



## Green Finance: Actors, Challenges and Policy Recommendations

### Summary

The year 2015 seems to have been an historic turning point in combatting climate change. Not only did the world agree on the first universal climate agreement, but the United Nations established the Agenda 2030 for Sustainable Development. Implementing the Paris commitment means limiting global warming to below 2°, striving even for 1.5°. In practice, this implies the radical decarbonisation of our economies, which entails fundamental changes in the financial world towards what has been termed “green finance”.

Green finance represents a positive shift in the global economy’s transition to sustainability through the financing of public and private green investments and public policies that support green initiatives. Two main tasks of green finance are to internalise environmental externalities and to reduce risk perceptions in order to encourage investments that provide environmental benefits.

The major actors driving the development of green finance include banks, institutional investors and international financial institutions as well as central banks and financial regulators. Some of these actors implement policy and regulatory measures for different asset classes to support the greening of the financial system, such as priority-lending requirements, below-market-rate finance via interest-rate subsidies or preferential central bank refinancing opportunities.

Although estimations of the actual financing needs for green investments vary significantly between different

sources, public budgets will fall far short of the required funding. For this reason, a large amount of private capital is needed.

However, mobilising capital for green investments has been limited due to several microeconomic challenges such as problems in internalising environmental externalities, information asymmetry, inadequate analytical capacity and lack of clarity in the definition of “green”. There are maturity mismatches between long-term green investments and the relatively short-term time horizons of savers and – even more important – investors. In addition, financial and environmental policy approaches have often not been coordinated. Moreover, many governments do not clearly signal how and to what extent they promote the green transition.

In order to increase the flow of private capital for green investment, the following measures are crucial. First, it is necessary to design an enabling environment facilitating green finance, including the business climate, rule of law and investment regime. Second, the definition of green finance needs to be more transparent. Third, standards and rules for disclosure would promote developing green finance assets. For all asset classes – bank credits, bonds and secured assets – voluntary principles and guidelines for green finance need to be implemented and monitored. Fourth, because voluntary guidelines may not be sufficient, they need to be complemented by financial and regulatory incentives. Fifth, financial and environmental policies as well as regulatory policies should be better coordinated, as has happened in China.

## Green finance: what it is and why we need it

Realising the climate agreement and starting the overdue implementation of transforming our economies requires enormous effort from the financial sector and its actors. Unfortunately, the current financial system is not providing the necessary financing. The main reason for this lies in the external costs of carbon emissions that are not adequately considered in prices. Even more, in most countries the use of fossil fuels is heavily subsidised, which implies that investments in new energies and energy efficiency are becoming unattractive. The first best solution to this problem – the correct pricing of carbon emissions through the abolition of fossil fuel subsidies on the one hand and the introduction of carbon emission trading systems or carbon taxes on the other – has only been successful on a limited scale. Even if financing is provided, appropriate green investment projects have often not been available, or financing for green investments is not allocated appropriately. Hence, in addition to carbon pricing we have to adapt our financial system.

Green finance comprises the following three aspects. First, it includes the financing of public and private green investments – including preparatory and capital costs – in the following two areas (i) environmental goods and services such as water management or protection of biodiversity and landscapes; and (ii) prevention, minimisation of and compensation for damage to the environment and to the climate, such as dams or measures for increasing energy efficiency. Second, green finance covers the financing of public policies – including operational costs – that encourage the implementation of environmental and environmental-damage mitigation or adaptation projects and initiatives, for example feed-in tariffs for renewable energies. Third, it comprises the components of the financial system that deal specifically with green investments, such as the Green Climate Fund or financial instruments for green investments, such as green bonds and structured green funds, including their specific legal, economic and institutional framework conditions.

## General challenges to green finance

Even taking into account the wide range of estimates of the financing needs of green investments, public financial sources will be insufficient to finance the green transformation. Hence, a significant amount of private capital is needed. However, private green finance is still scarce due to a range of microeconomic challenges, including problems in internalising environmental externalities, information asymmetry (e.g., between investors and recipients), inadequate analytical capacity of issuers and investors, a lack of generally accepted green definitions and maturity mismatches (G20, 2016). The unclear definition of green finance leaves room for “green-washing”, with issuers of “green assets”, for example, making misleading claims about the environmentally friendly nature of their assets.

Moreover, the short-term time horizon of savers and investors does not match the long-term nature of green investment projects, which often extend over more than a decade. In addition to these general challenges, the specific challenges of different actors impede the rise of green finance.

## Important actors and their instruments

There are a number of crucial financial intermediaries and institutions driving the greening of the financial system, including banks, institutional investors and international financial institutions (IFIs), as well as regulatory authorities and central banks. In particular, regulatory authorities and central banks can have an important impact on the speed at which the greening of the financial system takes place, as the legal and supervisory regime determines the framework for the financial system.

### Banks

Banking system assets play an important role in the international financial system because they represent an important share of global financial assets. In particular, emerging markets and developing countries have established numerous measures to mobilise finance for sustainable development and to mainstream green finance in the banking system (Alexander, 2014). These measures include priority-lending requirements and below-market-rate finance via interest-rate subsidies. However, these measures carry risks because they could also bring about misallocation of financial resources. In addition, these measures could cause fiscal problems (UNEP, 2015). When designing these measures, these risks have to be taken into account.

### Institutional investors

It is widely acknowledged that a large share of the trillions of USDs needed to finance green investments have to come from institutional investors, including pension funds, sovereign wealth funds and insurances. However, this investor group is constrained by a number of hurdles: green investments are generally not included in the relevant benchmarks of rating agencies as they do not have a sufficient track record to be given a rating. In addition, green investments are usually not possible at scale because of an insufficient number of appropriate green projects. Generally, even if institutional investors would be willing to invest in long-term and sustainable projects, the prevailing regulation often prevents them from doing this, or allows it only in a very limited way because this regulation requires cautious and conservative investment strategies.

### International financial institutions

In order for investments in green products and projects to be significantly up-scaled, pioneering work is necessary.

IFIs can support the green transformation in three specific ways. First, they have a pioneering role in testing new ways of financing sustainable development: voluntary commitments to take climate risks and the carbon footprint of potential investments into account when making investment decisions by using the notional “shadow prices” of carbon. Second, IFIs have an important role to play in the mobilisation and rechannelling of private and institutional capital for green investments by the provision of innovative instruments such as green bonds. Finally, IFIs are predestined to build a coalition of green financiers with the aim of reforming global financial governance to become supportive of sustainable development (Lindenberg, 2016). Since the IFIs often have different objectives and instruments, one main challenge is to apply the same definition for green finance in order to prevent “greenwashing”.

### *Central banks and regulatory authorities*

Apart from IFIs, central banks and other regulatory authorities could push financial markets towards more sustainability by establishing adequate policies and regulations. They are particularly called upon to support the green transformation (Alexander, 2014). The current financial system is driven mainly by short-term yields and, consequently, a chronic investment deficit for long-term and sustainable projects is one of the most urgent problems financial regulators could help to tackle. Banking stress tests and standards of due diligence for banks and financial institutions could give greater consideration to climate risks in order to impact the common investment behaviour. What is more, green financial guidelines and regulations can avoid competitive distortions due to the higher costs related to green financial activities.

While green prudential regulation represents an effective lever to green investments, there are many more examples of green policies and regulations. For instance, in many countries – including Australia, Brazil, Canada, Denmark, France, Netherlands, New Zealand, Norway, Sweden and the UK – regulators require investors to include information on environmental, social and governance aspects in their financial disclosures (UNEP, 2015).

One main problem with green regulation in the financial sector has been that financial and environmental policy approaches have often not been coordinated. Finance ministries have frequently not yet given bank supervisors the mandate to require banks and financial institutions to report and disclose their environmental risks. In this regard, China and Peru represent exceptions and some kind of path leaders because these countries have coordinated their environmental and finance ministries as well as their banking regulators by, for instance, exchanging information and data, and have assessed the adoption of environmental laws (Alexander, 2014).

#### **Box 1: Green Bonds**

Various financial market actors have identified green bonds as a key instrument of climate finance. The bond market, which includes longer-term debt instruments delivered by governments, regions, municipalities and enterprises, is mainly used to change illiquid assets into tradeable assets, backed by securities. Since bonds make up the largest single asset class in the financial system, it is possible to issue many green bonds. According to estimations of the Climate Bonds Initiative, a non-governmental organisation that supports the growth of green bond markets, issuance could rise to USD 100 billion in 2016.

On the one hand, green bonds have several benefits for green projects and investors because they represent an additional source of financing for green investments. Moreover, green bonds provide long-term financing for green projects and investors. On the other hand, green bonds are associated with some difficulties. Labelling a bond “green” incurs costs related to administrative certification, verification and monitoring, which gives rise to “greenwashing”. To avoid “greenwashing”, investors need more information than green labels provide. Third-party verification must include “second-opinion” providers and more detailed green bond ratings. Green bond valuations by rating agencies are in an embryonic stage: agencies should ensure ongoing monitoring (Berensmann / Dafe / Lindenberg, 2017).

In addition to financial sector regulators and central banks, the Financial Stability Board (FSB) represents a crucial multilateral actor in regulating environmental risks. This institution assumes the task of promoting global financial stability by coordinating the development of regulatory, supervisory and other financial sector policies. As regards green finance, the G20 Finance Ministers and Central Bank Governors mandated the FSB to assemble public and private sector participants to assess the role of the financial sector in green transformation and to analyse financial stability against the background of the green transformation.

### **What needs to be done?**

In order to enhance private capital for green investment, it is necessary to design an enabling environment facilitating green finance. Among other factors, the business climate, as well as rule of law and investment regime, are important aspects that support the increase of green investment activities. Above all, a coordinated approach of all public and private actors of the financial system at all levels is needed.

Several general measures could contribute to increase private capital for green investment. Country authorities should support green finance by backing the strategic framework for green finance, notably the Sustainable Development Goals (SDGs) and the Paris Agreement (G20, 2016). By providing clear policy signals, this could

be an incentive for actors of the international financial markets to pursue the SDGs and to fulfil the Paris Agreement.

With the start of its G20-presidency on 1 December 2016, Germany has the opportunity to carry on China's efforts at establishing a clearly defined green finance agenda on the list of G20 concerns. The world needs to pursue its green transformation, and ensuring that the world's 20 most influential nations keep discussing the green agenda could be decisive at this point in time. Financial and environmental policies, as well as regulatory policies, should be better coordinated, as in the case of China. The ministries of finance should give bank regulators the mandate to supervise the financial sector's environmental risks.

In the same way, it would be necessary to increase transparency about the definition of green finance to prevent "greenwashing". Voluntary principles and guidelines for green finance need to be established and monitored for all asset classes: bank credits, bonds and secured assets for institutional investors. However, voluntary guidelines alone will not bring about a "green transformation of finance" if not complemented by financial and regulatory incentives.

Moreover, country authorities, together with IFIs and the private sector, should enlarge capacity-building platforms, for example to discuss the effects of the green transformation on credit risks and to elaborate adequate risk modelling and trainings. The Sustainable Banking Network and the Principles for Responsible Investment represent good examples of capacity-building platforms (G20, 2016).

In addition to these general policy recommendations, all important actors for green finance should contribute to the further development of green finance:

- Banks should accelerate their green finance instruments, notably priority-lending requirements and capital adjustments. Banks and financial institutions should report and disclose their systemic environmental risks (Alexander, 2014). In this regard, the G20 countries should serve as good examples.
- All institutional investors should state in their annual report in which way their investment policy considers environmental, social and governance factors and disclose their carbon footprint.
- For mobilising private capital for green investments, IFIs assume a crucial task because they can alleviate the environmental risks by offering risk-mitigating instruments and guarantees. In the same vein, IFIs are able to accumulate green projects for appropriate green financial products. In addition, IFIs, notably multilateral development banks, take on an important role in promoting the market development for green financial products (Lindenberg, 2016).
- In order to ensure financial stability, central banks should assess the potential effects of environmental degradation, climate change impacts and resource scarcities on price and financial stability. In addition, they should incorporate environmental effects in their central bank reporting. Moreover, central banks could acknowledge high-rated (AAA) asset-backed securities as collateral for central bank loans to banks (Alexander, 2014).
- Similarly, regulatory authorities should take into account environmental risks. Financial regulation such as Basel III and Solvency II should include exceptions with regard to capital and liquidity requirements for green investments.

Whether the ambitious climate and sustainability goals can be achieved, will depend significantly on the determination with which these actors drive the development of green finance forward.

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