and territories that do not fall in these categories (most notably the Russian Federation (Russia) are not covered by the analysis.

Table A.1. Developing countries: Non-Annex I Parties on the DAC List of ODA Recipients

Afghanistan	Dominica	Liberia	Saint Lucia
Albania	Dominican Republic	Libya	Saint Vincent and the Grenadines
Algeria	Ecuador	Madagascar	Samoa
Angola	Egypt	Malawi	Sao Tome and Principe
Antigua and Barbuda	El Salvador	Malaysia	Senegal
Argentina	Equatorial Guinea	Maldives	Serbia
Armenia	Eritrea	Mali	Sierra Leone
Azerbaijan	Eswatini	Marshall Islands	Solomon Islands
Bangladesh	Ethiopia	Mauritania	Somalia
Belize	Fiji	Mauritius	South Africa
Benin	Gabon	Mexico	South Sudan
Bhutan	Gambia	Micronesia	Sri Lanka
Bolivia	Georgia	Moldova	Sudan
Bosnia and Herzegovina	Ghana	Mongolia	Suriname
Botswana	Grenada	Montenegro	Syrian Arab Republic
Brazil	Guatemala	Morocco	Tajikistan
Burkina Faso	Guinea	Mozambique	Tanzania
Burundi	Guinea-Bissau	Myanmar	Thailand
Cabo Verde	Guyana	Namibia	Timor-Leste
Cambodia	Haiti	Nauru	Togo
Cameroon	Honduras	Nepal	Tonga
Central African Republic	India	Nicaragua	Tunisia
Chad	Indonesia	Niger	Turkmenistan
China (People's Republic of)	Iran	Nigeria	Tuvalu
Colombia	Iraq	Niue	Uganda
Comoros	Jamaica	North Macedonia	Uzbekistan
Congo	Jordan	Pakistan	Vanuatu
Cook Islands	Kazakhstan	Palau	Venezuela
Costa Rica	Kenya	Panama	Viet Nam
Côte d'Ivoire	Kiribati	Papua New Guinea	West Bank and Gaza Strip
Cuba	Kyrgyzstan	Paraguay	Yemen

Korea	Lao People's Democratic Republic	Peru	Zambia
Democratic Republic of the Congo	Lebanon	Philippines	Zimbabwe
Djibouti	Lesotho	Rwanda	

Table A.2. Developing countries: Non-Annex I Parties beyond ODA Recipients

Andorra	Chile	Korea	Saint Kitts and Nevis
Bahamas	Israel	San Marino	Trinidad and Tobago
Bahrain	Kuwait	Saudi Arabia	United Arab Emirates
Barbados	Oman	Seychelles	Uruguay
Brunei Darussalam	Qatar	Singapore	

Table A.3. Developing countries: ODA Recipients beyond the Non-Annex I Parties

Belarus	Montserrat	Republic of Türkiye	Ukraine
Kosovo	Saint Helena	Tokelau	Wallis and Futuna

Table A.4. Developed countries

Australia	European Union	Latvia	Portugal
Austria	Finland	Liechtenstein	Romania
Belgium	France	Lithuania	Slovak Republic
Bulgaria	Germany	Luxembourg	Slovenia
Canada	Greece	Malta	Spain
Croatia	Hungary	Monaco	Sweden
Cyprus (see "Notes")	Iceland	Netherlands	Switzerland
Czech Republic	Ireland	New Zealand	United Kingdom
Denmark	Italy	Norway	United States
Estonia	Japan	Poland	

Note by the Republic of Türkiye: The information in this document with reference to "Cyprus" relates to the southern part of the Island. There is no single authority representing both Turkish and Greek Cypriot people on the Island. The Republic of Türkiye recognises the Turkish Republic of Northern Cyprus (TRNC). Until a lasting and equitable solution is found within the context of the United Nations, the Republic of Türkiye shall preserve its position concerning the "Cyprus issue".

Note by all the European Union Member States of the OECD and the European Union: The Republic of Cyprus is recognised by all members of the United Nations with the exception of the Republic of Türkiye. The information in this document relates to the area under the effective control of the Government of the Republic of Cyprus.

Regions and sub-regions

The classifications used in this report are inspired by the M49 standard of the United Nations to the extent possible, as well as the DAC regional groupings. Climate finance that is not allocable by region is grouped under "unspecified".

The divergences from the UN M49 standard in this report are that:

- Central Asia includes all post-soviet countries in Asia, except Russia, namely Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan.
- Western Asia is replaced with the Middle East, whereas relevant post-soviet countries (Armenia, Azerbaijan, and Georgia) are included in Central Asia (see above).
- Sudan is included in Eastern Africa, rather than North Africa.

The main reason for these divergences is to ensure consistency with the DAC classification, which is used in the context of the underlying data on multilateral public and private finance mobilised. Moreover, "developed countries" are excluded from the individual regions.

Table A.5. List of developing countries and territories by region and sub-region

Region	Country
Africa	Algeria, Angola, Benin, Botswana, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Congo, Côte d'Ivoire, the Democratic Republic of the Congo, Djibouti, Equatorial Guinea, Egypt, Eritrea, Eswatini, Ethiopia, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Libya, Madagascar, Malawi, Mali, Mauritania, Mauritius, Morocco, Mozambique, Namibia, Niger, Nigeria, Rwanda, Saint Helena, Sao Tome and Principe, Senegal, Seychelles, Sierra Leone, Somalia, South Africa, South Sudan, Sudan, Tanzania, Togo, Tunisia, Uganda, Zambia, Zimbabwe
Asia	Afghanistan, Armenia, Azerbaijan, Bahrain, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, China, Democratic People's Republic of Korea, Georgia, India, Indonesia, Iran, Iraq, Israel, Jordan, Kazakhstan, Korea, Kuwait, Kyrgyzstan, Lao People's Democratic Republic, Lebanon, Malaysia, Maldives, Mongolia, Myanmar, Nepal, Oman, Pakistan, Philippines, Republic of Türkiye, Qatar, Saudi Arabia, Singapore, Sri Lanka, Syrian Arab Republic, Tajikistan, Thailand, Timor-Leste, Turkmenistan, United Arab Emirates, Uzbekistan, Viet Nam, West Bank and Gaza Strip, Yemen
Europe	Albania, Andorra, Belarus, Bosnia and Herzegovina, Kosovo, Moldova, Montenegro, North Macedonia, San Marino, Serbia, Ukraine
Americas	Antigua and Barbuda, Argentina, Bahamas, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago, Uruguay, Venezuela
Oceania	Cook Islands, Fiji, Kiribati, Marshall Islands, Micronesia, Nauru, Niue, Palau, Papua New Guinea, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna

Green Finance and Investment

Scaling Up the Mobilisation of Private Finance for Climate Action in Developing Countries

CHALLENGES AND OPPORTUNITIES FOR INTERNATIONAL PROVIDERS

This report explores evidence-based action areas to increase and accelerate the mobilisation of private finance for climate action in developing countries, and the role of international public finance providers in doing so. It draws on best-available data to provide disaggregated analysis of the sectoral, geographic and other features of private finance mobilised by public climate finance and presents key economy-wide, sector-specific, and institutional challenges to private finance mobilisation. The analysis is anchored in the context of the USD 100 billion climate finance goal, initially set for 2020 and extended to 2025, while also providing insights related to mobilising private finance for climate action in developing countries more broadly.

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