



Frankfurt School  
FS-UNEP Collaborating Centre  
for Climate & Sustainable Energy Finance



**Inquiry** into the Design of a Sustainable  
Financial System: Policy Innovations  
for a Green Economy

# **Delivering the green economy through financial policy**

Technical paper

Frankfurt School of Finance & Management – UNEP Collaborating Centre for  
Climate & Sustainable Energy Finance

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# 1. Introduction and Context

## **Purpose of paper: situate in overall framework**

In January 2014, the United Nations Environment Programme (UNEP) launched an Inquiry into policy options for guiding the global financial system to invest in the transition to a green economy. There is an urgent need to accelerate the transition to a green economy by better aligning the financial system to the resilience and the long-term success of the real economy. The UNEP Inquiry is intended to support such actions by identifying best practice, and exploring financial market policy and regulatory innovations that would support the development of a green financial system.

Back in late 2013, a Working Group Meeting on Climate Finance took place in Frankfurt following up on an earlier meeting in April 2013 of the UN Secretary General with a group of financiers organized during the Bloomberg New Energy Finance (BNEF) Summit. This Frankfurt Dialogue was jointly organized by the United Nations Environment Programme, including both its Frankfurt School - UNEP Collaborating Centre for Climate & Sustainable Energy Finance (the "Centre") and the UNEP Finance Initiative, with the UN Secretary General's Office and Bloomberg New Energy Finance. Arguably the purpose of the finance sector should be to efficiently finance the development of the global economy on a path which is sustainable and within planetary boundaries. The reality that the concentration of carbon dioxide in the Earth's atmosphere has now surpassed 400 parts per million for the first time in several million years, indicates that currently the finance sector is not able to fulfil this purpose. The meeting in Frankfurt engaged 50 international experts in a dialogue on how regulators, investors and the finance industry can work with the United Nations to help address this climate finance challenge. "Financial Regulation" was defined as one of the two focus areas for discussion.

The Centre appreciates the opportunity to contribute to this important discussion on green financial regulation. In this background paper we aim to provide an idea of the different dimensions of the financial system and their potential interaction with the real economy. The focus is on regulation that is targeted to the financial sector, rather than the whole financial system (which would, e.g., include the full toolbox of fiscal policy).

Within this focus, we identify areas where the financial sector can actually have an impact on moving the green economy forward. Our aim is to demonstrate the extent to which green financial policy is already actively being practiced. This is necessarily a narrow view; regulatory measures on the broader economy could potentially have significant impact on the green economy. Accordingly, we touch upon how current "green financial regulation" fits into the broader framework.

The paper aims to provide a solid overview of the current status quo and to serve as a basis for discussion among regulators, financiers and political decision makers on whether financial regulation should be used as an effective tool to redirect capital flows.

Taking into account the current status of the UNEP Inquiry as well as the purpose of this paper to provide a basis for an informed discussion, we refrain from using the term “best practices” but rather restrict ourselves to describing our observations, i.e. describing current practices, and providing food for thought at this point in time.

This paper does not, for the most part, assess the broader economic policy framework that could directly or indirectly impact the financial sector and influence its activities in a greener direction (or vice-versa). Given that the financial sector is a key player in a modern market economy, policies that drive towards sustainability will certainly influence financial sector behaviour and capital allocation.

### **Work focus, limitations and call for comments**

It has been written in the context of the preparation of first Inquiry Advisory Council meeting and is primarily based on publicly available information. We, however, acknowledge that the way regulation is interpreted, incorporated in the management and steering of financial institutions and monitored by the regulator is crucial and can massively influence the success of a regulatory intervention. Focusing on these aspects will need the support of both, regulators and financial institutions in the respective countries and we hope that the discussion in the context of the first Inquiry Advisory Council as well as follow-up discussion with additional stakeholders will shed more light on these “soft factors”. In the meantime, we appreciate comments from practitioners on the current version of the paper and its conclusions.

### **Green Economy and the Green Economy business case for the private sector**

UNEP launched its Green Economy Initiative in 2008. It defines a green economy as one that “results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy can be thought of as one which is low carbon, resource efficient and socially inclusive.”<sup>1</sup>

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<sup>1</sup> See <http://www.unep.org/greeneconomy/AboutGEI/WhatisGEI/tabid/29784/language/en-US/Default.aspx>.

For the purpose of our analysis we follow this definition of green economy as an economic development model based on sustainable development promoting inter- and intragenerational equity and consequently taking into account both social and environmental concerns. Our definition of the green economy rests on the three pillars of sustainability: the economic, environmental and social pillar.

We expect social equity to trigger primarily a redirection of financial flows between different stakeholders. Financing environmentally friendly growth will, however, have a more substantial impact as it requires a stronger shift to long-termism. In addition, pricing of externalities will be key to overcome challenges with regard to common pool resources.

### **Financial sector's role in driving the global transformation**

The financing required for a green economy transition (investments, not incremental costs) is substantial. This is primarily driven by the fact that most green technologies are characterized by high capital intensity and consequently high upfront financing requirements. By 2020, according to the World Economic Forum, about USD 5.7 trillion will need to be invested annually in green infrastructure, much of which will be in the developing world. This will require shifting the world's USD 5 trillion in business-as-usual investments into green investments, as well as mobilizing an additional USD 700 billion to ensure that this shift actually happens.

The financial sector's mandate is to manage risk, allocate capital, mobilize savings and – as financial intermediary – manage risk and maturity transformation and convenience denomination, all at the lowest possible transaction costs. At an individual institutional level, profit maximization remains the driver, with the focus moving partially from short to mid-term profits.

Among others, UNEP FI has identified high risk perception, driven by longer payback periods and the absence of policy and regulatory measures to internalize externalities, as key current barriers for private sector investments in green assets.<sup>2</sup>

Leadership and regulation are key elements to consider in any well-founded discussion on scaling up private sector investments required for a transition towards a green economy. Leadership in climate finance is required to re-allocate capital from business-as-usual into new, green asset classes with an already appealing risk-return profile. Where costs have yet to come down a learning curve, or where risk perception remains high, leadership in climate finance is required to overcome initial transaction costs relating to new technologies and

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<sup>2</sup> See [http://www.unep.org/greeneconomy/Portals/88/documents/GE\\_FINANCE%202juin.pdf](http://www.unep.org/greeneconomy/Portals/88/documents/GE_FINANCE%202juin.pdf).

markets. Leaders are required to demonstrate the viability of green business models and green banking approaches and to mainstream these. The financial viability of green projects/business models is the key pre-requisite.

Real economy regulation and/or a pricing of climate externalities are required to create this necessary financial viability and allow finance sector leaders to become first movers. Finance sector regulation could potentially further incentivise financial institutions (FIs) to supply capital to green assets.

A number of NGOs regularly attack FIs for financing business-as-usual rather than supplying financing for green business models and projects. They insist that FIs fail to use their power to drive transformation. Private sector representatives remain cautious on the ability of large FIs to easily “re-allocate” capital and consequently drive transformation. The number and volume of green investment opportunities with appropriate risk-return-profile remains limited (even at “normal” financing costs). Representatives of large financial intermediaries and institutional investors regularly stress that it is currently nearly impossible to avoid some allocation of their capital to brown investments because green investment opportunities are lacking.

While leadership by first mover private sector FIs is an important early catalyst to sector transformation, their actions are generally limited to identifying and realizing investment opportunities in the existing “financial eco-system”, e.g. within existing risk-return expectations. Regulation, on the other hand, plays a more fundamental role in shaping the “financial eco-system” and therefore in altering the risk-return paradigm. Aligning the finance sector with climate imperatives and, consequently, mobilizing private finance at the required scale, will depend on bold leadership (in form of real economy and financial sector regulation) by national as well as international policy-makers, vis-à-vis fierce vested interests. In particular, leadership by the public sector will be needed i) to address the global GHG externality (by putting a price on carbon; etc.) and ii) to mobilize public finance at-scale with a view to leveraging sufficient volumes of private climate finance in low carbon solutions. Private sector leadership is required to overcome first mover barriers and to enable the private sector to enter new green asset classes or participate in new transaction structures.

### **Scope of paper: areas examined**

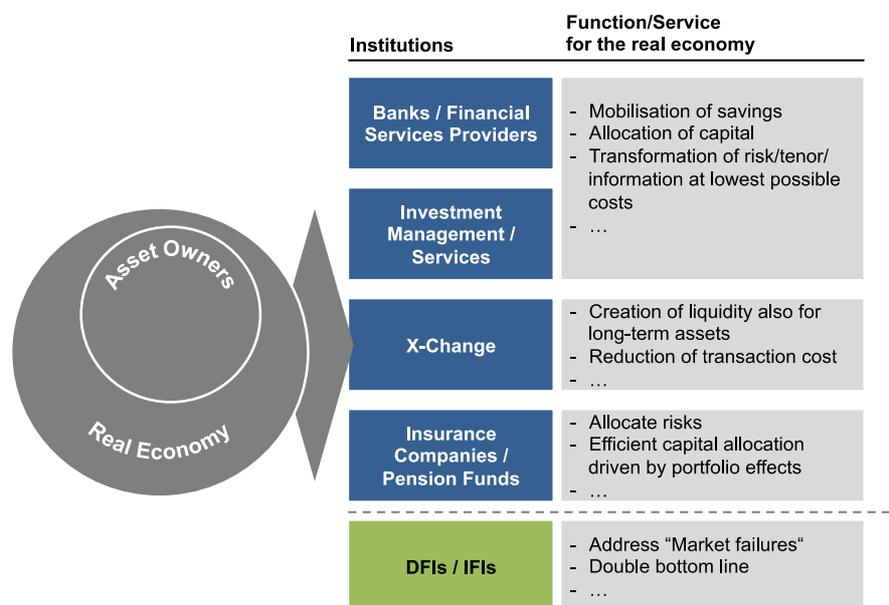
This paper is focused on financial regulation and the instruments of financial policy that apply to the financial sector. The financial sector plays a valuable financial intermediation role, and is the source of capital needed for economic growth, but in a market economy, capital allocations will be dictated by risk-return considerations in the real sector. The financial sector can react to real sector opportunities, but it generally cannot create such opportunities in any

sustained manner. Section 2 of the paper maps out the financial regulatory landscape and lays out the functions that different FIs fulfil. In Section 3, we look at regulatory mechanisms that operate via financial markets to influence investment behaviour. Not all regulations that impact the financial sector are explicitly targeted to the financial sector, and where relevant, we also touch upon some elements of public policy that have an impact on the financial sector. Finally, Section 4 concludes with some open questions that warrant discussion and further study.

## 2. Mapping Financial Regulation

Chart 1 illustrates our definition of the financial sector as well as the functions the different subsectors fulfil for the real economy.

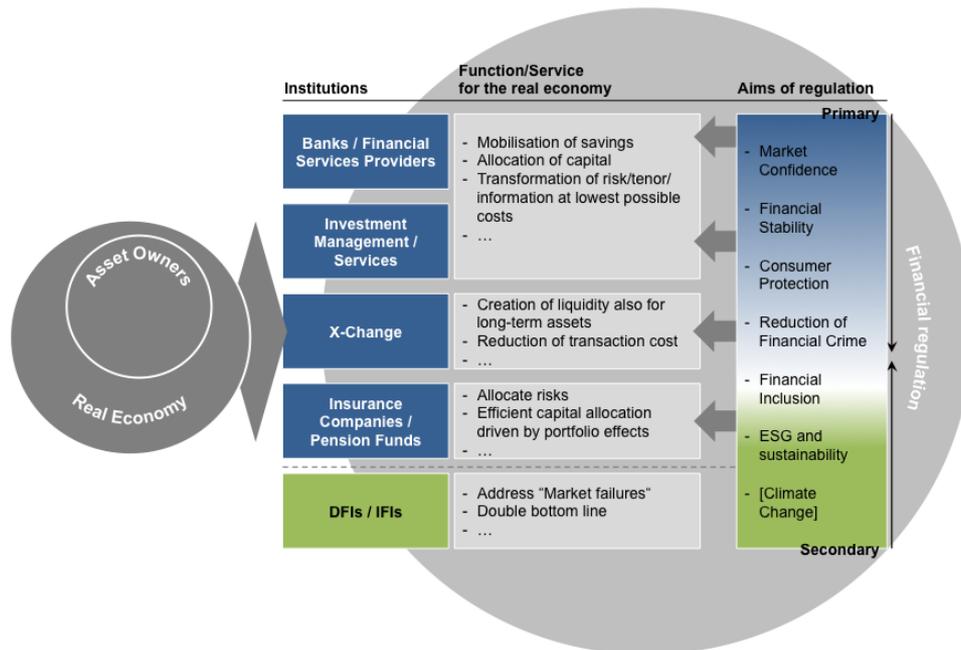
**Chart 1: Financial Sector Institutions and Functions**



Given the important role of development/ international finance institutions we have included them in our universe of subsectors rather than seeing them as an instrument of public sector intervention.

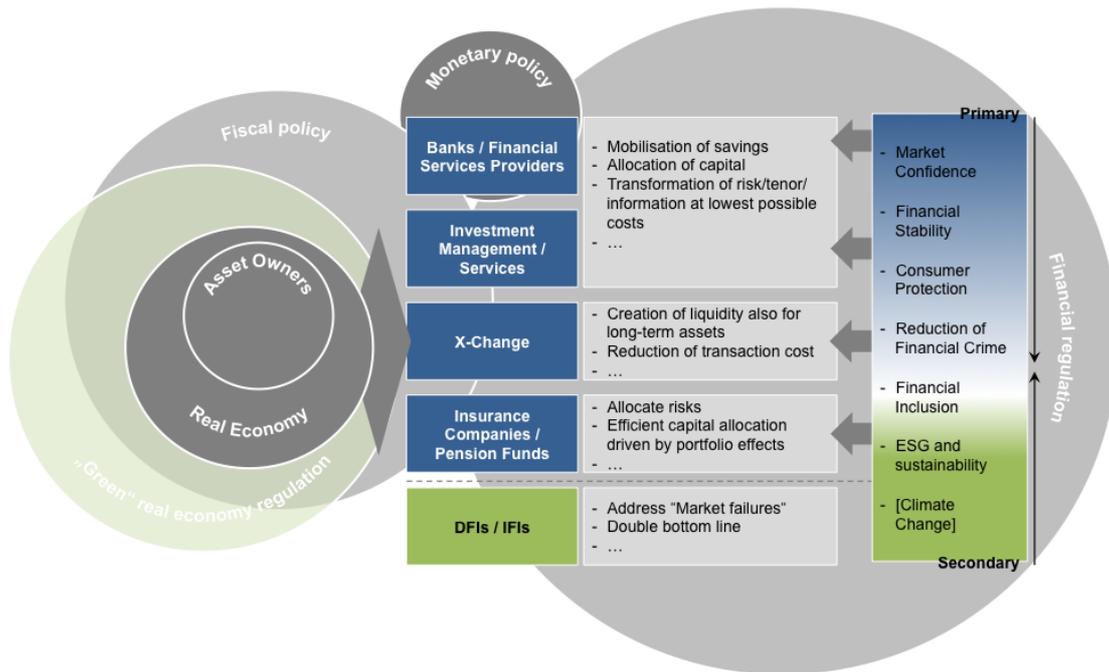
The financial sector acts in the existing "financial eco-system" which is framed by financial regulation, shareholder expectations and further "rules of the games" like voluntary standards. Financial regulation is required to facilitate the best possible financing and financial services supply to the real economy and to society without endangering the stability and liquidity of the financial sector and society's trust in financial markets. The latter is a kind of common pool resource (like carbon emissions).

**Chart 2: Regulatory Objectives in the Financial Sector**



As shown in Chart 2, primary targets of financial regulation are clearly the stability of the financial sector as well as market confidence. Consumer protection, in particular protection of small volume savings, is an important component as well. Besides these primary targets, financial regulation often includes additional targets which are not directly linked to the primary targets. Prevention of financial crime is one example highlighting that financial regulation does not only focus on one single pillar. Regulation with regard to the prevention of financial crime, however, does not conflict with the primary target. This may not be the case for financial regulation supporting a transformation towards a green economy. The argumentation for green financial regulation could be based on two pillars: on the one hand, that climate risks endanger the stability of the financial sector, and on the other, that regulation is required to force the financial sector to drive global transformation towards a green economy. The latter would imply a widening of the scope of financial regulation, potentially triggering conflicts of goals and requiring trade-offs. Chart 3 shows the broader regulatory framework impacting the financial sector. Besides direct financial regulation, the activity of the financial sector (and the real economy) is heavily driven by "green" real economy regulation, including green investment targets, carbon markets, incentives and other regulatory incentives as well as the fiscal policy. For the banking subsector, monetary policy plays an important role and could be used to influence the behaviour of institutions.

**Chart 3: Broader Regulatory Framework Impacting the Financial Sector**

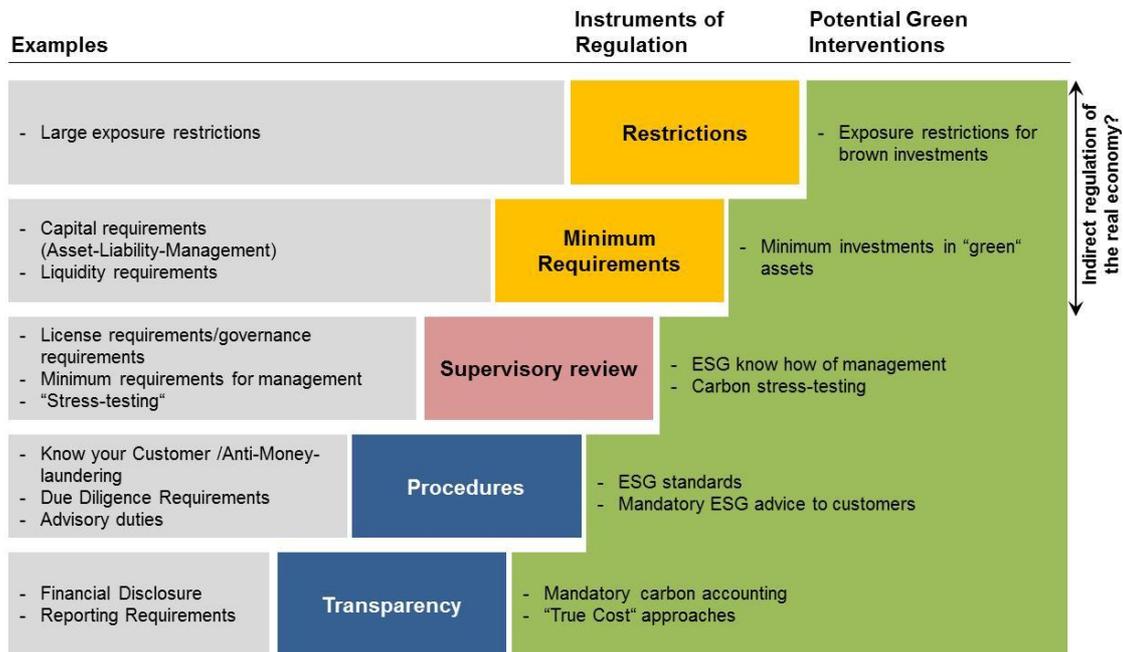


While these interventions can have a significant impact, we focus on instruments of the core financial regulations in this paper.

Chart 4 aims to categorize instruments of financial regulation across the above-described subsectors. These categories can also be applied for other "rules of the game", for example, voluntary industry standards. Transparency and procedure requirements aim to provide a solid basis for supervision. In particular, minimum due diligence requirements and liability in case of disregard of due diligence requirements ensure an alignment of real economy and financial sector regulation. For example, anti-money laundering procedures have been implemented to avoid the provision of financial services to illegal activities. The Equator Principles are one example of voluntary commitments relating to internal procedures of FIs. While they primarily ensure the conformity of projects with international environmental and social criteria, they might restrict FIs from financing activities that may well be legal in the country concerned.

Minimum requirements and restrictions, taking into account the overall portfolio of the FI, can also prevent FIs from providing financing to legal activities.

**Chart 4: Instruments of Financial Regulation and Potential for Green Intervention**



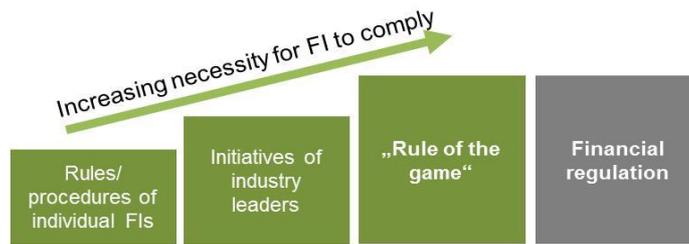
The chart also provides examples for potential green intervention in the five categories. In line with the above, green interventions in the yellow categories are more likely to establish an indirect regulation of the real economy via the financial sector. Interventions in the blue categories tend to go hand in hand with real economy regulation. They might not push FIs into a transformative role. However, they can create awareness and provide information to customer of FIs/asset owners and allow them to make an informed choice. With an increased awareness among asset owners a stronger pull for green products/investment strategies can be expected creating attractive markets for FIs.

Regulatory reform in response to the global financial crisis has focused on important considerations with regard to the primary target, but has largely ignored implications for long-term investments with climate benefits. For instance: the impact of Basel III on bank lending, as well as Solvency II on the insurance industry, might not only limit liquidity of funding but also reduce the overall appetite for long-term investments in low-carbon infrastructure.

**Financial regulation vs. other rules of the game**

Besides financial regulation, industry leadership plays a crucial role, in particular if champion FIs play a leadership role, developing new "rules of the game" that create peer pressure on others to comply.

**Chart 5: Leadership creates peer pressure**



Rules and procedures of individual FIs primarily target risk management, and, in particular, reputational risk (e.g. cluster ammunition policies). Initiatives of industry leaders as a group can primarily be observed in cases where substantial competitive disadvantages would arise, i.e. business would be lost, if certain ESG criteria were established (e.g. Equator Principles). These might finally develop into rules of the game, if there is sufficient uptake from others such that a non-adhering institution would risk being isolated and need to explain its position. In section 3 we assess various industry initiatives besides regulatory interventions and highlight to which extent we feel they have become rules of the game.

### **Financial sector stability and Green Economy: Conflicting or reinforcing targets?**

Environmental issues are largely “overlooked” when FIs are undergoing health check-ups; for example the stress test on a bank’s loan book, or the value at risk in an investment portfolio, are not subject to consideration of carbon exposure. While most FIs have implemented ESG risk management systems, the focus appears to be on reputational risk.

The exposure to climate risk varies depending on the FI’s position in the financial value chain and the investment instruments used. While equity investments might face considerable climate risk in relevant sectors, the risk for short-term lenders appears limited. With average debt tenors having decreased significantly over the past years, the exposure of commercial banks appears to be rather limited (except for non-avoidable losses and the systemic risk). In case of decreasing revenues and profitability of companies, such as, for example, due to carbon regulation, the cash flows are usually still high enough to cover senior debt service and to avoid default with commercial banks. For losses due to climate events, such as extreme weather events, insurance coverage typically keeps the lenders whole. Equity investors, however, might face returns below expectations.

Public sector intervention is required to make brown investment unprofitable and consequently reduce profitability for investors in such assets in the short term (except for losses resulting from extreme weather events which are “unavoidable”). Given the slow progress made in international climate negotiations, the risk of stranded assets due to a sudden change in regulation appears limited. In addition, the probability of regulation

endangering the financial viability of a broad range of companies and consequently, losses for commercial lenders appears low, given the massive social and economic collateral damage. Any “climate stress testing” should therefore start at the top of the financial value chain, i.e. asset owners with long investment horizons and significant equity exposure.

Representatives of large FIs remain cautious on the ability of large FIs to easily “re-allocate” capital and consequently drive transformation. The number and volume of green investment opportunities with appropriate risk-return-profile remains limited (even at “normal” financing costs). Large financial intermediaries and institutional investors stress that it is currently nearly impossible to avoid some allocation of their capital to brown investments because of lacking green investment opportunities.

A more intense dialogue is needed to reveal the relative importance of predictability of cash flows resulting from an investment versus liquidity of an asset as drivers of finance sector stability. Recent financial regulation changes have primarily increased liquidity requirements. With a green economy requiring more long-term investments, the long term financing demand could be addressed by changing investor behaviour or a more intense tenor transformation by the financial intermediaries. Whether current regulation, particularly for commercial banks, is biased against long-term finance, or whether the recent changes are required to ensure stability of the banking sector, should be discussed in more detail with regulators. If liquidity requirements remain as they are at present, asset owners need to play a more dominant and direct role in long-term infrastructure finance.

### **Supporting real economy regulation vs. indirect real economy regulation via the financial sector**

As discussed above we remain sceptical over the extent to which the finance sector would be able to drive the transformation towards a green economy. If regulation is needed, then there are several regulatory options: In the longer term, a price on carbon is the most direct and economically efficient instrument to overcome the common pool resource challenge (internalize the externality) inherent in climate action. At a minimum, fossil fuel subsidies need to be removed. If pricing of externalities is not possible (as the current status of international negotiations predicts), other regulation of the real economy could be pursued, for example feed-in tariffs for renewables. Regulating the financial sector would be another alternative to scale up investments. However, it moves the place of intervention further away from the market imperfection (GHG emission), and could potentially create perverse outcomes. Further analysis is needed to demonstrate the effectiveness of financial versus real economy regulation (that discussion is outside the scope of this paper but needs to be addressed before “best practices” can be defined).

In any event, financial sector and real economy regulation cannot be seen as “either-or.” Rather, the question is how to combine the two approaches to maximize impact.

A good example of the need to coordinate approaches between the real and financial sectors can be seen in the example of corporate reporting. IFRS and FASB, together with IOSCO, have significant impact on corporate reporting. Yet, they have failed to tackle the question of carbon/integrated reporting, leaving it instead to voluntary initiatives in the financial sector. The EU mandatory integrated reporting initiative is understood to have been significantly diluted after the public consultation process last year, making scope 3 reporting for FIs much more difficult. To become meaningful, any mandatory scope 3 carbon reporting for FIs would need to be aligned with reporting requirements for the real economy.

### 3. Observations on Current Green/Sustainability Driven Financial Policy and Practice

#### Summary of schemes

The policies and instruments examined in this section concern those that influence investment behaviour through regulatory mechanisms or through industry-driven initiatives that operate via financial markets. Financial markets are the lifeblood of market economies, and policies that influence capital allocation can have very large impact. We relate each instrument or policy to the categories described in Chart 4.

In particular we have examined the following financial regulations or initiatives that have a strong regulatory flavour:

- China Green Credit Guidelines
- South Africa Regulation 28
- Reserve Bank of India Priority Sector Lending
- Netherlands Green Funds Scheme
- UK Green Investment Bank
- Dodd-Frank Act

We consulted several secondary sources for information on:

- Pension investment policies
- Stock market initiatives
- Green bonds
- Insurance initiatives

We also conducted interviews with selected financial industry players to get a more nuanced understanding of policies.

This exposition does not claim to be exhaustive. We have examined financial policies and regulations that are *mandatory* in nature (*de facto* or *de jure*) and that *directly* influence the behaviour of the financial sector and for which, furthermore, we were able to find examples in application today. The resulting list of regulation, policies and instruments, which we refer to as “green financial regulation,” is small: financial sector policies are currently somewhat limited in their green credentials (although data limitations may have precluded us from including relevant policies that meet our criteria). Nevertheless, we believe that these case studies can showcase what green regulatory intervention can look like.

Financial policy can also be shaped by industry through voluntary standard setting or adherence to industry groups that advocate for certain ESG practice. Civil society plays an

important role, through public interest groups or advocacy organizations, in influencing industry and financial practice. While the resulting guidelines or standards do not have regulatory imprimatur, their adoption – be it through conviction or peer pressure – has the potential to transform industry practice. We therefore also looked at such *voluntary* industry-led initiatives that operate through the financial sector and assess to which extent they have become a “rule of the game”.

Table 1 charts the financial sectors we have analysed and the illustrative materials that we prepared on selected regulations or initiatives for additional detail and context.<sup>3</sup> These case studies are provided in Annex 1.

**Table 1: Summary of Green Initiatives and Related Material Examined**

Area	Green Initiative		Illustrative Case (In Annex)
	Regulatory	Industry-led	
Banking	✓	✓	<ul style="list-style-type: none"> <li>China Green Credit Guidelines</li> <li>Informal Sustainable Banking Network</li> </ul>
Pension Funds	✓	✓	<ul style="list-style-type: none"> <li>South Africa Regulation 28</li> </ul>
Stock Exchange	✓	✓	<ul style="list-style-type: none"> <li>Stock Exchange Initiatives</li> </ul>
Insurance	✓		<ul style="list-style-type: none"> <li>US Insurance Regulation</li> </ul>
Green Finance	✓	✓	<ul style="list-style-type: none"> <li>UK Green Bank</li> <li>Netherlands Green Funds Scheme</li> </ul>
Economic Policy	✓		<ul style="list-style-type: none"> <li>South Korea Green Growth Strategy</li> </ul>

✓ = examples of relevant policies are included in the paper

The instruments used today range in a continuum from “do no harm,” such as ESG compliance, to more dirigiste measures such as the channelling of government funds into “green” investment. Most of the regulatory instruments currently in use fall in the “do no harm” side of the spectrum, and take the form of ESG standards and disclosure policies. Nonetheless, there are some approaches that extend beyond minimum ESG compliance into

<sup>3</sup> We reviewed several initiatives and other material that are not presented as case studies, but rather, referred to in the appropriate place in the text.

more environmentally sustainable activities. Increasing investor demand for “green” investment opportunities – spurred in part by voluntary industry initiatives – are also contributing to greater interest in sustainability on the part of the financial sector, and in the creation of special investment instruments and vehicles.

Additionally, since the financial sector services the real economy, policies that affect the real economy and economic growth more broadly will cascade through and impact the sector, but these have not been analysed. Examples of such policies are:

- Monetary policy: quantitative easing<sup>4</sup>
- Fiscal policy: tax incentives for green investment, penalties for pollution<sup>5</sup>

Regulations that affect the financial sector more broadly (such as Basel III and Solvency II) can also be expected to have some impact on green investment and growth, to the extent that they provide incentives (or disincentives) for such investment. Such *indirect* impacts have similarly not been analysed in detail but are discussed briefly later in this section.

## **Banking Policies**

Banking policies and initiatives designed to encourage investment in sustainable or “green” activities can take different forms. In most cases, the policies are designed for risk management, and stress ESG due diligence requirements. These would fall into the Procedures category referred to in Chart 4. In others, policies are specifically designed to encourage investment in certain activities, such as energy efficiency or renewable energy, or, in rare cases, to require investment in certain sectors – as in the Minimum Requirements category. By and large, the financial sector tends to be a follower rather than a leader in the sustainability space: banking activity responds to market demand, and is driven by developments in the broader economy. Annex I contains a case study of China’s Green Credit Policy – perhaps the most visible initiative in this space in the developing world.

## ESG Standards

Financial regulations and industry standards that target Transparency and Procedures would certainly seem to be a minimum requirement for sustainability. Their effectiveness as an instrument of policy depends on how well they are implemented and followed; however, most

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<sup>4</sup> Please see Annex 1 – UK: The Green Investment Bank for a description of proposed quantitative easing and other domestic financial policy to incentivize green growth under the Green New Deal.

<sup>5</sup> Please see Annex 1 – UK: The Green Investment Bank for a description of fiscal policy designed to incentivize green growth being implemented in the UK.

of such standards are based on a “do no harm” principle, rather than designed to actively encourage green growth.

### *Regulatory approaches*

Banks typically rely on the permitting process to ensure that borrowers are in compliance with applicable rules (Transparency and Procedures). Many existing regulations, like the German *Kreditwesen Gesetz* (KWG) require FIs to perform a decent due diligence on whether the underlying business is in line with applicable law (however, rarely international conventions). Gross negligence would have severe consequences for the FI. Increasingly, however, there is growing realization that there are risks to the financial sector arising from environmental, social and governance (ESG) issues that can and need to be managed and that the financial sector should be used to ensure compliance with national regulations. Managing risk requires that the bank be able to first understand it; this involves assessing potential activities against a risk management framework, or ESG standards. Banking regulators appear to be motivated by different concerns and, as described above, regulators might be driven by the primary aim of stability of the financial sector (i.e. address systemic risk) or secondary aims like climate change and inclusion. In some cases, the key focus is the environment, as in China; in others, as in Peru, the key driver is social risk arising from certain types of investment. Some countries (Bangladesh) have explicitly incorporated climate change as a risk that needs to be understood and mitigated, and are also concerned with occupational health and safety issues.<sup>6</sup>

The locus of the regulatory impetus also varies. In some countries, the impetus is top-down, cascading from the higher reaches of government through the banking regulator and down to the banks. In China, the government’s green credit policies created the impetus for the banking regulator to create implementation modalities to guide banks, which now have to integrate ESG reviews into their organization, credit, and disclosure processes. In some cases, regulator interest is sparked from outside pressure from NGOs or other civil society groups. In Nigeria, it is the banking sector itself that saw the need for a harmonized approach to ESG and regulation resulted in a bottom-up manner. The Nigerian Principles require all clients to comply with Nigerian laws governing E&S issues, and banks to define their sustainability approach accordingly.

### *Industry approaches*

The Equator Principles (EP) is a voluntary risk management framework designed for FIs to

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<sup>6</sup> IFC interview February 2014

assess and manage environmental and social risk in projects and is primarily intended to provide a minimum standard for due diligence to support responsible risk decision-making. Members, of which there are currently 79 institutions in 35 countries, commit to implementing the EP in their internal ESG processes, and to not providing project finance or project-related loans where the client does not comply with such standards and procedures.<sup>7</sup> The IFC Performance Standards and project categorization methodology are the basis for the EP.

The EP have created a level playing field for FIs active in the project finance space: 70% of global project finance is subject to the EP.<sup>8</sup> While they have greatly increased the attention and focus on social/community standards and responsibility, the jury still appears to be out as to their contribution to project sustainability. Critics reason that without fundamental implementation efforts and enforcement, the EPs are a mere window-dressing adventure and will not contribute to any change with respect to sustainable development.<sup>9</sup> With only few leading commercial banks not applying the EP, and taking into account that some of these at least apply FI-specific procedures comparable to the EP, it could be argued that the EP has become a “rule of the game”. Those institutions not applying the EP often have to justify themselves for non-compliance.

Another interesting industry initiative is the Thun Group of Banks (seven leading international banks), which has drafted a discussion paper for banks on the implementation of the UN Guiding Principles on Business and Human Rights. This paper provides guidance to banks on addressing human rights issues in their core business activities.<sup>10</sup> Information on uptake and implementation is not available.

IFC Informal Sustainable Banking Network:<sup>11</sup> DFIs straddle a unique space: they can be instruments of public policy, but they are also significant purveyors of resources to developing countries. Their activities can have important market development impact. The International Finance Corporation (IFC) has set up an Informal Sustainable Banking Network (ISBN), which supports members in their efforts to develop standards, policies and guidelines for environmental and social best practices in their countries’ banking sectors. This network

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<sup>7</sup> <http://www.equator-principles.com/index.php/about-ep/about-ep>.

<sup>8</sup> <http://cfi.co/asia/2013/08/the-equator-principles-banking-on-sustainability/>.

<sup>9</sup> Weber, O. and E. Acheta. (2014). The Equator Principles: Ten Teenage Years of Implementation and a Search for Outcome. Center for International Governance Innovation. Available at: [http://www.cigionline.org/sites/default/files/no24\\_0.pdf](http://www.cigionline.org/sites/default/files/no24_0.pdf)

<sup>10</sup> The Thun Group of Banks (2013). UN Guiding Principles on Business and Human Rights: Discussion Paper for Banks on Implications of Principles 16-21. Available at: [https://www.credit-suisse.com/responsibility/doc/thun\\_group\\_discussion\\_paper.pdf](https://www.credit-suisse.com/responsibility/doc/thun_group_discussion_paper.pdf)

<sup>11</sup> drawn from interviews with IFC staff. Please see Annex 1: The Informal Sustainable Banking Network for details.

provides an avenue for banking regulators to share ideas and experiences with one another; it is not a prescriptive policy body. In setting up the ISBN, IFC was motivated by two concerns: to promote ESG in the sector, and to support regulatory approaches that can incentivize green growth and energy efficiency. IFC interest is to get regulators to take on the ESG issues for the banking sector and thereby drive the market forward.

Currently, regulators in Bangladesh, Brazil, China, Indonesia, Lao PDR, Mongolia, Nigeria, Peru, Vietnam and Thailand participate in ISBN. In Russia, IFC works with the development bank (rather than the regulator) on these issues. The focus of activities in most of the participating countries is ESG risk management, but over time, IFC hopes to build awareness of sustainability-related business opportunity. More detail on this initiative and individual country initiatives is available in Annex I.

### Green or Inclusive Credit Policies

#### *Regulatory approaches*

Regulators can encourage certain types of lending via policies and guidelines (Minimum Requirements and Restrictions). China's Green Credit Guidelines require banking financial institutions to encourage energy saving and emission reduction in addition to managing environmental and social risk of their clients.<sup>12</sup> While there is no central level fund available to support such lending, governments at the local level can provide financial "sweeteners" to induce companies to undertake energy efficiency investment<sup>13</sup> – an example of real sector policy delivered through the financial system.

In most cases, however, bank lending for "green" activities follows from other governmental policies, notably tax incentives that benefit companies or investors that we categorize as real economy regulation. In the US, for example, federal incentives in the form of investment tax credits and grants can encourage banks and other investors to invest in solar energy. Similarly, in the UK, the Renewable Energy Act, introduced in 2008, provides for a range of incentives to encourage investment in solar energy.<sup>14</sup>

In the framework of our assessment, India's priority sector lending portfolio requirements including a minimum exposure to agriculture and the SME sector, among others<sup>15</sup> is the only example for a strict minimum requirement for FIs that we found, although the chosen target sectors are not (necessarily) relating to green growth.

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<sup>12</sup> See Annex 1: China's Green Credit Policy

<sup>13</sup> Ibid.

<sup>14</sup> See Annex 1: United Kingdom – The Green Investment Bank

<sup>15</sup> Reserve Bank of India (2014). Available at: <http://www.rbi.org.in/scripts/FAQView.aspx?Id=87>.

### *Industry approaches*

Green credit policies can also take the form of excluding certain sectors on ESG grounds and could be initiated as an industry approach. We are given to understand that commercial banks in the Solomon Islands have now decided to stop financing the logging industry, prompted in part by concerted civil society pressure over the years. They are turning to solar energy and energy from waste instead.<sup>16</sup> The government, facing significant lobbying pressure from the logging industry, was a passive supporter of these moves. Interestingly, in the case of Westpac bank, which is understood to be the latest and last to stop banking loggers, the move came after they won an award for Sustainable Banking in Australia. Pressure then mounted on them to not look “unsustainable” in one of their branches.

With regard to the other interventions outlined in Chart 4, we were not able to find examples of policies in operation today that imposed carbon accounting or stress testing or true cost accounting. However, some of these are addressed through industry initiatives, discussed later in this section.

### **Pension Investment Policies and Regulations**

Institutional investors hold significant assets (USD 83.2 trillion in the OECD alone in 2012), and play a key role in channelling savings into productive long-term investment.<sup>17</sup> However, the amount of investment going directly into infrastructure – much less green infrastructure – remains small, at around 1%.

Pension fund managers are guided first and foremost by the principle of fiduciary duty, whereby they are obliged to act in the long term best interests of the beneficiaries of the fund.<sup>18</sup> Pension funds are also subject to stringent regulatory requirements. This leads them to invest conservatively, in “tried and true” instruments. Given the longer-term horizon of pension funds, one could expect a pension fund to be intrinsically more motivated to invest in a sustainable manner than a bank, with a relatively shorter time horizon.

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<sup>16</sup> Comment from Frankfurt School e-learning participant from the Solomon Islands, March 2014.

<sup>17</sup> OECD (2013). Annual survey of large pension funds and public pension reserve funds. Available at: <http://www.oecd.org/daf/fin/private-pensions/LargestPensionFunds2012Survey.pdf>.

<sup>18</sup> Maheshwari, A. et al (2013). Mobilizing Public and Private Funds for Inclusive Green Growth Investment in Developing Countries. International Finance Corporation. Available at: [www.ifc.org/Report-MobilizingGreenInvestment](http://www.ifc.org/Report-MobilizingGreenInvestment).

## Asset Allocation

Albeit starting from a very small base, a recent survey<sup>19</sup> of large pension funds undertaken by the OECD shows that there is an increasing interest in green investments including clean technology and renewable energy such as wind and solar projects. None of the 86 funds surveyed (which control total assets of more than USD 10 trillion) had a target allocation, nor specifically addressed “green” investment in its investment policy. Private sector leadership is consequently limited. Some funds have incorporated “green” investment in their asset allocation decisions: the New Zealand Superannuation Fund invests in green alternatives to help mitigate environmental risks; Sweden’s AP2 has maintained exposure to private equity targeted to renewable energy and climate solutions, forestry and farmland; Norway’s Government Pension Fund Global has established specific mandates for environment-related investments. An innovative structure was used by PensionDanmark (a Danish pension fund) to invest in a Swedish wind farm, whereby its position was guaranteed by the Danish export credit agency.<sup>20</sup>

Regulation has a major influence on the asset allocations of pension funds – with the majority of regulations hindering rather than supporting green investments.<sup>21</sup> Some funds can only invest in certain securities and markets (such as Belgium’s Zilverfonds, which can only invest in Belgian Government Securities). For Latin American pension funds there are quantitative investment limits on unlisted equity by credit rating and limitations on bonds issued by new companies and projects.

South Africa’s Regulation 28 imposes asset diversification principles on all private retirement fund assets over a certain size. Percentage limits for each asset class or instrument are defined: for example, no more than 15% may be invested offshore. These principles result in the channelling of investment into domestic assets, but there is no explicit holding requirement for “green” assets (other than that they pass an ESG review).<sup>22</sup> Annex 1 contains a case study of the South Africa example.

Recognizing that pension funds constitute a large pool of funds that could be channelled to sustainable investment, the Prince of Wales launched the P8 initiative in 2007, supported by the Cambridge Program for Sustainability Leadership. It brought together senior leaders from some of the world’s largest pension funds to tackle the problem of climate change by taking a leadership role in investment and policy actions. Despite several meetings, including attempts to broaden the coverage to include more Asian funds, sovereign wealth funds and asset

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<sup>19</sup> OECD (2013) op. cit.

<sup>20</sup> CPI (2013). San Giorgio Group Case Study: Jädraås Onshore Windfarm. Available at <http://climatepolicyinitiative.org/publication/san-giorgio-group-case-study-jadraas-onshore-windfarm/>

<sup>21</sup> OECD (2013) op. cit.

<sup>22</sup> See Annex 1: South Africa: Regulation 28

managers (leading the P8 to become the P80), progress in shifting investment strategies has been limited, as shown above. This work is now being taken forward by the Club of Madrid, which has established the Global Leaders for Climate and Sustainable Development Financing Action Initiative to further its commitment to address the challenges of climate change and development in a resource-constrained world.<sup>23</sup>

### ESG Considerations

Environmental aspects of investments will typically be addressed in the due diligence process (generally through regulatory pressure on Procedures). In general, the OECD survey found that funds with broadly diversified portfolios are more likely to incorporate ESG criteria in the investment due diligence and asset allocation processes. Interestingly, the survey also found that public pension reserve funds (reserves or buffers to support “pay as you go” public pension schemes) had fewer ESG investment guidelines and mandates compared to large pension funds (public and private).

Some funds have well-established ESG guidelines and investment programs. PREVI’s pension fund, the largest in Latin America (domiciled in Rio de Janeiro, Brazil), includes sustainability as one of its business directives, and its investment policies include social and environmental criteria. Similarly, ABP, the largest pension fund in the world (Netherlands based), has a clearly defined socially responsible investment policy, and considers ESG factors when evaluating investments. Sweden’s AP2 integrates ESG criteria into aspects of all investments.<sup>24</sup> Most of these are a result of voluntary action by management, which appears to have integrated Supervisory Review in its modus operandi in the absence of a specific regulatory push.

South Africa’s Regulation 28 is primarily concerned with asset diversification, but it also establishes guidelines to incorporate ESG considerations into the investment decision-making process. It seems obvious that Transparency and Procedures should be a minimum regulatory requirement for any investment portfolio. The critical issues are what standards are used and how well they are applied. But these on their own may not necessarily result in greater asset allocation to green investment, and regulatory measures to increase Supervisory Review and impose Minimum Requirements or Restrictions will be necessary. We were, however, unable to find any examples of relevant green financial regulations in this area.

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<sup>23</sup> Club of Madrid (2012). “Climate and Sustainable Development Financing Action”. Available at: [http://www.clubmadrid.org/en/programa/climate\\_and\\_sustainable\\_development\\_financing\\_action](http://www.clubmadrid.org/en/programa/climate_and_sustainable_development_financing_action)

<sup>24</sup> OECD (2013) op. cit.

## Stock Exchange Regulations and Initiatives

Globally, stock market capitalization stood at USD 55 trillion in 2012.<sup>25</sup> Stock markets are significant sources of capital for investment, and stock exchanges can exert significant influence on listing companies through their requirements. The instrument of policy examined here is ESG disclosure requirements. Additionally, a number of industry-led initiatives operate through or around the stock market, such as special indices, and provide avenues for greening investment behaviour. Annex 1 contains a description of these initiatives, including a tabulation of ESG disclosure policies and special indices for selected stock exchanges.<sup>26</sup> It shows that several regulators have policies that address sustainability – but the focus remains on ESG disclosure, rather than on incentivizing “green”.

### ESG Disclosure Requirements

Various stock exchanges around the world have instituted some form of ESG disclosure policy (Transparency and Procedures) in response to government regulation. ESG disclosure requirements at the listing stage can have significant impact, since public listing is a key source of capital for many companies. China’s Green Securities Policy, supplemented by the Green Initial Public Offering Policy, raised the bar for listing and appears to have been specifically focused on the country’s 14 most polluting industries. India’s Securities and Exchange Board requires listed companies to report on ESG initiatives.<sup>27</sup> The US’ Dodd-Frank Act has far-reaching impact across the financial sector – it contains some 90 provisions that require rulemaking by the Securities and Exchange Commission (SEC), and dozens more that give SEC discretionary rulemaking authority.<sup>28</sup>

Corporate governance codes increasingly include CSR and sustainability issues. The Australian Securities Exchange has incorporated ESG disclosure requirements in its Corporate Governance Principles. The SEC’s required annual disclosure is skewed towards governance: public companies must disclose CEO-to-worker pay ratios; resource extraction companies must disclose payments to governments. The SEC has also issued guidance to companies on existing disclosure requirements as they apply to business or legal developments relating to the issue of climate change. Efforts to gauge the impact of this guidance indicate that there has been little disclosure of actual or potential harm that might arise due to climate change; that companies see little upside and even less downside from nondisclosure: there are few, if

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<sup>25</sup> World Federation of Exchanges (2013). 2012 WFE Market Highlights. Available at: <http://www.world-exchanges.org/files/statistics/2012%20WFE%20Market%20Highlights.pdf>.

<sup>26</sup> See Annex I: Stock Exchange Initiatives

<sup>27</sup> See Annex 1: Stock Exchange Initiatives

<sup>28</sup> SEC (2014). Implementing the Dodd-Frank Wall Street Reform and Consumer Protection Act. Available at: <http://www.sec.gov/spotlight/dodd-frank.shtml>.

any, penalties from the SEC.<sup>29</sup> Quite apart from the questionable quality of information, it is not clear how this information is assessed and utilized – anecdotal evidence suggests that the filings are pro forma and that the SEC lacks the resources to adequately analyse them.<sup>30</sup>

### Stock Market Indices

Several stock market indices attempt to measure the performance of companies that meet certain ESG standards. Such indices provide investors with tools to create and manage sustainably responsible portfolios, and allow benchmarking of performance. They create transparency and give asset owners “a choice”, allowing them to take ESG criteria into account. Indices can be global, and include stocks regardless of which stock exchange they trade in, or confined to a particular stock exchange. Such indices are not a regulatory creation, but could be a useful instrument to help fulfil regulatory mandates on Minimum Requirements or Restrictions in investment portfolios.

Leading indices globally include:<sup>31</sup>

- *Dow Jones Sustainability Index*: launched in 1999, it includes only those companies that fulfil certain sustainability criteria better than the majority of their peers (“best-in-class” approach). There are no industry exclusions. Customized versions of the indices can be created to meet specific investor demands.
- *FTSE4Good*: this series comprises four tradable and five benchmark indices, representing global, European, US, Japan and the UK markets. The benchmark indices include all companies in the broad market index that meet FTSE4Good criteria, while the tradable indices cover the largest 50 or 100 companies in the benchmark.
- *MSCI World ESG Index*: this index consists of large and mid-cap companies in 23 developed market countries. Companies are selected based on proprietary research, using a best-in-class selection process. Various other indices are also available, such as those that exclude certain industries or are focused on companies that derive substantial revenue from environmentally beneficial activities.
- *NYSE Euronext Vigeo index family*: NYSE Euronext and Vigeo have launched a range of indices based on ESG. The indices include major listed companies from Europe, the Asia-Pacific region and North America.<sup>32</sup>

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<sup>29</sup> Shorter, G (2013). SEC Climate Change Disclosure Guidance: An Overview and Congressional Concerns. Congressional Research Service. Available at: <https://www.fas.org/sgp/crs/misc/R42544.pdf>.

<sup>30</sup> Discussion with industry analysts, February 2014, New York.

<sup>31</sup> See Annex 1: Stock Exchange Initiatives.

In addition to these global indices, special indices are available for most developed country exchanges: Spain, Germany, Switzerland, US, UK, Austria and South Korea to name a few, and in several developing country markets: Brazil, South Africa, Indonesia, Egypt, India and China. Please see Annex 1: Stock Market Initiatives for more detail on these indices for selected stock markets.

### Credit Ratings

Credit ratings play a key role in the capital allocation decisions of investors. They are a potent tool in signalling the financial viability of a business and directly influence the cost of capital for companies.

A review of the main agencies' ratings guides reveals that the primary driver for most corporate and structured product ratings remains financial viability. ESG issues are not explicitly mentioned in the methodology, and do not seem to be incorporated in any systematic way in credit ratings.

Surprisingly, recent searches of the S&P website found no mention of its 2011 announcement that it would begin to incorporate climate change risk in its credit ratings. However, S&P publish a variety of reports exploring how ESG issues affect creditworthiness, and claim to have begun incorporating water conservation, pricing and supply risks into sector analyses.<sup>33</sup>

Credit ratings agencies respond to market demand; if investors or regulators require an explicit assessment of sustainability risk, ratings agencies will provide it.

### **Shareholder Activism**

A number of reporting initiatives and disclosure demands related to companies' ESG practices have come about due to stakeholder pressure. In some cases, asset managers have begun including sustainability proposals through proxy, essentially "voting with their pocketbook."

### Proxy Voting

Grassroots efforts to organize and share information by public interest groups and sustainability advocacies have resulted in shareholder pressure on companies for greater ESG disclosure. Such efforts can be particularly impactful when they join forces with investor

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<sup>32</sup> NYSE Euronext (2013): News releases: NYSE Euronext and Vigeo launch ESG indices, Available at: <http://www.nyse.com/press/1363687752612.html> and News releases NYSE Euronext and Vigeo expand range of ESG indices, Available at <http://www.nyse.com/press/1372326894699.html>.

<sup>33</sup> See <https://ratings.standardandpoors.com/about/who-we-are/Our-Approach-to-Corporate-Social-Responsibility.html>.

groups and money managers. The Investor Network on Climate Risk (INCR) is a group of 100 institutional investors with assets of approximately USD 10 trillion that addresses the financial risks and investment opportunities associated with climate change. Ceres, which directs this coalition, provides a guide to help asset owners and managers address sustainability issues that arise through shareholder resolutions.<sup>34</sup> A number of US asset managers have recently begun submitting sustainability proposals during proxy season requiring investee companies to provide reports assessing, among others, exposure to climate change and other sustainability risk. Even though these early efforts failed to garner enough shareholder votes to pass, the fact that the SEC ruled against the companies' requests for their exclusion from proxies suggests that these sorts of proposals will continue to be put forward.<sup>35</sup>

A recent victory for shareholder activism concerns Exxon-Mobil, which became the first oil and gas producer to agree to publish information on the business risks associated with stricter limits on carbon. This move is seen as a sign of growing acceptance among investors and companies that the value of fossil fuel assets may be out of line with evolving policies on global warming, increasing the risk of stranded assets.<sup>36</sup>

#### Various Reporting and Best Practice Initiatives

Investors can exercise significant pressure on companies even without voting their proxy. The Carbon Disclosure Project, for example, sends annual questionnaires to the world's largest listed companies requesting information on greenhouse gas emissions, water usage and strategies for managing climate change, water and deforestation risks. The requests are sent on behalf of their "signatories"- 767 institutional investors controlling USD 92 trillion in assets; the CDP now holds the largest collection of self-reported climate change, water and forest risk data globally.<sup>37</sup>

A large number of other global initiatives currently underway aim to increase ESG disclosure and action. The list below is by no means exhaustive, but it is illustrative of concern and growing interest on the part of investors:

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<sup>34</sup> Spalding, K.S. and J. Cook (2011). Ceres Guidance: Proxy Voting for Sustainability. Available at: <https://www.ceres.org/resources/reports/proxy-voting-for-sustainability>.

<sup>35</sup> The Harvard Law School Forum on Corporate Governance and Financial Regulation blog (2013). Sustainability Disclosure in Annual Reports and Proxy Statements. Available at: <https://blogs.law.harvard.edu/corpgov/2013/08/01/sustainability-disclosure-in-annual-reports-and-proxy-statements/>.

<sup>36</sup> Cardwell, D. (2014). "In Shift, Exxon Mobil to Report on Risks to Its Fossil Fuel Assets" New York Times. Available at: <http://www.nytimes.com/2014/03/21/business/in-a-shift-exxon-agrees-to-report-on-carbon-asset-risk.html>.

<sup>37</sup> See <https://www.cdp.net>.

- *The Global Reporting Initiative*: an international not-for-profit organization that provides a Sustainability Reporting Framework in use by over 5000 companies and organizations worldwide.<sup>38</sup>
- *UN Principles of Responsible Investing*: an international network of investors that put PRI into practice; 1188 signatories with USD 34 trillion under management.<sup>39</sup>
- *Investor Network on Climate Change*: group of 100 US institutional investors with assets of approximately USD 10 trillion focused on financial risks and investment opportunities associated with climate change.
- *Institutional Investor Group on Climate Change*: group of 80 European institutional investors with assets of GBP 7.5 trillion set up to address long-term risks and opportunities associated with climate change.<sup>40</sup>
- *UN Global Compact*: strategic policy initiative for businesses that agree to align their practices with certain human rights, labour, environment and anti-corruption principles; 7000 businesses in 145 countries.<sup>41</sup>
- *Sustainability Accounting Board*: established industry-based sustainability accounting standards for the recognition and disclosure of material ESG impacts by companies traded on US exchanges.

The common thread in these initiatives is the recognition that sustainable growth requires the appropriate disclosure and management of ESG risk. However, these initiatives remain voluntary and it is not clear if there are any sanctions for non-compliance. They all serve an important signalling purpose, however, and the information collected contributes to transparency and peer-to-peer benchmarking. Given the large number of signatories to many of these initiatives, one could argue that they have become *de facto* rules of the game, despite the lack of formal regulatory pressure.

## Insurance

The insurance industry, perhaps more than any other, is in the front lines of climate change: there is growing acknowledgement among insurers that the impact of climate change on future insured losses is likely to be profound. However, the response of many has been to focus on limiting financial risk by reducing exposure or simply withdrawing from certain

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<sup>38</sup> See <https://www.globalreporting.org>.

<sup>39</sup> See <http://www.unpri.org>.

<sup>40</sup> See <http://www.iiqcc.org>.

<sup>41</sup> See <http://www.unglobalcompact.org>.

markets; increased deductibles and new exclusions are other ways that the industry seeks to protect itself.<sup>42</sup>

Yet, the industry can materially benefit from green growth along several dimensions. Green technology and infrastructure present a growing asset pool that will need insurance services. Innovative risk management could create new product opportunities (weather insurance, for example).

The insurance industry is also a large investor, with USD 20 trillion in assets under management globally, and could potentially be a source of capital for green investment. Finally, the industry could be a powerful voice in shaping the public debate about climate change – yet it has been reluctant to do so, possibly because it does not feel very vulnerable, since there is a presumption of government assistance for the worst catastrophes and because it can simply withdraw from unprofitable activities.<sup>43</sup>

The insurance industry is subject to regulation that governs solvency, accountability and transparency, among others. We were not able to find any green regulation governing this industry. Annex 1 contains a description of the regulatory framework applying to the US insurance industry; as can be seen, the focus is on solvency and environmental sustainability is not explicitly mentioned. But, as an industry subject to government review of its terms, conditions and rates, it can be viewed as combining public and private characteristics.<sup>44</sup> Governments can have a wide range of involvement in the sector, and the insurance industry could be a potential vehicle for the delivery of green policy initiatives.

### **Green Financing Schemes**

In recent times, targeted financing schemes – via banks, or through capital market products – are beginning to emerge. Green bonds, for example, are industry initiatives – but there is a “push” element involved as the first green bonds were issued by DFIs before a market for such securities existed. Green investment vehicles, like the UK’s Green Investment Bank or the Dutch Green Funds Scheme, are examples of government regulation that influence investment behaviour – in the one case, directly, and in the other, via the banking system (Minimum Requirements).

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<sup>42</sup> Mills, E. (2007). "Responding to Climate Change — The Insurance Industry Perspective." In *Climate Action*, Sustainable Development International (in partnership with the United Nations Environment Programme). Available at: <http://evanmills.lbl.gov/pubs/pdf/climate-action-insurance.pdf>.

<sup>43</sup> Porter, E. (2013). "For Insurers, no Doubt on Climate Change." The New York Times. Available at <http://www.nytimes.com/2013/05/15/business/insurers-stray-from-the-conservative-line-on-climate-change.html?pagewanted=all>.

<sup>44</sup> Maheshwari, A et al (2013) op. cit.

### Government Sponsored Investment Vehicles

“Green” investment banks have the specific aim of promoting investment in clean energy and green technologies. The UK has created a Green Investment Bank in 2010, claimed to be the first of its kind and capitalized with GBP 3.8 billion from the government. Investment is to be directed to three priority sectors: offshore wind, energy efficiency and waste.<sup>45</sup> This is an example of a public policy intervention that is not directed to the financial sector at large, but that will have the effect of increasing investment in green assets. It also conveys an important signalling effect to the sector.

The Netherlands’ Green Funds Scheme has been in operation since 1995 and funds are directed via a financial institution to a variety of sustainable development activities in agriculture, energy, construction, transport and nature management (Minimum Requirements). Investments in a green fund provide a tax advantage to compensate for a lower than market return. Individuals can decide to participate in this scheme through earmarked savings or by investing in an eligible project. The majority of Dutch banks operate such “green funds” – enabling them to channel financing into eligible activities at lower interest rates.<sup>46</sup>

“Green” investment requires not only a viable investment opportunity and the financing to implement it, but the appropriate “ecosystem” for support. Such an ecosystem - coherent government policies, financial services, appropriate benchmarks and standards – is only slowly emerging. Until such an ecosystem develops fully, and capital markets are able to respond to needs, special subsidies or financing arrangements such as the two examples cited above may help fill the gap.

### Green Bonds

Green bonds are a relatively new development, but the concept is old. Special purpose, or “themed” bonds have been used for decades, and involve raising money earmarked for a specific purpose (such as for war, or the building of railroads). The term is widely used to refer to bonds floated for a number of climate-relevant and sustainable activities, such as water, waste and agriculture.

In 2013, climate-themed bonds worth USD 74 billion were issued, bringing the total outstanding under such instruments to USD 346 billion.<sup>47</sup> However, this remains a drop in the

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<sup>45</sup> See Annex 1: United Kingdom: The Green Investment Bank.

<sup>46</sup> See Annex 1: Netherlands: Green Funds Scheme.

<sup>47</sup> Climate Bonds Initiative (2013). Bonds and Climate Change, The State of the Market 2013. Available at: [http://www.climatebonds.net/wp-content/uploads/2013/08/Bonds\\_Climate\\_Change\\_2013\\_A3.pdf](http://www.climatebonds.net/wp-content/uploads/2013/08/Bonds_Climate_Change_2013_A3.pdf).

bucket compared to the global bond market. Directly comparable figures in terms of issuance are not available, but overall bond turnover was over USD 26 trillion in 2012.<sup>48</sup>

Fixed-income securities are attractive to a wide range of investors. Institutional investors, in particular, have found green bonds to be a relatively low-risk way of investing in climate-related activities. The World Bank, which pioneered the green bond, and other multilateral development banks, issue such bonds on the strength of their balance sheets: while proceeds are ring-fenced or earmarked for climate-related investment, debt service is through general revenues, thus attracting the same rating as that of the underlying issuing institution (investment grade). This makes the instrument attractive to pension funds and other institutional investors.

Themed bonds offer an array of financing opportunity, and could be amenable to standardization and eventual securitization. Current shortcomings in the market include low liquidity of the instrument, and a lack of appropriate benchmark indices. In order to increase volume and render the instrument attractive to a range of investors, it will be necessary to define standards for “green”, and standardize the bond offering. This will help in its securitization, in which the bond can be unbundled and repackaged into risk classes that can meet different investor requirements. This instrument also lends itself well to credit enhancement and structuring, and could therefore be a good mechanism to blend public and private financing around green investment.

The Climate Bonds Initiative is an investor-focused advocacy that seeks to mobilize bond markets for climate change solutions. It is attempting to address some of the market shortcomings identified above. In particular, it has developed the Climate Bonds Standard, a screening tool that helps investors assess the integrity of environmental claims for green bonds.<sup>49</sup> It has also developed a standard for wind investment (2011) and is developing one for solar.

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<sup>48</sup> WFE (2013) op.cit.

<sup>49</sup> Climate Bonds Initiative (2014) Climate Bond Standard. Available at: [http://standards.climatebonds.net/wp-content/uploads/2014/01/ClimateBondStandard\\_Text.pdf](http://standards.climatebonds.net/wp-content/uploads/2014/01/ClimateBondStandard_Text.pdf).

## Other Relevant Initiatives

We also examined a few other initiatives that have an impact on green growth, even if they do not constitute green financial regulation *per se*.

### South Korea's Green Growth Strategy

The South Korea Green Growth Strategy has economy-wide impact, and its implementation can be expected to have far-reaching impact on the behaviour of FIs. Annex 1 contains a description of the strategy, which rests on the four pillars of sustainable production and consumption, green businesses, sustainable infrastructure, and fiscal incentives and reforms. There are no explicit provisions for the financial sector, but many of the proposed initiatives will involve financial sector participation: green bonds and savings, green fund for SME credit, green private equity fund, and an emissions trading scheme. The data available focus on the real sector, where investments in "green growth" were 3% of GDP in 2011. We are given to understand that while companies have aggressively invested in new technologies, this growth has been financed through own funds rather than with the help of the banking sector, which reportedly remains cautious and conservative with regard to green investment. The green fund initiative is patterned after the Netherlands Green Funds Scheme, and operates via the financial sector, but we are given to understand that it has not been very successful because there is insufficient margin for profitable operation.<sup>50</sup>

### Funds

Private equity (PE) funds can be a vital source of investment capital for business, particularly in earlier stages of enterprise investment. Hedge funds can also be a source of capital; however, hedge funds tend to be short-term investors, employing a variety of financial hedging techniques, derivatives trading and arbitrage to generate returns for their investors. Such funds explicitly fall outside the purview of regulation and are designed to operate within designated exemptions from prevailing securities legislation. Marketing restrictions determine who may invest in the fund. The principal effect of these restrictions (at least in the UK and US) is to exclude retail investors (who may not have the necessary knowledge or wherewithal) from such funds, thus placing primary responsibility for the investment decision on investors able to "fend for themselves," obviating the need for product-level regulation.<sup>51</sup> In the US, the Dodd-Frank Act contains provisions that will affect hedge funds and other

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<sup>50</sup> Interview with KCFI March 2014.

<sup>51</sup> Spangler, T (2013). Forbes "Private Equity, Hedge Funds are Ready for their Close-Up" Available at <http://www.forbes.com/sites/timothyspangler/2013/08/31/private-equity-hedge-funds-are-ready-for-their-close-up/>.

private investment vehicles, such as a registration requirement for funds over a certain size, clear articulation of policies and procedures and related compliance requirements and enhanced risk management (with regard to exposure and trading risks).<sup>52</sup> In Europe, the Directive on Alternative Investment Fund Managers was approved in 2010; it requires registration of hedge funds with national regulators and greater disclosure requirements, as well as higher capital requirements and limits on leverage. EU member countries were required to adopt the Directive in their national legislations by 2013.<sup>53</sup> The focus of these policies is on solvency and financial stability.

PE and venture capital (VC) play an important role in the financing of clean technology, particularly in the riskier stages of technology development and commercialization. In the renewable energy segment – the one green investment area for which information is readily available - PE/VC provided USD 3.6 billion in financing in 2012 – as against total investment across the sector of USD 227 billion.<sup>54</sup> However, the share of renewables in PE and VC investments remains small, at less than 2 percent in 2012. PE funds made global investments of USD 189 billion in that year (USD 231 billion in 2013)<sup>55</sup> In those same years, the amount of available capital for investment was USD 1000 billion and USD 900 billion respectively<sup>56</sup> - indicating that renewable energy (and, by extension, green investment) does not appear to offer attractive investment potential. This is a matter for real sector policy, rather than financial regulation.

Another asset class is that of Socially Responsible Investing (SRI) - an investment strategy that seeks to incorporate ESG considerations into investment decisions. Some SRI funds exclude investments in certain sectors (such as alcohol, arms and ammunition, or fossil fuels); others target investment in some sectors (renewable energy, for example). Market studies of 7 regions (Europe, US, Canada, Asia, Japan, Australia and Africa) find that USD 13.6 trillion worth of professionally managed assets - representing 21.8% of total professionally managed assets in the regions concerned - incorporate ESG factors into

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<sup>52</sup> Rodgers, D (n.d.). About.com Financial Services "The Dodd-Frank Act Requires Hedge Fund Investments in Compliance and Technology" Available at <http://financialservices.about.com/od/EthicsCompliance/a/The-Dodd-Frank-Act-Requires-Hedge-Fund-Investments-In-Compliance-And-Technology.htm>.

<sup>53</sup> Managed Funds Association (n.d.). "Global Hedge Fund Regulation" Available at <https://www.managedfunds.org/issues-policy/issues/globalhedge-fund-regulation/>.

<sup>54</sup> REN21. (2013). *Renewables 2013 Global Status Report* (Paris: REN21 Secretariat). Available at: [http://www.ren21.net/Portals/0/documents/Resources/GSR/2013/GSR2013\\_lowres.pdf](http://www.ren21.net/Portals/0/documents/Resources/GSR/2013/GSR2013_lowres.pdf).

<sup>55</sup> Bain and Company (2014). Global Private Equity Report 2014. Available at: <http://www.bain.com/publications/business-insights/global-private-equity-report.aspx>.

<sup>56</sup> Bain and Company (2014). Op. cit. and Bain and Company (2013). Global Private Equity Report 2014. Available at: <http://www.bain.com/publications/business-insights/global-private-equity-report.aspx>.

investment selection.<sup>57</sup> By this measure, sustainable investing has some scale in global markets. Here, too, further development of the market will depend on real sector policies and the overall attractiveness of green assets.

A special category of funds concerns multilateral initiatives such as the Global Environment Facility (GEF), designed to be the financing vehicle of the UN COP process in climate change and biodiversity; the Climate Investment Funds (CIF), designed to channel concessional finance for climate change mitigation and adaptation activities; and the Green Climate Fund, which is under creation and expected to channel pledges of climate finance made by donor countries at the UN Climate Change Negotiations. The GEF provided USD 547 million in funding for eligible projects in 2012,<sup>58</sup> and the Clean Technology Fund (CTF), the largest of the CIF focused on mitigation, approved USD 2.3 billion in funding in 2013.<sup>59</sup> This funding mobilized other sources (both private and public) and resulted in significantly greater investment on the ground: USD 16.2 billion for the CTF alone. These figures are a drop in the bucket compared to needs, but the funds do provide a demonstration effect of public-private partnership and blended financing structures that could be relevant for green growth financing.

#### Potentially “Perverse” Consequences of Policy

Financial policies and regulations designed for broader market stability may have unintended consequences on green investment. Basel III rules are likely to make long-term financing more expensive, which will particularly affect renewable energy projects as they have high upfront capital costs; capital and liquidity requirements will likely limit the amount of capital available for such financing.<sup>60</sup> Solvency II requirements that insurance companies hold their assets in liquid or low-risk instruments will likely reduce their appetite for long-term investments for which there is no public market.<sup>61</sup> These work against infrastructure investments in general, and renewable energy projects in particular.

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<sup>57</sup> GSIA (2013). 2012 Global Sustainable Investment Review. Available at: <http://gsiareview2012.gsi-alliance.org/pubData/source/Global%20Sustainable%20Investement%20Alliance.pdf>.

<sup>58</sup> GEF (2013). 2012 Annual Report. Available at <http://www.thegef.org/gef/sites/thegef.org/files/publication/GEF-AR2012.pdf>

<sup>59</sup> Global Sustainable Investment Review. Available at: <http://gsiareview2012.gsi-alliance.org/pubData/source/Global%20Sustainable%20Investement%20Alliance.pdf>.

<sup>60</sup> Narbel, P. (2013). Norges Handelshøyskole. The likely impact of Basel III on a bank's appetite for renewable energy financing. Available at: <http://www.nhh.no/Files/Filer/institutter/for/dp/2013/1013.pdf>.

<sup>61</sup> Bloomberg New Energy Finance (2013). Financial Regulation – Biased Against Clean Energy and Green Infrastructure? Clean Energy – White Paper

## 4. Open Issues and Further Areas Of Required Analysis

In this section, we put forward some issues that concern financial sector regulation that we see as “food for thought” for policy makers and industry champions.

### **Lack of Dialogue with Regulators on Climate Relevant Actions**

Attention to climate finance (broadly defined) is limited – if it exists at all – in regulators’ short-term agendas as well as current priority areas. A more constructive dialogue is required to maximize the co-benefits of financial regulation and minimize the burden placed on FIs that supply financing to green investments. This in particular applies to the Global North where regulators of the financial sector are well established, powerful and independent. The current situation seems to be comparable to the relationship between environmental NGOs and the finance sector some years ago – before they started to understand that they needed to learn each other’s language and join together to fight dangerous climate change.

Internalizing different ways of thinking will become even more crucial once political stakeholders become involved. Any political action supporting implementation of green financial regulation would need to be pushed by ministries of finance and of environment. This may lead to tensions between the two: environment ministries, with their greater understanding and awareness of the underlying issues, may be seen as the ones responsible for stress in the financial sector due to financial regulation.

We strongly believe that the UNEP Inquiry can play a very important role in this context.

### **Concrete Suggestions With Regard To Changes in Finance Sector Regulation**

Existing finance sector regulation is highly complex and offers a number of entry points for climate finance relevant intervention. However, it is obvious that the implications of changes – on green and brown investments – are extensive and not yet fully thought through. Although limited, there are some policy areas could deliver early wins today, and it is those opportunities that reduce barriers for green investments without creating a direct negative impact on finance sector stability that should serve as a starting point. One example is pension fund regulations in developing countries that differentiate between real estate and RE infrastructure investments and allow for illiquid assets only in the first asset class (real estate), thereby directly disincentivising RE investments. It is also important to draw the link between how finance sector regulation impacts the cost of clean energy projects and to communicate this linkage through practical examples.

Another example is that of stress testing of the long-term viability of all investments to climate change and related impacts and integration of climate risk into portfolio analysis. This could be a win-win in that it makes banks and investors aware of the climate risk embedded in their portfolios, and enables planning to manage these risks in an orderly fashion (I.e., before a crisis situation arises) – thereby contributing to financial stability.

A number of avenues to improve disclosure to better integrate environmental indicators can also be pursued. Reporting on carbon emissions of major exposures is one such measure. It is aligned with industry practice; tools are readily available for calculation. In conjunction with strengthened disclosure policies, efforts are also needed to ensure that regulators are better equipped to actually use the information thus collected.

Governments could certainly influence the asset allocation of funds under their control towards sustainable activities (by imposing Minimum Requirements or Restrictions, as per the categories in Chart 4). This requires a clear definition of what such activities are; this is not an easy task. There is at present no universally accepted definition of even a climate investment activity (a narrower category than “green” or sustainable). If the “green” investments are expected to underperform compared to the traditional alternatives, the pension fund manager may find it difficult to reconcile fiduciary responsibility with government directive. Governments tend to be reluctant to impose such asset allocation directives. This suggests that it is crucial to create an overall conducive environment for “green” investment, not least by creating a level playing field for such investment.

### **“Greenwashing” Financial Regulation**

The paper highlights a number of interventions introduced by regulators in developing and emerging economies that are called “green” or “sustainable”. With regard to some of these interventions, we would like to stress that similar rules exist for FIs in the Global North although these are not highlighted as green interventions. One example is the Nigerian regulation on financial inclusion which – in our view – could be compared to the German Postbank and Sparkassen Gesetz which establishes an obligation to contract to the regulated banks, i.e. they must open an account for everybody and cannot reject the provision of their services. The respective law was introduced in Germany back in 1909. An intense discussion with regulators in the Global North should help assess whether existing regulations (and the practical application of laws) are already comparable with so-called green regulations.

# Annex

## China: Green Credit Policy

In July 2007, the State Environmental Protection Administration (SEPA, now the Ministry of Environmental Protection, MEP), the China Banking Regulatory Commission (CBRC), and the People`s Bank of China (PBC) laid the foundation for the Chinese green credit policy in their jointly issued *Suggestions on Implementation of Environmental Policies and Regulations and Guard against Credit Risks*.<sup>62</sup> Here, they agreed upon credit controls on enterprises and projects by FIs in order to limit the rapid expansion of high energy consuming and heavy polluting industries – essentially reacting to the alarming increase of environmental pollution in China in the last years. The green credit concept together with the Chinese 11<sup>th</sup> five-year plan pushed the environmental topic to a high level of the political agenda and raised national and public attention to energy-saving and emission-reducing long-term goals. On February 24, 2012, the CBRC on behalf of the Chinese government issued the final version of the Green Credit Guidelines applicable to local offices, policy banks, state-owned banks, joint-stock commercial banks, financial assets management companies, the Postal Savings Bank of China (PSBC), provincial rural credit unions as well as trust firms, financial leasing companies and enterprise group finance companies.<sup>63</sup> The Guidelines contain specific requirements in terms of organization, internal policy, lending procedures, supervision and information disclosure by FIs and clients.

### China`s Green Credit Policy

China`s political elite has accepted that China will not be able to realize its economic and social ambitions without placing pollution, energy and resource consumption high on the agenda. Furthermore, there seems to exist a common understanding that a further disregarding of these problems may lead to rapidly increasing domestic security challenges and eventually, also impact China`s general standing in the world. Therefore, the Green Credit Guidelines were introduced in 2012 with the aim of providing a regulatory framework for the financial sector in order to boost China`s green economy. They serve to incentivize banking institutions to adjust their credit structures towards more environmental supportive and protective lending by managing the environmental and social risk of their clients. China`s attempt to limit lending to environmental high-risk clients is a strongly promoted endeavour and has also awakened a great deal of interest at the international level.

The Green Credit Policy is a creation which has a distinct Chinese character and therefore, offers a unique and pioneering case to study. Utilizing command and control measures

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<sup>62</sup> B. Zhang et al. (2010). Tracking the implementation of green credit policy in China: Top-down perspective and bottom-up reform, *Journal of Environmental Management* 92 (2011)

<sup>63</sup> Notice of the CBRC on Issuing the *Green Credit Guidelines*. Available at:<http://www.cbrc.gov.cn/EngdocView.do?docID=3CE646AB629B46B9B533B1D8D9FF8C4A>.

applied to state-owned and joint-stock banks, the policy aims to help China to achieve its national environmental and energy consumption targets through strict regulation for bank lending.<sup>64</sup> One of the major challenges is the rather decentralized regulation process. Whereas larger banks find it comparatively easy to adopt the Guidelines, smaller and provincial banks struggle with proper adaptation and application. While the Guidelines are of a top-down nature, regulators operate at different levels, including the national, provincial and city (district) level from where they monitor the activities of banks. Local authorities also have considerable autonomy in deciding on financial incentives; some provide financial incentives to banks in respect of the Green Credit Policies. It is left to the local governments if and how they assist banks in their attempts to provide 'green' loans. Every sort of arrangement needs to be negotiated individually with each authority, therefore subsidies are only occasional and not necessarily the rule. As a result, smaller banks face a heavier competition for budget allocation.<sup>65</sup>

The bigger banks in China are able to internalize these policies relatively smoothly within their existing frameworks, but their undertakings remain rather superficial relative to their size. Nevertheless, when looking at other government incentives, the Green Credit Policy is high on the political agenda and claims a great amount of commitment from all participating parties. It has developed steadily and with a relatively high speed, beginning in 2007, and can be expected to affect the financial sector in a significant manner. Recently, the CBRC drafted key performance indicators (KPIs) for banks, which are currently undergoing review by affected banks. These KPIs are divided into three main areas, reflecting the three objectives of the Green Credit Policy: (1) Green Products, (2) Green Risk Assessment, and (3) Green Operations. At this time, they are still in draft and not publicly available. Their publication, expected shortly, will most likely provide a more comprehensive and profound guiding structure to banks and clients.

## **Observations and Conclusion**

China's efforts to 'green' its banking sector are pioneering and somewhat unique among developing countries. Its commitment to these policies is also manifested in its role as co-chair of the Informal Sustainable Banking Network established by the International Finance Cooperation (IFC). However, given China's size, the heavy environmental burden resulting from many years of pollution and environmental degradation cannot be addressed in one decade. The Green Credit Guidelines represent an important and innovative approach to redress China's 'Development first, Environment later'<sup>66</sup> policy, predominant in the mid-1990s.

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<sup>64</sup> Aizawa, M. & Yang, C. (2012). Green Credit, green Stimulus, green Revolution? China's Mobilization of Banks for Environmental Cleanup, *The Journal of Environment & Development* 19(2), pp.119-144.

<sup>65</sup> Interview with Taizhou Bank, March 2014.

<sup>66</sup> Policy approach framed by China's political leaders in 1995.

Even though the changes in policy are of a very recent nature, their implementation has been relatively rapid. The Green Credit Policy is considered as a win-win strategy for both the central governments and the banks.<sup>67</sup> In practice, however, the Guidelines still need improvement; in particular, a better inclusion strategy for smaller banks at the local level needs to be developed. In order to improve the effectiveness of the policy, the decentralized structure and the top-down approach need to be better adjusted to the challenges which smaller banks face. The vague policy details, unclear implementation standards and lack of environmental information for banks and clients constitute the main problems in the implementation of the Green Credit Policy on a national level.<sup>68</sup> There is still limited awareness and understanding of environmental, social and governance risks on the part of many banks (particularly smaller banks), and of most banking clients. Given prevailing energy prices, energy efficiency is not an immediate priority for many clients, and some level of subsidy or sweetener seems to be necessary to incentivize such lending.

The banking sector in China, just like its underlying policy framework, is rapidly evolving. In this dynamic market, a push by the national government for rapid implementation of the Green Credit Guidelines is to be expected. How quickly and successfully the banks adopt these Guidelines in their existing lending operations remains an open question. Smaller banks, in particular, are likely to find this challenging, given their client base and own capacity shortcomings. It is not clear, in the absence of detailed implementation Guidelines, to what extent this policy will have “teeth.” Nonetheless, these Guidelines represent an important policy statement and are being studied with interest by a number of other developing countries.

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<sup>67</sup> B. Zhang et al. (2010) op. cit.

<sup>68</sup> Ibid.

## The informal Sustainable Banking Network

The informal Sustainable Banking Network was launched in 2012 supporting members in their efforts to develop standards, policies and guidelines for environmental and social best practices in their countries' banking sectors. The Network is designed to bring regulators together, whether they have regulations in place and want to share their experiences and lessons learned, or whether countries and networks have no regulation in place and want to link in to see what others in the space are doing. The main focus for IFC is to deepen the integration of ESG issues into financial systems; IFC has witnessed regulators increasingly see the need to manage ESG risk in the banking sector.<sup>69</sup>

### The Sustainable Banking Network

The primary goal of the initiative is for FIs in emerging markets to follow good environmental and social standards similar to and/or consistent with IFC performance standards. The informal network supports banking regulators and FIs building on IFCs Performance Standards on Environmental and Social Sustainability. Three types of advisory services are provided:<sup>70</sup>

1. Advising banking regulators on standards or guidelines for local financial industries in environmental and social risk management, green lending, and improvement of their footprint in banking operations;
2. Developing a training program and building technical capacities in environmental and social risk management for consulting networks in various regions;
3. Developing and testing tools that help FIs identify gaps in their environmental and social risk management practices and make necessary improvements.

Countries participating in this network - Bangladesh, Brazil, China, Indonesia, Lao PDR, Mongolia, Nigeria, Peru, Vietnam and Thailand, at the present time - engage and exchange lessons in support of mainstreaming sustainable banking practices into their national finance system. The network is underpinned on the belief that environmentally and socially sound sustainable banking practices will in turn ensure capital preservation and create new financial products and markets.

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<sup>69</sup> Interview with IFC, February 2014.

<sup>70</sup> IFC (2013). Annual Report 2013. Available at: <http://passthrough.fw-notify.net/download/104993/http://www.ifc.org/wps/wcm/connect/595dba00429205089b69bf0dc33b630b/A2FAnnualReview2013-Final.pdf?MOD=AJPERES>.

IFC is the Network Secretariat and facilitates meetings, provides an online knowledge management platform, facilitates bilateral exchange, and provides technical assistance and support to members on policy development. IFC's work is motivated by 2 concerns:<sup>71</sup>

1. Promoting ESG in the financial sector;
2. Supporting regulatory approaches that can incentivize green growth and energy efficiency.

In IFC's experience<sup>72</sup>, in most countries the focus is not on new regulation but rather on the creation of guidelines that build on existing law and provide implementation guidance. A typical evolution consists of general banking guidelines, and then more specific sector guidelines to cover high-risk sectors. In most cases, the national regulator drafts the guidelines and IFC support is requested for review. In some cases, support is needed to help draft them, and IFC can help mobilize donor financing to do so.

The network is underpinned in the belief that environmentally and socially sound sustainable banking practices will in turn ensure capital preservation and create new financial products and markets. In practice, the participating Network countries have demonstrated the development of the regulatory framework is evolutionary, both across time and across a spectrum of regulation. Specific regulation may result from these efforts, or, conversely, some existing regulatory requirement may prompt such efforts. The needs of banks are different depending on where the overall regulatory framework sits.

## **Examples**

### **Mongolia**

In 2013, the Mongolian Sustainable Finance Forum brought together the Dutch Development Bank (FMO), Trade and Development Bank of Mongolia (TDB), IFC, Mongolia Bankers Association (MBA) and the Banking and Finance Academy (BFA) to promote green growth in Mongolia. The resource-rich country is one of the world's fastest-growing economies, expanding 12.3% in 2012.<sup>73</sup>

Mongolia aims to implement internationally recognized sustainable financing practices and standards throughout the Mongolian banking sector in line with their new National Green Development Strategy and action plan which outlines ways to build a greener economy.

TDB is one of the top five Mongolian banks and have been implementing an internal environmental and social risk management framework to protect assets and presents

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<sup>71</sup> Interview with IFC, February 2014.

<sup>72</sup> Ibid.

<sup>73</sup> World Bank, (2013) op. cit.

business opportunities by opening up new financial products and markets. They work together with the Bank of Mongolia, the Ministry of Environment and Green Development, and international and local partners.

## **Indonesia**

In 2010, the governor of Bank Indonesia, the country's central bank, and the state minister of the environment signed a Joint Agreement on Coordinating the Increased Role of Banking in Environmental Conservation and Management. In July 2011, IFC and Bank Indonesia jointly organized the Green Banking Conference. Bank Indonesia is currently developing a green banking policy. The green banking policy will have two components:<sup>74</sup>

- Compliance and enhancing banking risk management on environmental issues;
- Beyond compliance with increasing banks' portfolio on green financing, e.g. renewable energy, energy efficiency, organic agriculture, green building, eco-tourism, eco-label products.

Bank Indonesia regulations include:

- Bank should consider environment protection in assessing asset quality (PBI No. 14/15/PBI/2012)
- Bank should increase productive loans and access loan for SME PBI (No.14/26/PBI/2012 and PBI No.14/22/PBI/2012)
- Green Lending Model, 2013

Indonesia is also developing a *Green Lending Model*, and preparing a *Green Banking Regulation* through active coordination among ministries, green banking working group, and international organizations/initiatives. The Indonesian authorities have highlighted the need for training and capacity building, government incentives (e.g. taxes, soft loan and credit guarantee scheme) and increase green financing portfolio.

## **Bangladesh**

Bangladesh Bank's Corporate Social Responsibilities (CSR) mainstreaming guidance of 2008 highlighted environmental sustainability issues alongside those of social and financial inclusion. Bangladesh has developed an Environmental Risk Management Policy and Strategy Framework, which the central bank made mandatory for the financial sector in 2011, and is now working on its implementation. Bangladesh banking regulation requires that national law

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<sup>74</sup> Bank Indonesia, *Green banking initiative: enhancing banking role to support sustainable development*, Available at: <http://passthrough.fw-notify.net/download/535447/http://www.ebtke-conex.com/down/Conference/220813%20Parallel%20Session%20I/4%20Energy%20Conservation/2%20BI%20-%20EDI%20SETIJAWAN.pdf>.

must be followed by clients and the banks categories risks to show which categories may have a higher risk due diligence. IFC have seen through their work that better ESG understanding at the bank level can create an additional check on critical ESG issues; however, banks need to build up the capacity to monitor and evaluate E&S risks.

## **China**

China has a top down approach as the government decided regulation and mandated all ministries to develop ESG frameworks. China's Green Credit Guidelines are discussed in greater detail elsewhere in this Annex.

## **Nigeria**

Nigeria developed and adopted the Nigerian Sustainable Banking Principles in July 2012.<sup>75</sup> Interestingly, the Nigerian effort was initiated by the banking sector itself – a bottom-up approach that stands in contrast to the other examples discussed here, where the impetus was more top-down. The Principles guide how eligible Banks must conduct their activities in line with environmental and social (E&S) performance. They apply to all corporate lending, project and structured finance, equity and debt capital market activities, and advisory services provided to new and existing clients. Specific guidelines have been developed for three sectors: Power, Agriculture and Oil and Gas.

Each Bank must establish a *Sustainable Banking Approach*, which will incorporate relevant international E&S standards and industry best practice. The Principles require all clients to comply with Nigerian laws governing E&S issues (for agriculture local E&S laws apply), and where applicable, the IFC Performance Standards, the Equator Principles for project finance, the World Bank Group Environmental, Health and Safety Guidelines for lending to different sector activities, or strategies for sustainable financing developed by UNEP FI.

An interesting provision of the Principles, in addition to ESG practice, is a financial inclusion policy that seeks to provide financial services to individuals and communities that traditionally have had limited or no access to the formal financial sector. The Central Bank of Nigeria has also put a National Financial Inclusion Strategy forward, and it aims to have at least 70% of Nigerians brought into the formal financial sector by 2020.<sup>76</sup>

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<sup>75</sup> Central Bank of Nigeria (2012). Nigerian Sustainable Banking Principles. Available at: <http://www.cenbank.org/out/2012/ccd/circular-nsbp.pdf>.

<sup>76</sup> Van de Walle, N. (2013). Center for Financial Inclusion blog "Nigeria Sets Its Sights on Financial Inclusion" Available at: <http://cfi-blog.org/2013/08/20/nigeria-sets-the-policy-stage-for-financial-inclusion/>.

## South Africa: Regulation 28

Regulation 28 gives effect to section 36 (1) (bB) of the Pension Fund Act, No 24 of 1956 of South Africa. The Act empowers the Minister of Finance to regulate the amount and the extent to which a pension fund may invest in particular assets. The concept of the Regulation 28 is not new; it was always part of the South African retirement law. However, the previous version was outdated (for more information on the key reasons to update Regulation 28, please refer to National Treasury, 2011<sup>77</sup>). The revised Regulation 28 of the Pension Fund Act came into effect on 1st July 2011. The primary aim is to reduce certain risks by imposing prudent asset diversification principles and to set forth percentage limits for each asset class or instruments.<sup>78</sup>

In addition to revised definitions and limits for asset classes, this version of Regulation 28 adopts the “look-through” principle, whereby the underlying assets of each investment vehicle need to be scrutinized and included in the compliance calculations.<sup>79</sup> In the contrast to previous rules focusing on the compliance of entire fund in the aggregate only, Regulation 28 also applies to assets at a member level. This aims to avoid individual member investments being non-compliant and to protect individual member’s retirement savings from undue market risks.<sup>80</sup>

The Regulation is supposed to ensure that the savings are invested in a prudent manner to not only protect fund members but also to achieve economic development and growth and support ESG considerations. Regulation 28 applies to all private retirement fund assets worth R1.1trillion (as of 03/2011; approx. EUR 73billion), and may be extended to the Government Employees Pension Fund. It underlines the importance of “the right mix of low risk-return ‘safe’ assets with higher risk-return innovative products”<sup>81</sup>. As highlighted by Bloomberg New Energy Finance, “Pension funds are important potential investors in clean energy projects, but rules on the matching of assets and liabilities tend to push trustees towards taking a highly conservative approach to asset allocation”<sup>82</sup>. Such a conservative approach can clearly be observed with Regulation 28.

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<sup>77</sup> National Treasury (2011). Final Regulation 28 Explanatory Memorandum. Government Gazette, 4 March 2011, No. 34070.

<sup>78</sup> National Treasury (2011). Final Regulation 28 Explanatory Memorandum.

<sup>79</sup> The only exceptions are guaranteed insurance policies – the guarantee removes the need for prudent guidelines as the money is safe by definition.

<sup>80</sup> Stanlib Insights (2012). Regulation 28 and the RA Season – What to Consider? January 2012, Issue 01; Available at [http://www.stanlib.com/Insights/012012/regualtion\\_28\\_ra.htm](http://www.stanlib.com/Insights/012012/regualtion_28_ra.htm). A more detailed comparison can be accessed at: <http://www.stanlib.com/Insights/012012/assets/downloads/Regulation28raseason.pdf>.

<sup>81</sup> National Treasury (2011). Op cit.

<sup>82</sup> Bloomberg New Energy Finance (2013). Op. cit

## Effects of Regulation 28 on green financial policy in South Africa

In addition to its primary aim of prudent asset diversification, the Regulation also includes specification with regards to green financial regulation. The preamble states, "Prudent investing should give appropriate consideration to any factor which may materially affect the sustainable long-term performance of a fund's assets, including factors of an environmental, social and governance [ESG] character"<sup>83</sup>. However, the Regulation merely calls for the incorporation of ESG goals into the decision-making ("give appropriate consideration", see above); the Regulation does not set forth mandatory rules to be followed in this regard. Nevertheless, the prominent placement of ESG in the Regulation is seen as an important signal underlining the government's aim to involve domestic pension funds in achieving social and environmental goals<sup>84</sup>. However, it does not provide or refer to any universally accepted definition of ESG factors. Rather broadly defined, "ESG issues may include climate considerations and energy security and efficiency, but also corporate governance, contributions to development infrastructure and water security, to name a few"<sup>85</sup>.

One criticism of Regulation 28 is that it offers only broad principles instead of specifying concrete approaches to meet the required consideration of ESG issues<sup>86</sup>. The majority of pension funds are at an early stage in responsible investing, and the state of knowledge about ESG remains low. Recognizing this, the industry-led Committee on Responsible Investing by Institutional Investors in South Africa has put forth a Code for Responsible Investment in South Africa (CRISA). It aims to provide the investor community with the guidance needed to integrate ESG issues into investment decisions.<sup>87</sup>

Even though a clear picture of implementation has yet to emerge, Regulation 28 does provide a strong regulatory basis for integration of ESG risk considerations into investment decisions. Internationally, the revision of Regulation 28 is considered as groundbreaking<sup>88</sup>.

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<sup>83</sup> National Treasury (2011). Pension Fund Act, 1956: Amendment of Regulation 28 of the Regulation made under Section 36.

<sup>84</sup> IIPC (2011). The Revised Regulation 28 of the Pension Fund Act, South Africa. Grow and Direct Private Capital. Available at [http://iipcollaborative.org/wp-content/uploads/media/Regulation-28\\_South-Africa\\_05-07-20132.pdf](http://iipcollaborative.org/wp-content/uploads/media/Regulation-28_South-Africa_05-07-20132.pdf).

<sup>85</sup> Maheshwari, A et al (2013) op. cit.

<sup>86</sup> WWF (2013): Sustainable Finance. Responsible Investment for Pension Fund Trustees: A Work in Progress? WWF Briefing ZA, p.3.

<sup>87</sup> Institute of Directors in Southern Africa. (2011). Code for Responsible Investing in South Africa, Available at [http://c.ymcdn.com/sites/www.iodsa.co.za/resource/resmgr/crisa/crisa\\_19\\_july\\_2011.pdf](http://c.ymcdn.com/sites/www.iodsa.co.za/resource/resmgr/crisa/crisa_19_july_2011.pdf).

<sup>88</sup> Maheshwari, A et al (2013) op. cit.

## Stock Exchange Initiatives

Sustainable stock exchange initiatives fall into two broad categories: One concerns ESG disclosure and reporting requirements and the other, special indices that attempt to measure company performance on certain ESG criteria (and provide specialised listing and trading platforms). Government regulation is the impetus for better disclosure, generally mandatory in nature. Special indices, on the other hand, are to a large extent voluntary industry initiatives that have developed in response to market demand or stakeholder pressure. The following table illustrates a selection of leading sustainability reporting initiatives by stock exchanges and special indices as well as an overview of supportive regulatory initiatives by the government in selected developed and developing countries.

## Stock Exchange ESG Initiatives

Stock Exchange	Partner SSE Initiative ?	Scope of Disclosure required by Stock Exchange	Sustainable Indices associated with Stock Exchange	Governmental Supportive Laws/Regulations
<b>Developing/Emerging Countries</b>				
<b>BRAZIL</b> Brazilian Stock Exchange (BM & FBOVESPA)  352 companies, USD 1020 b market capitalization	Yes	BM & FBovespa tracks its issuers' ESG disclosures in a public database  <b>2012</b> Comply or Explain recommendations released for all companies to state whether they publish a regular sustainability report and where it is available, or explain why not.	<b>2010</b> BM & FBovespa and development bank of Brazil launched the ICO2 <u>Carbon Efficient Index</u> . (It is calculated according to companies' free float and greenhouse gas (GHG) emissions coefficient.)  <b>2005</b> BM&F Bovespa creates a <u>corporate sustainability index</u> which measures total return on a theoretical portfolio composed of stocks issued by companies on the São Paulo stock exchange that are highly committed to corporate sustainability and social responsibility (maximum of 40 companies).  <b>2000</b> Bovespa launches ' <u>Novo Mercado</u> ' for listed companies that voluntarily adopt corporate governance practices in addition to those required by law. .	No data found
<b>INDIA</b> National Stock Exchange of India (NSEI) and Bombay Stock	NSE no, BSE yes	The Securities and Exchange Board of India (SEBI) has increased attention to sustainability reporting and support to ESG disclosure and standard setting initiatives.  <b>2011</b> SEBI mandates top 100	<u>S&amp;P ESG India Index</u> of 50 best performing stocks in Indian market as measured by ESG parameters.  The index is maintained by a committee composed of credit rating agencies and service providers, and is reportedly the first of its kind to measure ESG practices based on	<b>2013</b> Implementation of the Companies Act that mandates a certain class of profitable enterprises to spend money on social welfare activities.  <b>2013</b> Companies Bill 2012: mandates companies with net worth > INR 500 crores or turnover of INR 1,000 crores to

Stock Exchange	Partner SSE Initiative ?	Scope of Disclosure required by Stock Exchange	Sustainable Indices associated with Stock Exchange	Governmental Supportive Laws/Regulations
<p>Exchange (BSE)</p> <p>NSE: 1678 companies, USD 1192 b market capitalization</p> <p>BSE: 5294 companies, USD 1138 b market capitalization</p>		<p>listed companies to report on ESG initiatives undertaken, according to key principles of the 'National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business' by the Ministry of Corporate Affairs (MCA). It is expected that reporting by the remaining companies (currently voluntary) will subsequently be phased in under mandatory.</p>	<p>quantitative as opposed to subjective factors</p>	<p>adopt a CSR policy (previously voluntary).</p> <p><b>2009</b> MCA issues <u>voluntary Guidelines for CSR</u></p> <p>(six core elements including sustainable environmental policies) to be disseminated to stakeholders via website, annual reports etc.</p> <p><b>2008</b> Companies Act: Information on conservation of Energy required in the Board of Directors Report.</p> <p><b>1986</b> Environment Protection Act: requires "covered organizations" to submit annual environmental audit reports (include water, raw material consumption) to the State Pollution Control Board (SPCB).</p>
<p><b>CHINA</b></p> <p>Chinese Shanghai Stock Exchange (SSE) and Shenzhen exchange</p>	No	<p>Both exchanges require certain industries to disclose an environmental assessment before <u>initiating an IPO</u>. SSE encourages companies to <u>voluntarily</u> disclose sustainability issues.</p> <p><b>2008</b> The SSE issues the <u>Shanghai CSR Notice</u> and the <u>Shanghai Environmental Disclosure</u></p>	<p><b>2009</b> SSE Social Responsibility Index established by SSE and China Securities Index Company Limited, which is composed of 100 SSE-listed companies with "good performance in fulfilment of social responsibility".</p>	<p><b>2008</b> Ministry of Environmental Protection in China launched the '<u>Green Securities</u>' <u>policy</u> later supported by the '<u>Green Initial Public Offering policy</u> in partnership with the China Securities Regulatory Commission to control the country's 13 most polluting industries (the so-called 'Liang Gao') for listings both Stock Exchanges.</p>

Stock Exchange	Partner SSE Initiative ?	Scope of Disclosure required by Stock Exchange	Sustainable Indices associated with Stock Exchange	Governmental Supportive Laws/Regulations
<p>Shanghai: 953 companies, USD 2496 b market capitalization</p> <p>Shenzhen: 1536 companies, USD 1452 b market capitalization</p>		<p><u>Guidelines</u> on strengthening listed companies' assumptions of social responsibility. These allow for the SSE to take "necessary punishment measures" against companies for violations of the disclosure rules.</p> <p>Listed companies that promote CSR are offered <u>incentives</u> like priority election into the Shanghai Corporate Governance Sector, or <u>simplified requirements</u> for examination and verification of temporary announcements.</p> <p>The SSE has also developed the concept of <u>social contribution value per share</u></p>		
<p><b>SOUTH AFRICA</b></p> <p>Johannesburg Stock Exchange (JSE) 322 companies, USD 338 b market capitalization</p>	Yes	<p>JSE requires companies to comply with the King Code, which promotes sustainability disclosure and reporting. Issuers have to report combined financial and ESG information on "comply or explain" basis.</p> <p><b>2009</b> King III requires integrated sustainability reporting and 3rd party assurance.</p>	<p><b>2012</b> JSE announced that &gt;70% of listed companies fulfil base requirements to become constituents of its 2012 Socially Responsible Index (SRI).</p> <p><b>2004</b> JSE launches <u>SRI Index</u>, composed of top performing companies with regards to ESG issues.</p> <p>Companies are assessed against criteria across environment, society and economy as well as governance. The JSE SRI Index has</p>	<p><b>2009</b> The Mineral Resources and Petroleum Bill requires certain companies to <u>disclose social and labour plans to the government</u>, addressing current and post operations social impacts.</p> <p><b>2008</b> Companies Act: Directors are liable for performance and public disclosure of information.</p> <p><b>2004</b> The Broad-Based Black Empowerment Act requires disclosure on</p>

Stock Exchange	Partner SSE Initiative ?	Scope of Disclosure required by Stock Exchange	Sustainable Indices associated with Stock Exchange	Governmental Supportive Laws/Regulations
			no exclusions or down weightings of specific industries or sectors. The data provider is Ethical Investment Research Services	corporate initiatives regarding black empowerment.
<b>Developed Countries</b>				
<b>FRANCE</b> Euronext Paris	indirectly, through parent Euronext (transatlantic)	<b>2010</b> Article L225-102-1 of the Commercial Code as modified by the Grenelle II Law Includes CSR reporting and social and environmental information obligation for listed companies and other large companies.	<b>2007:</b> launch of <u>BlueNext</u> , one of NYSE Euronext's main sustainability-related projects, which aims to be the world's largest exchange for carbon and other environment-related products. It is owned jointly by NYSE Euronext (60%) and the French sovereign fund Caisse des Dépôts et Consignations (40%).  <u>Metnext</u> is a leader in weather risk analysis (subsidiary of Météo-France, NYSE Euronext and CDC), and develops weather indices (In association with finance and environmental stock exchange professionals) that can be used as underlying indices for weather hedges.	<b>2011</b> New national law states the proportion of women directors should not be below 40% in any company with annual revenues over 50 million euro.  <b>2009</b> Companies with more than 500 employees in high emitting sectors are required to publish greenhouse gas emissions.  <b>2002</b> Listed companies must disclose data on 40 labour and social criteria.  <b>2001</b> Public pension funds are required to disclose how their investment policy guidelines have addressed social and environmental considerations.
<b>SPAIN</b> Bolsas y Mercados Españoles (BME)	No	Reporting requirements relate to annual reports covering ESG issues.	<u>FTSE4Good IBEX Index</u> is under development.  The index will comprise companies in the BME's IBEX 35 Index and the FTSE Spain All Cap Index, namely for meeting good standards of practice in CSR.	<b>2011</b> Government-sponsored commercial companies and state-owned business enterprises are directed to file <u>annual corporate governance and sustainability reports</u> . <b>Sustainable Economy Law Article 39</b> requires reporting obligations for public/private companies & guidelines for non-financial information in accordance

Stock Exchange	Partner SSE Initiative ?	Scope of Disclosure required by Stock Exchange	Sustainable Indices associated with Stock Exchange	Governmental Supportive Laws/Regulations
3213 companies, USD 1116 market capitalization				with generally accepted standards, and must mention whether an independent third party has examined this information. If the corporation has more than one thousand employees, this report must also be sent to the Spanish CSR Council. <b>2007</b> Listed companies are required to nominate women to 40 per cent of board seats.
<b>JAPAN</b> Tokyo Stock Exchange  3408 companies, USD 4543 b market capitalization	No		<b>2009</b> Environmental ETF <u>Japan Green Chip 35</u> is launched. <b>2003</b> <u>Morningstar Socially Responsible Investment Index</u> (MS-SRI) is the first SRI index in Japan. <b>2009</b> The Tokyo Stock Exchange and the Tokyo Commodity Exchange create a joint venture to establish an emissions trading exchange.	<b>2004</b> Japan's "Law on the Promotion of Business Activities with environmental consideration by Specified Corporations..." requires specified companies and government agencies to produce annual reports on their activities related to the environment. Companies must report on specific indicators including the amount of greenhouse gas emissions, amount of release and transfer of chemical substances, and total amount of waste generation. Penalties for non-compliance are provided.
<b>UK</b> London Stock Exchange (LSE)	No	The London Stock Exchange requires listed companies to <u>report total GHG emissions</u> .	<b>2001</b> LSE is involved in the launch of the <u>FTSE4Good Index</u> . <u>The FTSE4Good Index Series</u> includes 4 tradable and 5 benchmark indices, representing Global, European, US, Japan and	<b>2013</b> UK Quoted companies incorporated in the UK are subject to <b>mandatory greenhouse gas reporting</b> requirements. The UK Financial Reporting Council (FRC) is finalizing a guidance on companies' disclosure on environmental,

Stock Exchange	Partner SSE Initiative ?	Scope of Disclosure required by Stock Exchange	Sustainable Indices associated with Stock Exchange	Governmental Supportive Laws/Regulations
996 companies, USD 3680 b market capitalization			<p>UK markets.</p> <p><u>The FTSE4Good benchmark indices</u> include all companies in the broad market index. Tradable indices include largest 50 or 100 companies measured by their market capitalisation. Indices include:</p> <p><u>FTSE4Good Environmental Leaders Europe 40 Index</u> identifies European companies with leading environmental practices</p> <p><u>The FTSE4Good Australia 30 Index</u> informs on Australian companies that meet good standards of practice in corporate responsibility.</p> <p><u>FTSE Environmental Technology Index Series</u> measures performance of global companies with core business in development/deployment of environmental technologies</p> <p><u>FTSE Environmental Opportunities Index Series</u> measures performance of global companies with significant involvement in environmental business activities,</p> <p><u>FTSE KLD Global Climate 100 Index</u> of top 100 globally listed companies, whose activities demonstrate the greatest potential for mitigating immediate and long-term causes of</p>	<p>social, and diversity replacing existing 'business review' sections of annual reports with information of business activity, including social effects etc.</p> <p><b>2010</b> <u>Carbon Reduction Commitment (CRC)</u> encourages organizations to develop energy management strategies for energy usage, requires companies &gt; 6,000MWh per year to measure and report emissions related to energy use to the Environmental Agency or face financial or other penalties.</p> <p><b>2008</b> <u>Climate Change Act</u>, by April 2012 the government will exercise its executive power to require companies to include GHG reporting in a company's Director's Report.</p> <p><b>2006</b> <u>British Companies Act</u> mandates companies listed on LSE to disclose in their annual Business Review, information on environmental, workplace, social and community matters "to the extent that they are important to understanding the company's business."</p> <p><b>2000</b> <u>Stakeholder Pension Schemes Regulations</u> requires managers to provide a written statement on principles of</p>

Stock Exchange	Partner SSE Initiative ?	Scope of Disclosure required by Stock Exchange	Sustainable Indices associated with Stock Exchange	Governmental Supportive Laws/Regulations
			<p>climate change.</p> <p><u>FTSE KLD Global Sustainability (GSI) Index Series</u> to identify companies committed to long- term environmental, social and governance (ESG) sustainability.</p>	<p>investments where social, environmental or ethical considerations were is taken into account for investments.</p>
<p><b>GERMANY</b></p> <p>Deutsche Börse</p> <p>639 companies, USD 1936 b market capitalization</p>	No	<p><b>2011</b> Deutsche Börse develops a two-tier system, where companies are listed according to best practices. In the Prime Standard Segment (under EU regulated market), companies with better records of robust international transparency e.g. governance practices, quarterly financial reporting, and other. However, according to Hauser Institute companies in the prime segment do not necessarily have best practices on ESG</p>	<p><b>2007</b> <u>DAXglobal Sarasin Sustainability Germany Index</u> which follow companies that meet sustainability requirements of the Sarasin Sustainability Matrix (rating of companies based on industry-specific ecological and social effects on sustainable development across the value chain, ecological and social performance compared to other companies in the same industry) composed of 100 biggest and most liquid German companies based on free-float and market capitalization.</p> <p><b>2006</b> <u>DAX Global Alternative Energy Index</u> includes international companies based on technology and services to promote and generate alternative energy sources.</p>	<p><b>2011</b> <u>German Sustainability Code</u> developed by German Council for Sustainable Development based on Sustainability Reporting Guidelines of GRI and the European Federation of Financial Analyst Societies.</p> <p><b>2004</b> <u>Reform Act on Accounting Regulations</u> requires companies to report on key financial and non-financial indicators in annual reports that materially affect the development or performance of the company.</p> <p><b>2002</b> <u>Insurance Supervision Act, section 115</u> states that pension fund trustees must inform in written form beneficiaries whether ecological, ethical and social needs have been considered in investment decisions.</p>

Stock Exchange	Partner SSE Initiative ?	Scope of Disclosure required by Stock Exchange	Sustainable Indices associated with Stock Exchange	Governmental Supportive Laws/Regulations
<p><b>USA</b></p> <p>New York Stock Exchange (NYSE),</p> <p>&gt;8000 companies, USD 14242 b market capitalization</p>	<p>Yes</p>	<p><b>2013</b> <u>NYSE Governance Services</u> launches integrated resources for private and public companies looking to advance their corporate governance, risk, ethics, and compliance practices.</p> <p><b>2003</b> <u>NYSE adopts Corporate Governance rules</u> requiring that listed companies “adopt and disclose code of business conduct and ethics.”</p> <p>NYSE-Listed companies make up 87% of both CDP's S&amp;P 500 Disclosure Leadership Index and the Dow Jones Sustainability Index.</p>	<p>A large variety of indices are available, developed by different players, including:</p> <p><u>NYSE Arca Environmental Services Index:</u> companies that engage in business activities related waste</p> <p><u>NYSE Arca WilderHill Clean Energy Index:</u> companies benefitting from cleaner energy and conservation.</p> <p><u>The NYSE Arca WilderHill Progressive Energy Index</u> comprised of companies in transition technologies that reduce the carbon or pollutants from fossil fuel use</p> <p><u>NYSE Arca Cleantech Index</u> comprised of global cleantech companies from a range of industry sectors</p> <p><b>2013</b> S&amp;P Dow Jones Indices and RobecoSAM launch new range of diversified sustainable indices with eight new indexes.</p> <p><b>1999</b> <u>Dow Jones Sustainability Index (DJSI)</u> launched as first global sustainability benchmark. DJSI tracks stock performance of world's leading companies in terms of economic, environmental and social criteria via the <i>Best-in-Class Approach</i>: only companies that fulfil certain sustainability criteria better than the majority of their peers are included.</p>	<p><b>2010</b> <u>Mandatory Reporting of GHG rule referred to as 40 CFR Part 9</u>, states that the EPA now requires large emitters of GHG to collect and report data on GHG emissions.</p> <p>2010 <u>Dodd-Frank Wall Street Reform and Consumer Protection Act</u> contains several ESG disclosure provisions</p> <p><b>2002</b> <u>Sarbanes-Oxley Act</u> requires CEOs and CFOs of public companies to certify annual and quarterly reports of companies' financial conditions.</p> <p><b>1986</b> <u>Emergency Planning and Community Right-to-Know Act</u> to inform citizens of toxic chemical releases and waste management activities in their areas.</p>

Stock Exchange	Partner SSE Initiative ?	Scope of Disclosure required by Stock Exchange	Sustainable Indices associated with Stock Exchange	Governmental Supportive Laws/Regulations
			<p>No industries are excluded from this process.</p> <p><u>Index Range</u> comprises global, regional, and country benchmarks.</p> <p><u>MSCI Family of indices</u></p> <p><u>MSCI World ESG Index</u></p> <p>is a capitalization weighted index which provides exposure to companies with high Environmental, Social and Governance (ESG) performance relative to their sector peers.</p> <p><u>MSCI Global Sustainability Indices</u> represent the performance of companies with high ESG ratings relative to their sector peers, located both global in developed and the US markets. Further related initiatives are, MSCI Emerging Markets (EM) ESG Index, MSCI SRI Indices, MSCI KLD 400 Social Index, MSCI Global Investable Market Indices, MSCI Ex Controversial Weapons Indices, MSCI 'Environmental' Indices, Custom MSCI Sustainability Indices, Custom MSCI Sustainability Indices, Barclays MSCI ESG Fixed Income Indices, Barclays MSCI Socially Responsible (SRI) Indices, Barclays MSCI Sustainability Indices , Barclays MSCI ESG Weighted Indices</p>	
USA	Yes		NASDAQ Clean Edge US Index tracks	2010 Mandatory Reporting of GHG rule

Stock Exchange	Partner SSE Initiative ?	Scope of Disclosure required by Stock Exchange	Sustainable Indices associated with Stock Exchange	Governmental Supportive Laws/Regulations
<p>NASDAQ OMX (NY)</p> <p>3400 companies, USD 4687 b market capitalization</p>			<p>performance of publicly traded clean-energy companies</p> <p><u>The NASDAQ OMX® Clean Edge® Global Wind Energy Index</u> acts as benchmark for the global wind energy sector, includes manufacturers, developers, distributors, installers, and users of energy derived from wind sources.</p> <p><u>The Wilder NASDAQ OMX Global Energy Efficient Transport Index</u> tracks companies which develop and promote innovative, energy efficient modes of transportation and transition towards more energy efficient transportation.</p>	<p>referred to as 40 CFR Part 9, states that the EPA now requires large emitters of GHG to collect and report data on GHG emissions.</p> <p>2010 <u>Dodd-Frank Wall Street Reform and Consumer Protection Act</u> contains several ESG disclosure provisions</p> <p><b>2002</b> <u>Sarbanes-Oxley Act</u> requires CEOs and CFOs of public companies to certify annual and quarterly reports of companies' financial conditions.</p> <p><b>1986</b> <u>Emergency Planning and Community Right-to-Know Act</u> to inform citizens of toxic chemical releases and waste management activities in their areas.</p>
<p><b>AUSTRALIA</b></p> <p>Australian Securities Exchange (ASX)</p> <p>~2200 listed companies, USD 1350 b market capitalization</p>	No	<p><b>2010</b> Listed companies must disclose if a code of conduct on environmental risks and controls has been conducted</p> <p><b>2004</b> Products must disclose the extent of environmental and social consideration taken into account during investment selection.</p>	<p><u>The FTSE4Good Australia 30 Index</u> informs on Australian companies that meet good standards of practice in corporate responsibility.</p>	<p><b>2010</b> <u>Financial Services Reform Act</u> with new ethical disclosure requirements. Issuers of financial products are obliged to disclose the extent of labour standards or environmental, social or ethical considerations are taken into account during investments.</p> <p><b>2001</b> <u>Corporation Act</u> requires some disclosure of violations of environmental legislation annual reports of listed companies.</p>

## Disclosure Initiatives

Environmental, social and governance (ESG) factors in an economy, sector or company play an increasingly important role in creating or eroding shareholder value.<sup>89</sup> Several exchanges engage in the following activities to address ESG issues:

- Raising ESG awareness and standards among listed companies;
- Information products and services for investors; and
- Specialised markets for specific sustainable investment niches.

Depending on the country's regulatory landscape, disclosure requirements can be Mandatory (M), Voluntary (V) or Comply or Explain (CoE).<sup>90</sup> For instance, in India the stock exchange requires the top 100 listed companies to report on ESG initiatives undertaken, according to key principles set out by regulation. The Securities and Exchange Commission (SEC) in the US requires regular filing of company information, including on ESG issues. The SEC's required annual disclosure is skewed towards governance: public companies must disclose CEO-to-worker pay ratios; resource extraction companies must disclose payments to governments. The SEC has also provided guidance to companies on existing disclosure requirements as they apply to business or legal developments relating to the issue of climate change. However, the quality of information is open to question, and it is not clear how this information is assessed and utilized – anecdotal evidence suggests that the filings are pro forma and that the SEC lacks the resources to adequately analyse them.<sup>91</sup>

The IPO stage is an important junction at which greater ESG disclosure can make a key impact. The measures implemented by both the Shanghai and Shenzhen Stock Exchanges as indicated above are harmonized within a wider framework of government policy to foster environmentally and socially sustainable development which include the "*Green Securities*" policy, launched by the Ministry of Environmental Protection in February 2008 in partnership with the China Securities Regulatory Commission. The policy requires companies to disclose more information on their environmental record—specifically pollution before raising capital on the stock exchange. The policy was enhanced by the "Green IPO" policy in June 2008 which requires enterprises in "*liang gao*"<sup>92</sup> industries to undergo an environmental assessment by the MEP before initiating an IPO or obtaining refinancing from banks. As a result, this process

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<sup>89</sup> World Federation of Exchanges (2009). Exchanges and sustainable investment: an overview, Available at: <http://www.world-exchanges.org/sustainability/m-2-0.php>.

<sup>90</sup> United Nations Conference on Trade and Development (2013). Best practice guidance for policymakers and stock exchanges on sustainability reporting initiatives, Available at: [http://unctad.org/meetings/en/SessionalDocuments/ciisard67\\_en.pdf](http://unctad.org/meetings/en/SessionalDocuments/ciisard67_en.pdf).

<sup>91</sup> Discussion with industry analysts, February 2014, New York.

<sup>92</sup> 14 industries identified as particularly energy intensive, polluting or with excessive production capacity.

was responsible for the rejection or further review of IPOs from 20 out of 38 companies after 2008.

The London Stock Exchange requires listed companies to report on total GHG emissions in line with the regulations laid out by authorities in 2013. UK Quoted companies incorporated in the UK are subject to mandatory greenhouse gas (GHG) reporting requirements. The new regulations came into force on 1 October 2013 with retrospective effect, applying to any company financial year ending on or after 30 September 2013. Further, the UK Financial Reporting Council is finalizing a guidance on companies' disclosure on environmental, social, and diversity replacing existing 'business review' sections of annual reports with information of business activity, including social effects etc.

A number of European regulations have been enacted that also speak to increased disclosure and analysis of ESG issues in corporate reporting. Recent European Parliament initiatives include the passage of a law requiring oil, gas, mining and logging companies to disclose payments for access to natural resources in countries of operation, and approval of a draft on corporate non-financial reporting requiring large companies to disclose their environmental, social and employee-related impact and diversity (both in 2013).<sup>93</sup>

As a result of the above-mentioned types of initiatives, according to analysts, corporations have begun increasingly disclosing corporate social responsibility in their annual reports.<sup>94</sup> CSR reporting alone increased during 2008-2011 by 74%-83% in the US, 62%-79% in Canada, and 94%-100% in the UK. Further, according to the Governance & Accountability Institute), 19% of S&P companies published CSR reports in 2011 while 53% reported in 2012 illustrating increased regulation.

## **Sustainability Indices**

Sustainability indices attempt to measure the performance of companies that meet certain ESG standards. Such indices provide investors with tools to create and manage sustainably responsible portfolios, and allow benchmarking of performance. Indices can be global, and include stocks regardless of which stock exchange they trade in, or confined to a particular stock exchange. Such indices are not a regulatory creation, but could be a useful instrument to help fulfil regulatory mandates on Minimum Requirements or Restrictions in investment portfolios.

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<sup>93</sup> The Initiative for Responsible Investment at the Hauser Institute for Civil Society (2014). Current Corporate Social Responsibility Disclosure Efforts by National Governments and Stock Exchanges, Available at: <http://hausercenter.org/iri/wp-content/uploads/2011/08/CSR-Disclosure-Updates-2-4-14.pdf>.

<sup>94</sup> KPMG. (2011). International Survey of Corporate Responsibility Reporting, Available at: [http://www.eticanews.it/wp-content/uploads/2011/12/CR\\_Report\\_2011\\_v10.pdf](http://www.eticanews.it/wp-content/uploads/2011/12/CR_Report_2011_v10.pdf).

Leading indices globally include:

- *Dow Jones Sustainability Index*: launched in 1999, includes only those companies that fulfil certain sustainability criteria whom perform better than the majority of their peers. The index does not exclude any industry. Customized versions of the indices can be created to meet specific investor demands.
- *FTSE4Good*: this series comprises 4 tradable and 5 benchmark indices, representing global, European, US, Japan and the UK markets. The benchmark indices include all companies in the broad market index that meet FTSE4Good criteria, while the tradable indices cover the largest 50 or 100 companies in the benchmark.
- *MSCI World ESG Index*: this index consists of large and mid-cap companies in 23 developed market countries. Companies are selected based on proprietary research, using a best-in-class selection process. Various other indices are also available, such as those that exclude certain industries or are focused on companies that derive substantial revenue from environmentally beneficial activities.
- *NYSE Euronext Vigeo index family*: NYSE Euronext and Vigeo have launched a range of indices based on ESG. The indices include major listed companies from Europe, the Asia-Pacific region and North America.<sup>95</sup>

In addition to these global indices, special indices are available for most developed country exchanges: Spain, Germany, Switzerland, US, UK, Austria and South Korea to name a few, and in several developing country markets: Brazil, South Africa, Indonesia, Egypt, India and China. Please see the table above for information on some of these initiatives.

## **Performance of emerging versus developed based stock exchanges**

There is great variability in corporate sustainability reporting across different markets. One attempt to rank such reporting indicates that European exchanges took eight of the ten top positions, with emerging market exchanges catching up. This same report states that emerging market based stock exchanges will overtake the developed world exchanges in terms of quantitative sustainability disclosure performance by 2015.<sup>96</sup>

Another assessment found nonetheless that most exchanges perform poorly on ESG performance overall; within ESG, they perform better on social issues and least well on environment. South Africa and Brazil stand out among developing countries: both have

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<sup>95</sup> NYSE Euronext (2013). News releases: NYSE Euronext and Vigeo launch ESG indices, Available at: <http://www.nyse.com/press/1363687752612.html> and News releases NYSE Euronext and Vigeo expand range of ESG indices, Available at: <http://www.nyse.com/press/1372326894699.html>.

<sup>96</sup> Corporate Knights Capital (2013). Trends in Sustainability Disclosure: Benchmarking the World's Stock Exchanges, Available at: <http://static.corporateknights.com/StockExchangeReport2013.pdf>.

developed the first responsible investment indices in emerging markets (the JSE SRI index in South Africa and the Bovespa Corporate Sustainability Index in Brazil).<sup>97</sup>

## Standards

Stock exchanges differ in their requirements, be it for listing requirements at IPO or on-going reporting requirements. Nonetheless, most countries are interested in a drive towards better risk management, governance and transparency. In an attempt to standardize sustainability initiatives, some stock exchanges have signed a sustainability commitment for the Sustainable Stock Exchange (SSE) Initiative launched by UNCTAD Secretary-General.<sup>98</sup> The SSE Initiative is co-organized by the United Nations Global Compact Office, the United Nations Conference on Trade and Development, the United Nations-supported Principles for Responsible Investment and the United Nations Environment Programme Finance Initiative. As a first step, exchanges have to publicly commit to promote sustainability in their markets. As a second step, exchanges are invited to join the SSE Consultative Group where exchange of ideas and information takes place. Further, stock exchanges are required to document their progress by sharing their current and future ESG activities on the SSE website.

In addition, various interest groups have been working in parallel with regulators to promote binding standards at a national and or international level e.g. the *Sustainability Accounting Standards Board (SASB)* in the US and the *Global Reporting Initiative (GRI)* internationally. SASB (established in 2011) is a non-profit organisation engaged in developing sustainability accounting standards for use by publicly listed corporations in disclosing material sustainability issues for investors and the public.<sup>99</sup> By 2015, SASB aims to develop standards for more than 80 industries in 10 sectors, which can be used by companies to report on ESG.

GRI aims to promote sustainable reporting standards for companies and organizations.<sup>100</sup> GRI has established reporting guidelines as well as a reporting system that provides metrics and methods for measuring and reporting sustainability-related impacts and performance. To date, thousands of organizations, of all sizes and sectors, use GRI's Framework to understand and communicate their sustainability performance.

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<sup>97</sup> EIRIS (2009). Taking stock: How leading stock exchanges are addressing ESG issues and the role they can play in enhancing ESG disclosure; Available at: <http://www.sseinitiative.org/files/EIRIS-StockExchangesAndESG.pdf>.

<sup>98</sup> Sustainable Stock Exchanges (2012). Press Release available at: <http://www.world-exchanges.org/focus/2012-06/m-1-1-1.php>.

<sup>99</sup> Sustainability Accounting Standards Board (2014). Mission and Vision; Available at: <http://www.sasb.org/sasb/vision-mission/>.

<sup>100</sup> Global Reporting Initiative (2014). What is GRI; Available at: <https://www.globalreporting.org/information/about-gri/what-is-GRI/Pages/default.aspx>.

## US Insurance Regulation

Insurance regulation is set in the backdrop of Basel III, which applies in the USA not only to banks but to all institutions with more than USD 50 billion in assets, and Solvency II, an EU directive which reviews the capital adequacy regime for the European insurance industry through harmonising the EU insurance regulation. In 2011, it was unclear how the Basel III rules would apply to insurance, hedge funds and other large financial players. However, the intention was to limit the dangers of big financial firms being heavily intertwined. Solvency II, although an EU Directive, will directly and indirectly affect US insurance companies particularly for all insurance companies that operate in Europe and through indirect changes in market competition, rating agencies' expectations and US regulatory regimes. If US insurance companies adopt Solvency II, global competition would be increased and US companies that implement Solvency II with an aim to integrating risk, performance, and strategy will likely be in a stronger position to respond to economic changes with improved mitigation strategies.<sup>101</sup> In contrast to the US model of entity-based insurance regulation, international regulators focus on a more holistic approach and consider the links between risk management and regulatory compliance at the group level.

### International Insurance Regulation

In the US, standard line insurance companies are insurers that have received a license or authorisation from a state. In July 2013, the Federal Reserve and other bank regulatory agencies approved the Final US Rules: a single, comprehensive regulatory framework, implementing Basel III and the Dodd-Frank Act. These rules replaced the Basel I framework, which was in place in the US, and made changes including:

- Revise the definition of regulatory capital;
- Implement new minimum requirements for Common Equity Tier 1 and an overall Tier 1 capital requirement;
- Add a supplemental leverage ratio for “advanced approaches” banks; and
- Amend the methodology for determining risk-weighted assets.

### The Dodd–Frank Wall Street Reform and Consumer Protection Act<sup>102</sup>

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<sup>101</sup> KPMG (2011). Solvency II: Issues for the US insurance market. Available at: [http://www.kpmg.com/US/en/IssuesAndInsights/ArticlesPublications/insurance-briefing/Documents/KPMG\\_Insurance%20Briefing\\_Solvency%20II.pdf](http://www.kpmg.com/US/en/IssuesAndInsights/ArticlesPublications/insurance-briefing/Documents/KPMG_Insurance%20Briefing_Solvency%20II.pdf).

<sup>102</sup> US Government Printing Office (2010). Dodd-Frank Wall Street Reform and Consumer Protection Act. Available at: <http://www.gpo.gov/fdsys/pkg/BILLS-111hr4173enr/pdf/BILLS-111hr4173enr.pdf>.

US Dodd Frank Act was signed into federal law in 2010, bringing significant changes to financial regulation in the US that affected all federal financial regulatory agencies. The aim is to promote the financial stability of the United States by improving accountability and transparency in the financial system, to end "too big to fail", to protect the American taxpayer by ending bailouts, to protect consumers from abusive financial services practices, and for other purposes. The Federal Insurance Office (FIO) was established under the Dodd-Frank Act to review the effectiveness of state and federal insurance regulations. The role of the FIO may include finding a Solvency II equivalent, and may impact the future role of the NAIC in international negotiations.

### **National Association of Insurance Commissioners**

In the US, insurance is regulated by the states under the McCarran-Ferguson Act. The states are then regulated through 'periodic proposals for federal intervention', and a non-profit coalition of state insurance agencies: National Association of Insurance Commissioners (NAIC), which works to harmonise the country's different laws and regulations. The National Conference of Insurance Legislators (NCOIL) also works to harmonise the different state laws.

Ultimately the responsibility for insurer insolvency rests with each state insurance department and the state insurance Commissioner. The state insurance departments are assisted by the NAIC, the US standard setting and regulatory support organisation created and governed by the chief insurance regulators from the 50 states, the District of Columbia and 5 US territories.<sup>103, 104</sup> NAIC members are elected or appointed state government officials who regulate the conduct of insurance companies in their respective state or territory. In 1994, the International Association of Insurance Supervisors (IAIS) was established and developed Insurance Core Principles (ICPs) in 2011, revised in 2013, as a globally accepted framework to supervise the insurance sector. The NAIC adopted the ICPs as part of their drive for the US to become a global insurance regulator leader.

The NAIC stresses the importance of top-down involvement by management to understand enterprise-wide risk and is therefore exploring new corporate governance in line with the ICPs. They emphasised that new rules (Basel III) need to be consistent with insurance regulatory requirements, commenting specifically on: the definition of separate accounts, the treatment of surplus notes and policy loans for risk weighting, and distinctions between Statutory Accounting Principles (SAP) and Generally Accepted Accounting Practices (GAAP). For insurance underwriting, the state regulators monitor each legal entity insurer's financial

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<sup>103</sup> NAIC (1991-2014), About the NAIC, [http://www.naic.org/index\\_about.htm](http://www.naic.org/index_about.htm).

<sup>104</sup> A list of NAIC members can be found at:  
[http://www.naic.org/documents/members\\_membershiplist.pdf](http://www.naic.org/documents/members_membershiplist.pdf).

position and results on an on-going basis through the Risk Based Capital (RBC) requirements, which are regulatory tools.

### **NAIC Accreditation Programme**

The accreditation programme is the certification of membership to NAIC for a state insurance department once it can demonstrate it meets a range of legal, financial, functional and organisational standards. This accreditation programme maintains standards to promote effective financial solvency regulation.

The emphasis in the accreditation programme and the processes it creates is on: (1) adequate solvency laws and regulations to protect consumers; (2) effective and efficient financial analysis and examination processes based on priority status of insurers; (3) cooperation and information sharing with other state, federal or foreign regulatory officials; (4) timely and effective action when insurance companies are identified as financially troubled or potentially troubled; (5) appropriate organisational and personnel practices; and (6) effective processes for company licensing and review of proposed changes in control. The NAIC's Financial Analysis Solvency Tools (FAST) encompass a wide-ranging review/testing system that enable the determination of financial distress.

### **Conclusion**

In the USA, each state has own laws and policies which govern the financial systems, including the insurance sector. The NAIC is the national body which regulates these different laws and regulations, and adheres to the ICPs as a globally accepted framework to supervise the insurance sector. The most important element of the NAIC is the Accreditation Programme; this Programme determines membership to NAIC based on legal, financial, functional and organisational standards. This accreditation programme maintains standards to promote effective financial solvency regulation. A number of US insurance companies were involved in the UN Principles of Sustainable Insurance (PSI), and the NAIC has undertaken awareness raising activities around the PSI.<sup>105</sup> However, in contrast to other areas of interest to the insurance community, such as accounting practices, capital adequacy or antifraud, for which task forces and committees have been established,<sup>106</sup> we were not able to find any evidence that NAIC has established a task force to further study ESG issues.

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<sup>105</sup> NAIC (2012). Powerpoint presentation at the NAIC Spring National Meeting. Available at: [http://www.naic.org/documents/committees\\_e\\_climate\\_related\\_docs\\_1203\\_presentation\\_national\\_meeting.pdf](http://www.naic.org/documents/committees_e_climate_related_docs_1203_presentation_national_meeting.pdf)

<sup>106</sup> NAIC (2014). 2014 Committee Structure. Available at: [http://www.naic.org/documents/committees\\_cmte\\_structure.pdf](http://www.naic.org/documents/committees_cmte_structure.pdf)

# The United Kingdom Green Investment Bank

In 2012 the Green Investment Bank (GIB) was established, becoming fully operational in October 2012 when it was granted State Aid approval by the European Commission to make investments on commercial terms. The public limited company was designated under the Enterprise and Regulatory Reform Act 2013, wholly owned by the UK Government but required under constitutional documents to operate independently from the Government. Therefore, the Bank is not regulated by the Financial Conduct Authority or Prudential Regulation Authority, but is regulated by its wholly owned subsidiary UK GIB Financial Services Ltd.

This is the first bank in the world of its kind and is committed to investing in sustainable projects in an effort to achieve the goals set out in the Kyoto Protocol, Climate Change Act 2008 and Energy Bill 2012. The GIB has three fundamental targets which must be taken into consideration before any investment is made in building green infrastructure and financing projects. These targets are:<sup>107</sup>

- A reduction in greenhouse gas emissions of 34% by 2020 and at least 80% by 2050;
- 15% of all energy consumed generated from green sources by 2020; and
- 'Reduction in waste' to landfill.

The GIB's capital is invested in UK projects alongside private capital. Priority sectors, to which 80% of the GIBs capital must be invested, are offshore wind, waste recycling and energy from waste, and energy efficiency, including support for the Government's Green Deal.<sup>108</sup> Non-priority sectors for the remaining capital are biomass power, carbon capture and storage, marine energy and renewable heat.<sup>109</sup> The GIB has to date invested in 23 projects, directly committing GBP 842 million which, when fully deployed, is expected to mobilise a total of GBP 3.5 billion. Therefore, the GIB has crowdfunded in GBP 3 for every GBP 1 invested.<sup>110</sup>

Every potential investment by the GIB must pass through a green impact assessment which ensures that the infrastructure or project complies with all environmental and planning laws and that the investment will contribute to the GIB's fundamental targets. This is ensured through assessing:

- The estimated total green impact over the project lifetime;

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<sup>107</sup> UK Green Investment Bank plc (2013). HM Government, <http://www.greeninvestmentbank.com/>

<sup>108</sup> A programme to help home-owners implement energy efficiency improvements; not to be confused with Green New Deal. See <https://www.gov.uk/green-deal-energy-saving-measures/overview>.

<sup>109</sup> The Green Investment Bank (2013). What We Do, HM Government, <http://www.greeninvestmentbank.com/what-we-do/default.html>.

<sup>110</sup> The Green Investment Bank (2013). Our Investments, [http://www.greeninvestmentbank.com/userfiles/files/Presenting-our-investments-18Mar\\_PUBLIC.pdf](http://www.greeninvestmentbank.com/userfiles/files/Presenting-our-investments-18Mar_PUBLIC.pdf).

- The estimated average annual green impact over the project lifetime per unit of investment; and
- The estimated average annual green impact at key points in the future.

The GIB also assesses the project or activity against its impact on the wider economy, including financial market development, technology costs and wider effects. The GIB is currently working on adopting the Equator Principles and the UN Principles of Responsible Investment.

The UK has a number of green policies, taxes and levies and has established the world's first Green Investment Bank. The Green New Deal presented a number of proposals to ensure green banking in the UK; however, these are yet to be adopted into national law. It is believed that the formation of the GIB was entirely independent of the Green New Deal.<sup>111</sup>

### **The Green New Deal**

In 2007, the Green New Deal Group was established, with members including newspaper editors, former Heads of NGOs and a Green Party Member of European Parliament (MEP). The Group launched their first report in 2008 as a series of proposals to combat the 'triple crunch': the financial crisis, climate change and volatile energy prices, and peak oil. The 2008 Report stated clearly that *financial deregulation has facilitated the creation of almost limitless credit* and called for action including structural transformation of the regulation of national and international financial systems, and major changes to taxation systems.

Alongside other measures, the report called for the re-regulation of the domestic financial system to ensure that the creation of money at low rates of interest is consistent with democratic aims, financial stability, social justice and environmental sustainability.<sup>112</sup>

In 2013, the report was re-launched, repeating calls for the urgent implementation of a real Green New Deal and adding an interlinked package of measures including a systematic programme of investment in green infrastructure of at least £50 billion a year. This would be funded, according to the Group, through measures including, but not limited to, a programme of Green Quantitative Easing (QE). Under green QE, the Bank of England would 'create' tens of billions of pounds to be used in a targeted fashion to fund a Green New Deal, including buying out the private finance initiative (PFI) debt and redirecting some of the otherwise huge repayments into funding green infrastructure.

In 2012, the Green Party (in coalition government with the Conservative Party) called again for green quantitative easing, as this would shift green investment projects to support

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<sup>111</sup> Interview with Investment Committee member, Green Investment Bank, February 2013.

<sup>112</sup> NEF A Green New Deal. Available at: <http://www.neweconomics.org/publications/entry/a-green-new-deal>.

renewable energy and energy efficiency projects, rather than giving the money to the banks. However, this has not yet been implemented.

## **UK Taxes and Policies**

To promote investment in sustainable building and technologies, various forms of '*green finance*' are already in place or are under development in the UK. Social impact bonds, enhanced capital allowances (tax relief), a climate change levy, fuel duty and many more incentives are available for green investments and policies.

Social Impact Bonds have been commissioned across the country from a variety of organisations: national government departments such as the Department for Work and Pensions, local authorities such as Essex County Council and private organisations such as the Council of Voluntary Adoption Agencies.<sup>113</sup>

A 100% first year enhanced capital allowance is also offered in the UK for specified energy saving plant and machinery. Loss-making companies can opt for an alternative 19% tax cash credit up to a maximum of GBP 250,000 (USD 380,000). Water efficient equipment also qualifies for ECAs in the first year of investment. The ECA credit is also only available to incorporated companies.

The UK has imposed a Climate Change Levy – an environmental tax levied on electricity, gas, and solid fuels including coal and liquefied petroleum gas. This levy provides up to a 90% discount when energy efficiency or carbon saving targets are met as part of Climate Change Agreements.<sup>114</sup> Large businesses that consume a certain amount of energy must also participate in the Carbon Reduction Commitment Energy Efficiency Scheme (CRC). This targets CO<sub>2</sub> emissions not already covered by CCAs and the EU ETS. Organisations eligible for the CRC must buy allowances for the energy they use and penalties for non-compliance are significant.

The UK's car tax is calculated based on CO<sub>2</sub> emissions and fuel type. The most polluting vehicles, emitting over 255g CO<sub>2</sub>/km, are taxed at GBP 475 (USD 723) per year whereas vehicles emitting 100g or less of CO<sub>2</sub>/km are exempt. Company cars in the UK are also taxed CO<sub>2</sub> emissions, fuel type and type of car. There is a 100% first year capital allowance for vehicles meeting low-emission requirements (less than 110gm CO<sub>2</sub>/km). In January 2011 the UK also introduced a 'plug in' car grant, with a 25% grant towards plug-in cars with a

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<sup>113</sup> City of London Economic Development (2013). The Role of Tax Incentives in Encouraging Social Investment. Available at: <http://www.cityoflondon.gov.uk/business/economic-research-and-information/research-publications/Documents/research-2013/the-role-of-tax-incentives-in-encouraging-social-investment-WebPDF.pdf>.

<sup>114</sup> KPMG (2013). KPMG Green Tax Index 2013. Available at: <http://www.kpmg.com/Global/en/IssuesAndInsights/ArticlesPublications/green-tax/Documents/kpmg-green-tax-index-2013.pdf>.

maximum value of GBP 5,000. Vehicles must meet certain criteria, including emissions levels, range, minimum top speed, warranty, battery performance, and safety. The UK froze their fuel duty, which was GBP 0.5795 per litre of unleaded gasoline or diesel (USD3.40 per gallon) compared with a duty of only 18.4 US cents per gallon in the US, until at least September 2014. Together with VAT, the total tax take on gasoline and diesel in the UK is around 60% of the pump price.

On 1<sup>st</sup> April 2002 an aggregate levy was introduced; a UK-wide tax on the commercial exploitation of virgin aggregates, namely rock, sand and gravel. The levy targets an efficient use of virgin aggregate materials and an increased use of untaxed alternative construction materials. The UK also imposes a per-ton landfill tax on waste going to landfill. Companies in the UK can claim Land Remediation Relief, a deduction of 100% plus an additional 50% for qualifying expenditure incurred by companies when they rehabilitate land from a third party in a contaminated state.

In 2008, the UK government introduced the Renewable Energy Act which promotes the development and commercialisation of renewable energy resources, solar energy being cited as a key source. Under this Act, investors have access to a range of incentives (both fiscal and non-fiscal) and other privileges:<sup>115</sup>

- Income tax holidays
- Duty-free importation of machinery and equipment and related materials
- Real property tax of 1.5% on the original cost, less accumulated normal depreciation or net book value of equipment, machinery and other improvements actually used in the RE facilities
- Preferential corporate income tax rate of 10% on net income after the lapse of the income tax holidays period
- Accelerated depreciation on plant, machinery and equipment used
- Zero-rated value-added tax (VAT) on certain transactions e.g. sale of power generated from renewable sources, purchase of local goods/services needed for the development of the solar power plant
- Tax exemption on sale of carbon credits

The UK currently incentivises local communities to accept shale drilling through tax breaks. However, the European Commission is expected to announce proposals which target cutting GHG emissions by 40% by 2030 (compared to 1990 levels). Britain opposes this target as it

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<sup>115</sup> Cross Green Energy (2010). Tax Incentives. Available at: <http://www.crossgreenenergy.co.uk/investors-roof-owners/financial-management/tax-incentives.php>.

would increase the use of renewable energy from their existing 20% target to 24-30% within 10 years.<sup>116</sup> The UK is concerned that a renewable energy target would mean less investment in shale gas and the UK also wants to include nuclear energy.

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<sup>116</sup> Harvey, F. (2014). "European Greens consider challenge to UK tax breaks for shale gas drilling", The Guardian, <http://www.theguardian.com/environment/2014/jan/20/european-greens-threaten-uk-government-shale-tax-breaks>.

## The Netherlands: Green Funds Scheme

The Dutch government aims to have a clear focus on environmental and energy issues in investment decision making, as manifested through initiatives such as: VAMIL (free depreciation of environmentally benign investments), the EIA (Energy Investment Allowance) and MIA (Environmental Investment Allowance) tax deduction schemes for green investments by companies, and the Green Funds Scheme for individual investors.

The establishment of the Green Institutions Scheme, which regulates the role played by the FIs, has made an impact on regulation and the banking system in the Netherlands. Banks have broadened their range of green products and there is an increased demand for green savings and investment opportunities. There has also been a 'snowball' effect with regards to CSR.

### Green Funds Scheme

The Netherlands implemented the Green Funds Scheme (GFS) in 1995. This scheme allows individuals who invest in a green fund or save money with FIs practising "green banking" a tax incentive for accepting a lower rate than market on their investments. In return, the banks charge green projects a lower interest rate.<sup>117</sup>

There are two components to this advantage: (1) individual investors are exempt from capital gains tax (typically 1.2%) on up to EUR 55.000 invested per person per annum in specific investments such as green business, social, cultural and seed capital funds; (2) investors receive a 1.3% reduction on income tax payments on their green capital. On average, individuals invest EUR 30.000 into green funds or bonds.<sup>118</sup>

Since 1995, thousands of projects have been implemented by more than 100.000 investors in areas such as environmentally friendly greenhouses and wind turbines to organic farming and afforestation. Through the Scheme, new technologies have been introduced to the market and stakeholders (individuals, banks, entrepreneurs and government) have realised the profitability of green investment.

Eligible activities for the GFS include:

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<sup>117</sup> NL Agency Ministry of Housing, Spatial Planning and the Environment (2010). The Green Funds Scheme: A success story in the making. Available at: [http://www.rvo.nl/sites/default/files/bijlagen/SEN040%20DOW%20A4%20Greenfunds\\_tcm24119449.pdf](http://www.rvo.nl/sites/default/files/bijlagen/SEN040%20DOW%20A4%20Greenfunds_tcm24119449.pdf).

<sup>118</sup> Accenture (2011). Carbon Capital: Financing the low carbon economy. Available at: [http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture\\_Barclays\\_Carbon\\_Capital.pdf](http://www.accenture.com/SiteCollectionDocuments/PDF/Accenture_Barclays_Carbon_Capital.pdf).

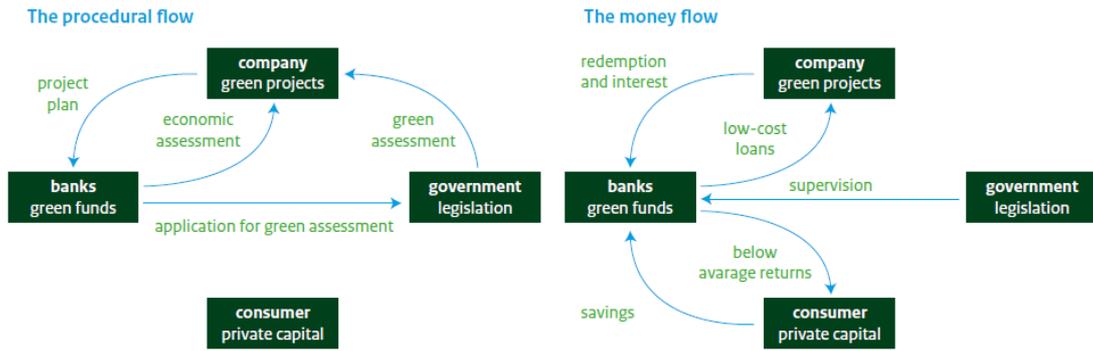
- Nature, forest and landscape: the creation of 'new' nature areas in protected zones, towns and cities, and nature management measures such as wildlife tunnels and nest protection;
- Agriculture: organic farming and energy efficient horticultural greenhouses;
- Energy: wind turbines, solar cells, hydropower or heat pumps;
- Sustainable construction: 'Green' homes and offices must meet strict sustainability standards. They have to be highly energy efficient, constructed from environmentally friendly materials and involve water saving faculties;
- Sustainable mobility: improvements in public transport, for example 'green' engines, as well as cleaner inland ships and refuse collection vehicles.

The Green Funds Scheme comprises the Green Projects Scheme, which establishes the conditions which govern projects, and the Green Institutions Scheme, which regulates the role played by the FIs. The majority of Dutch banks have a 'green fund' or a 'green bank', which meets the strict requirements imposed by the Green Institutions Scheme. The banks issue bonds with a fixed value, term and interest rate, or shares in a green investment fund. Usually the interest rate or dividend paid out by the bank is lower than the market rate, which means that the bank can in turn invest the funds in green projects for a lower interest rate.

Originally, the idea behind the Green Funds Scheme was to allow private citizens to participate in projects that benefit the environment. However, the Scheme also encouraged the banking sector's corporate social responsibility, allowing product development, turnover and profit to be linked to CSR and thus corporate management.<sup>119</sup> As a result, banks are increasingly including 'green' aspects in their decision-making processes, in addition to financial aspects of projects. This has also led to increased investments in renewable energy or organic farming projects, as they now represent a serious credit option.

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<sup>119</sup> NL Agency Ministry of Housing, Spatial Planning and the Environment (2010). Op. cit.



Source: NL Agency, Ministry of Housing, Spatial Planning and the Environment, *The Green Funds Scheme, A Success Story in the Making*

# South Korea Green Growth Strategy

South Korea is the first country in the world to make their Green Growth Strategy a national one.<sup>120</sup> In August 2008, on the 60th anniversary of Republic of Korea (South Korea), President Lee Myung-Bak declared "Low Carbon Green Growth" as a new vision to lead the country's development over the next 60 years.

During the last century South Korea was amongst the fastest growing economies, but it initially overlooked the environment. In less than 50 years since its establishment, South Korea has become the world's 15th largest economy; however, between 1990 and 2005 its greenhouse gas emissions almost doubled, the highest growth rate among OECD countries.<sup>121</sup>

## Green Growth Policy

Through the Green Growth Policy, South Korea aims to become a global leader among low carbon societies. It also aims to become the 7th Green World Power by 2020, and the 5th by 2050. To achieve these goals, the government issued a Framework Act on Low Carbon Green Growth in 2009. This framework is based on the OECD green growth measurement framework and indicators, which South Korea has applied and adjusted to their specific national context. The legal document defines the milestones of the National Green Growth Strategy, which mainly includes three objectives and ten policy directions.

Since South Korea imports approximately 96% of its primary energy sources, the objectives are to<sup>122</sup>:

- improve energy independence and climate change mitigation
- create new drivers for economic growth such as the development of green technologies and the promotion of the industry's green structure
- introduce a green lifestyle, and green transport infrastructure, as well as sustainable land and water use

To facilitate the development of technologies and the fulfilment of the Green Growth Strategy, the South Korean government first introduced a Five-Year Action Plan (from 2009 to 2013). As part of its Five-Year Plan, South Korea committed 2% of its GDP each year to

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<sup>120</sup> Jones, R. S. and B. Yoo (2011). "Korea's Green Growth Strategy: Mitigating Climate Change and Developing New Growth Engines", *OECD Economics Department Working Papers*, No. 798.

<sup>121</sup> World Bank (2012), Korea's Global Commitment to Green Growth. Available at: <http://www.worldbank.org/en/news/feature/2012/05/09/Korea-s-Global-Commitment-to-Green-Growth>.

<sup>122</sup> Zelenovskaya, E., (2012). "Green Growth Policy in Korea: A case study", International Centre for Climate Governance. Available at: [http://www.iccgov.org/FilePagineStatiche/Files/Publications/Reflections/08\\_reflection\\_june\\_2012.pdf](http://www.iccgov.org/FilePagineStatiche/Files/Publications/Reflections/08_reflection_june_2012.pdf).

create a knowledge and technological foundation to sustain a green growth economy and tackle the financial crisis through job creation.

The strategy includes a program of regulatory, financial and fiscal reform measures, which helps grease the wheels towards green economy. It also incorporates investment in large infrastructure projects that are essential for South Korea and attract private businesses to invest in the New and Renewable Energy (NRE) field. In order to strengthen growth potential and encourage the participation of private businesses in the Green Growth Strategy, tax incentives are planned and industrial regulations for 'green' companies will be simplified. Private investments in green businesses have a positive impact on reducing GHG emissions.

Some of the key priorities underpinning Korea's development of its green economy include<sup>123</sup>:

- Introduction of a national carbon emissions trading system
- Extending public assistance and encouraging investment in 'green enterprises'
- Public credit guarantees for green technology and green industry sectors
- Tax incentives for emissions reduction, energy efficiency and green economy-related initiatives
- Long-term, low interest green bonds and savings
- Creation of a green fund to facilitate access to credit for SMEs
- Mobilizing investment from pension schemes
- The launch of a green private equity fund
- Incentives to increase the use of solar energy in households and small buildings
- Adoption of a Renewable Portfolio Standard (RPS) from 2012 requiring a proportion of energy supply to come from NRE sources, with the proportion increasing annually up to 10 per cent by 2022

## Impacts

While the South Korean Green Growth Strategy four pillars include sustainable production and consumption, green businesses, sustainable infrastructure, and fiscal incentives and reforms, there is very little mentioned about the role of banking or industry regulation. The key priorities identified above clearly show that the role of tax incentives, green bonds and savings, investment from pension schemes and incentives for EE/RE investments are considered in the strategy and that in the 'long term' there may be reforms for the financial sector. The current focus, however, appears to be on emissions reductions and the goal of becoming an Energy World Power. Financial regulations seem to be, currently, on the outskirts of the Strategy, rather than the impetus behind them. The green savings and funds

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<sup>123</sup> See <http://www.postcarbonpathways.net.au/transition-strategies/south-korean-government/#.UxnM7xCE5ek>.

schemes (patterned after the Netherlands Green Funds Scheme, discussed elsewhere in the Annex) relied on incentives and a cost structure that have not been attractive enough to spur much uptake. The manufacturing sector appears to have benefitted from the focus on green technology, but financing has been through company balance sheets rather than through the banking sector.<sup>124</sup>

## Conclusion

Since the announcement of South Korea's Green Growth Policy in 2008, considerable progress has been made and Korean companies with technologies in the NRE sector have grown significantly. It is expected that the expansion of NRE business will create about 110,000 jobs in 2015. The amount of investments in Green Growth in the year 2011 is calculated to be 3% of Korean GDP or approximately USD 33 billion, which is three times higher than the amount recommended by the UN. However, in comparison to the expected amount of the NRE export income in 2012, which was expected to be approximately USD 10.7 billion, it seems that Green Growth is not very effective.<sup>125</sup> There are, undoubtedly, environmental and social benefits that can be expected, such as reducing GHG emissions and increasing the rate of employment. We were not able to find data to quantify these.

The Green Growth Strategy was the flagship policy of the previous government, and how it evolves in the future depends on the current government's commitment to it. Green growth is not incompatible with President Park Geun-Hye's Creative Economy Policy. Besides, Korea now hosts the Green Climate Fund, and expects to launch a domestic emissions trading scheme in 2015. The overall sense in the country is that there continues to be political will to emphasize low carbon and green growth.<sup>126</sup>

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<sup>124</sup> Interview with Korea Capital Markets Institute, March 2014.

<sup>125</sup> Zelenovskaya, E (2012).Op. cit.

<sup>126</sup> Interview with Korea Capital Markets Institute, March 2014.

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### **About the Inquiry**

United Nations Environment Program (UNEP) is undertaking the **Inquiry into the Design of a Sustainable Financial System** to identify and recommend reforms to the policy and regulatory arrangements governing financial markets that would accelerate the transition to a prosperous and inclusive green economy. The Inquiry will establish a knowledge baseline of how the financial system is currently operating with regard to the green economy, identify bottlenecks and barriers and highlight options for reform in terms of both financial practice and policy. It is led by Dr. Simon Zadek and Nick Robins, together with an Advisory Group made up of leaders from the worlds of finance, banking, regulation investment and academia, whose role is to channel experience and test ideas for reform.

<http://www.unep.org/greeneconomy/financialinquiry/>

### **About the Frankfurt School of Finance & Management – UNEP Collaborating Centre for Climate & Sustainable Energy Finance**

The Frankfurt School - UNEP Collaborating Centre for Climate & Sustainable Energy Finance (the "Centre") was set up in 2011 as a joint venture between the United Nations Environment Programme and Frankfurt School, supported by the German Federal Ministry for the Environment, as a think-and-do tank advancing the role of the private sector in climate change mitigation and adaptation. It has offices in Frankfurt and Nairobi as well as permanent experts in Panama.

The Centre combines project implementation on the ground with think tank activities. Its work is cutting edge: the team of expert's experiments with new financial mechanisms and implements cutting edge projects informs policy development and changes the way the financial industry operates. The primary objective is to mobilize significantly increased levels of sustainable energy and climate finance, bridging the public-private sector gap and thereby contributing to the development of a global green economy. In applying a continuum from research to project implementation, the Centre builds a knowledge base that directly benefits its partners and the wider community. By combining advisory work with applied research and capacity building, we identify and multiply good practice in climate and sustainable energy finance.

Together with its sister department, the Frankfurt School's International Advisory Services, the Centre has advised FIs and/or public sector institutions on their work with the private sector in developing and emerging economies across the globe. The following map highlights the countries in which the Frankfurt School has successfully implemented projects and or performed research assignments.

<http://fs-unep-centre.org/>

## About the lead authors

<p>Silvia Kreibiehl</p>	<p>In her role as Head of the Centre Silvia has overall responsibility for all international consultancy projects in the area of climate and sustainable energy finance. She is also leading applied research efforts particularly with regard to the role of local investors in climate finance. Silvia is also a contributing author of the Fifth Assessment Report (AR5) prepared by the Intergovernmental Panel on Climate Change (IPCC).</p> <p>Before joining the Centre Silvia worked for Deutsche Bank for 17 years, with 10 years in corporate finance (Equity Capital Markets and Mergers &amp; Acquisitions), in particular in the RE sector. She was responsible for DB's shareholding in the Desertec Industrial Initiative and in her role as Lead Analyst, Silvia Kreibiehl designed the GET FiT programme (Global Energy Transfer Feed-in Tariffs for Developing Countries), a scheme for encouraging private-sector investors deploy capital in renewable energy projects in developing countries.</p>
<p>Shilpa Patel</p>	<p>Shilpa has over 30 years' experience working in development in the World Bank Group, including 10 years' experience in climate change strategy, finance and metrics. She pioneered IFC's work on climate change strategy and metrics, supporting the corporation's climate change agenda and commitment to increase its climate-friendly lending.</p> <p>In recent years, Shilpa is working as an independent consultant conducting analytical work on climate finance, impact measurement of climate expenditures, and leveraging private financial flows directed to climate related investment. Clients include World Resources Institute, EBRD, IFC and Deutsche Bank. Shilpa is also a co-author of many publications regarding climate-related and green growth investments</p>

## Contributing authors (annexes)

Tobias Panofen  
 Laura Druce  
 Funda Dere  
 Srishti Gupta  
 Laura Sterner