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DEMYSTIFYING ADAPTATION FINANCE FOR THE PRIVATE SECTOR

November 2016

•EXECUTIVE SUMMARY•

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FOREWORD

The Paris Agreement in December last year was a landmark achievement with 197 countries speaking in unison to endorse ambitious action to combat climate change. While this undoubtedly represents a historic turning point in the global climate negotiations, it is important to remember that in pledging to limit global warming to two-degrees we are locking ourselves into a significant global warming trajectory. Even if greenhouse gas emissions were halted today, we would still experience decades of considerable and damaging climate impacts, that will put communities at risk and undermine economies around the globe.

In order to mitigate this impact, climate resilient development will require considerable additional investment compared to development paths in scenarios without climate change. While estimates of the level of investment are uncertain, it is clear that levels of public finance available for adaptation presently fall well below the volumes required. In order to achieve the required levels of adaptation it is therefore essential to understand and mobilise private sector financial flows.

To date, much of the discussion on adaptation finance has focused on integrating aspects of climate resilience into public sector budgeting and the allocation of international climate finance. It is however, through the integration of climate resilience aspects into the day-to-day decisions of private enterprises around the world, that the most significant adaptation potential in economic development can be achieved.

Understanding how these decisions are made and are ultimately financed is critical for establishing the policy frameworks capable to releasing that potential and, hence, scaling-up private sector investment, and financing, for adaptation to the transformational scale required.

Demystifying Adaptation Finance for the Private Sector is part of a series of studies, developed by the Finance Initiative of UN Environment (UNEP FI) that analyse the role of private finance in confronting the challenges of climate change. This report examines how private enterprises make investment decisions in adaptation and how those investments are ultimately financed. The report analyses the market barriers that inhibit investments in adaptation, both on the side of the private enterprise investing in adaptation, and on the side of the private financial institution financing such investment. Finally, the report provides practical policy solutions to remove the barriers and scale-up the volume of financial flows for adaptation. Understanding how private sector adaptation occurs and is financed is critical to making best use of the limited supply of available public finance and realise levels of adaptation at sufficient scale to ensure the long-term resilience of economies across the globe.



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EXECUTIVE SUMMARY

Climate change will alter the conditions that underlie economies. Slow onset changes such as shifting rainfall patterns, increasing temperatures, and coastal intrusion will affect both global as well as national and subnational markets, while rapid onset events such as high intensity storms and flooding will increase disruption and drive economic loss.

These impacts are changing the conditions under which economies deliver goods and services. The resulting structural shift in the economy has already started to drive investment in new business models, technologies, and infrastructure, as well as the upgrading/ climate proofing and relocation of existing infrastructure. These investments are taking place against a background of unprecedented uncertainty accompanying climate change and its immediate physical impacts, as well as the more indirect consequences that might ensue. This uncertainty and lack of historical precedent, coupled with other market imperfections, inhibit private financial flows for adaptation from reaching the required volumes.

Much of the discussion on adaptation finance to date has focused on public spending. However, it is clear that a large share of the required adaptation measures, as well as the corresponding financing needs, will need to be provided by private sector actors.

This report finds that substantial investment in adaptation and resilience is already occurring in the private sector, financed by private capital. This investment is being undertaken within private enterprises of varying scales in response to the shifting market conditions driven by climate change. Understanding how this investment occurs, what drives it and how it is financed, is a low-cost entrance for governments and policy makers seeking to increase levels of adaptation.

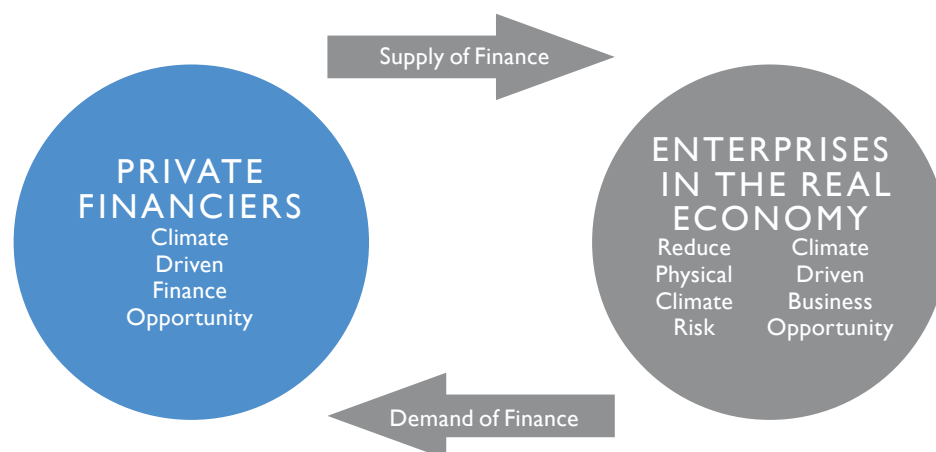
The ultimate aim of this report is to analyse the role of public actors in order to inform the way in which public finance and policy can be used to catalyse private investments in adaptation. The report focuses on the barriers inhibiting private financial flows for adaptation and how these barriers may be removed by public intervention.

Who are the relevant actors, and what is their motivation?

To understand better how private investments in adaptation occur and are financed, this report divides the relevant economic actors into four categories: (i) public policy makers, including legislators and regulators, both nationally and internationally; (ii) public finance providers, such as national, bilateral and multilateral banks and funds; (iii) private financiers, who constitute the supply side of private finance; and (iv) private enterprises in the real economy, who constitute the demand side. The flows of private adaptation finance occur between the two latter actors, while the role of the two former actors will be to provide the regulatory and legislative environments necessary to support these flows.

A private enterprise will typically choose to invest in adaptation measures to reduce physical climate risks directly, transfer the risk through insurance, or to capitalise on a new business opportunity that has arisen as a result of climate change.

The Two Dimensions of Investment in Private Adaptation Measures



Source: Authors

In order to analyse how these decisions are made, the report uses four climate impacts and provides examples of how they might typically affect private enterprises at different points of their business models. The study then identifies the measures with which businesses might respond with, so as to mitigate, or benefit from, the impact.

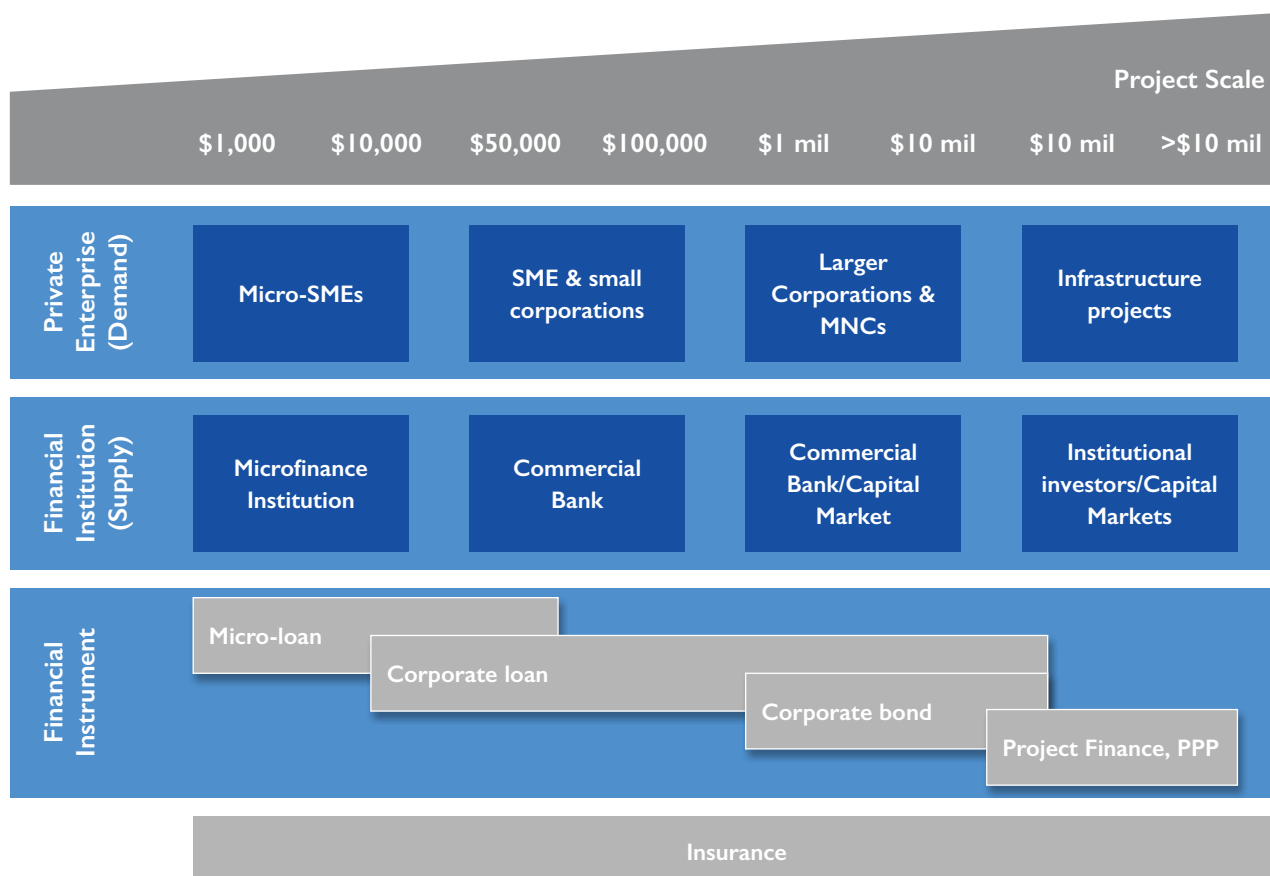
Using the resulting matrix of climate impact and counter-measures as a basis, the report describes how such adaptation measures by private actors would typically be financed, including the sources, financial instruments and actors that would typically be involved.

Broad Study Findings

The report applies this method to a sample of 28 case studies on adaptation to climate change by private sector actors. The analysis provides a number of broad insights:

- **Substantial investment is already being undertaken by private enterprises in adaptation and resilience.** Private enterprises have already started responding to climate change and many are mainstreaming adaptation and climate-related activities into their business planning, often without the explicit acknowledgement that what is being done contributes to their adaptation;
- **While climate change may adversely affect existing business activities, it will also lead to the creation of new opportunities.** Climate change is driving the emergence of new markets and creating business opportunities as emerging technologies are required to adjust to the changing conditions. Many private enterprises are responding by investing in the development and deployment of new products or technologies;
- **Private adaptation investments are typically financed using the same instruments as traditional business investments.** Adapting to structural change is an on-going component of strategic business management, addressing economic a range of social, political, and environmental factors. The physical impacts of climate change constitute one such example of structural change, albeit a significant one. If adapting to structural change is a core part of the normal course of business, then financing of adaption can be considered as part of normal business financing;

The Debt Financing Options for Private Enterprises Varying by Type and Scale



Source: Authors

- **Understanding both the supply of and demand for adaptation finance is critical to designing policies and public finance instruments to catalyse flows of private adaptation finance.** There is a shortfall between current volumes of adaptation finance and what is required to facilitate the transformational change of the economy as it adapts to climate change. When designing public policies or finance interventions to mobilise private finance, it is critical to understand the origins of this shortfall. Literature in the field of economics points to several barriers, in the form of market imperfections, which create distortions in the risk/return profile of an adaptation investment and suppress levels of adaptation below the ideal and required amount. These barriers manifest on either the demand side of private adaptation finance among the private enterprises challenged by physical climate change or on the supply side of finance, among private financiers;
- **Policy makers should focus on addressing market imperfections.** The report argues that addressing market imperfections and therefore enabling the market to perform its role of allocating capital efficiently, constitutes an effective approach to increasing financial flows for adaptation to socially optimal levels. In doing so, the report adopts a definition of barriers as, “a friction that prevents socially optimal (adaptation-related) investments from being commercially attractive”.

Barriers to Adaptation Finance

These barriers, or market imperfections, can include:

- **Positive externalities**, when private investments generate benefits to society that do not generate additional cash flows and hence are not captured by the financial return. This, in turn, means that financial returns on the investment do not reflect the true value of undertaking the activity;
- **Imperfect capital markets**, when financial markets are unable to efficiently allocate capital or transfer risk. For instance, many financial markets are characterised by a shortage of longer-term credit, which inhibits the ability to finance investments required to cope with longer-term or distant climate impacts;
- **Incomplete or asymmetric information**, when critical information such as that pertaining to the expected impacts of climate change is unavailable, inaccessible, or distributed unevenly among different actors. Without accurate and reliable climate data actors are disempowered from making informed decisions and investing accordingly.

Describing barriers in this way can form the basis of remedial policy or public finance interventions that can either modify the **market environment in a way that the barrier is eliminated, or compensate the private actors for the effects on the risk/return profile.**

Tools for Addressing Barriers

Governments can use a range of known policy and financial instruments to mobilise private sector finance towards investments that build climate resilience and promote the adoption of adaptation technologies:

- **Addressing incomplete and asymmetric information:** Such as publically funded information campaigns to provide accurate information and knowledge on climate impacts, as well as to showcase promising adaptation strategies.

For private enterprises, raising awareness of adaptation risks, costs and options will strengthen their capacities to identify and invest in appropriate adaption measures.

- **Addressing imperfect capital markets:** Such as ensuring adequate supply of finance for adaptation and resilience investments.

Providing long-term public finance for on-lending can adjust for financial markets that fail to provide sufficient volumes of affordable, long-term debt. In addition, credit enhancement in the form of governmental guarantees can reduce the risk of adaptation-related lending to smaller enterprises for lenders. Public auctions of credit guarantees to commercial banks can further reduce the burden to public finance institutions and reduce the cost of borrowing to micro, small or medium enterprises (MSMEs) or corporations, which has a knock-on effect of freeing up capital for further investment in other activities.

- **Addressing Positive Externalities of Adaptation-Related Investments:** Such as using grants or subsidies to internalise the social benefit of a public good. Positive externalities can be internalised through financial instruments, such as taxes or subsidies that capture the value of the positive externality and provide reimbursement to the investor. This will improve the return from the investors' perspective and could bring it closer to the true value ("social rate of return") of the adaptation activity.

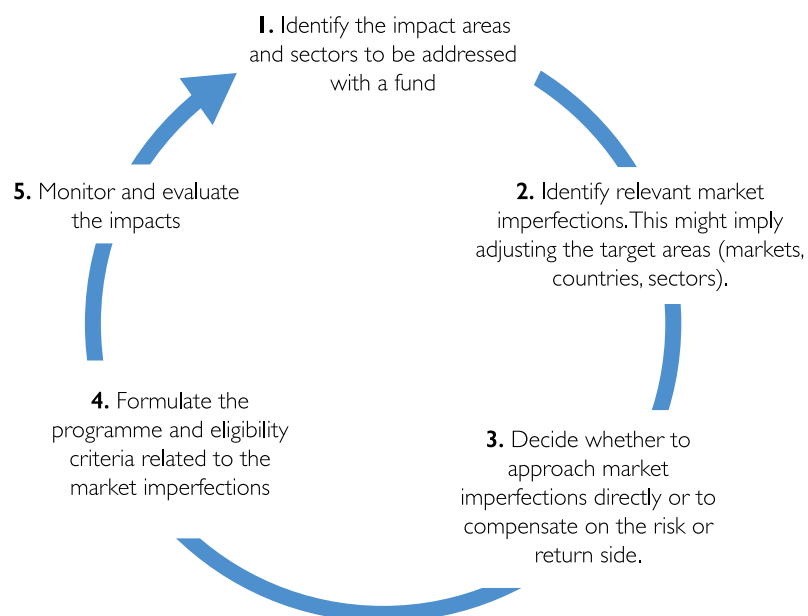
Recommendations for Policy Makers

Policy makers and other public actors can help facilitate or moderate the structural changes required in the private sector by:

- **Integrating a more granular, 'actor-based' perspective into national adaptation planning**, rather than limiting the process to high-level planning approaches at the macro level; considering the risk-return perspective of enterprises when making investment decisions; and identifying the positive impacts of private adaptation activities on other actors so as to incentivise corresponding activities;

- **Stimulating the creativity of the private sector.** This could be achieved by increasing the support for knowledge generation and innovation. This would be sector- and potentially actor-specific and should be aimed at contributing to a general climate of innovation where there is also room for new business models to emerge;
- **Adhering to clear processes for the determination and assessment of criteria for public spending.** As public funds are limited, the efficient use and allocation of this funding is important. Public authorities and financial institutions should set clear criteria for how funding decisions are made, and assess criteria over time.

Steps for the Assessment of Investment/Spending Criteria of Public Funds



Source: Authors

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Demystifying Adaptation Finance for the Private Sector seeks to shed light on the role, potential, and policy needs of private financial institutions in enabling adaptation to the unavoidable physical impacts of climate change. Using a broad sample of adaptation-related measures, it explains how private sector actors can adapt their production processes, supply chains, and marketed products to a changing climate. It explains how the required investments will be financed, and identifies the barriers currently inhibiting private financial flows for adaptation, both on the demand and supply sides of financial transactions. Importantly, the study discusses the catalytic role that national and international public actors need to play in establishing the policy and public finance regimes to mobilise private adaptation finance at scale.