



Towards a Sustainable Financial System in Indonesia



Inquiry: Design of a
Sustainable Financial System

In partnership with



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The partners

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About this report

This report has been developed by the UNEP Inquiry, in partnership with the IFC and AsRIA. Its aim is to support both domestic policy making and international understanding and knowledge. The research was carried out through a desk review of literature and data and a series of interviews carried out in Jakarta between October 2014 and January 2015. An earlier version was presented at a workshop in Jakarta in February 2015.

It is part of a wider set of regional and country reports being produced as part of the UNEP Inquiry (including Bangladesh, Brazil, China, Colombia, India, Indonesia, Kenya, South Africa, Uganda, the UK and the US; the Colombia and Kenya reports are also being developed with the IFC).

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Summary

Placing Indonesia's economy onto a green and sustainable development pathway, as envisaged in the National Long Term Development Plan, will require a large mobilization of investment. Estimates of the annual investment needed are in the order of US\$300-530 billion, with a large portion of this investment needed in critical infrastructure, as well as environmentally sensitive areas such as agriculture, forestry, energy, mining and waste. In addition, financing for SMEs and industry is critical for creating jobs and boosting productivity.

Funds for this investment will need to come from both the private and public sectors, including both domestic and international sources. Addressing 'real economy' barriers, such as fossil fuel subsidies and gaps in enforcement of environmental regulation, is critical to mobilising green investment. However, such policies are not the only tools for influencing investment. Policy makers around the world are increasingly recognizing that weaknesses and failures within the financial system may be constraining its ability to respond to risks and opportunities for viable, resilient investments.

Indonesia's financial system is dominated by banking, which accounts for 79.8% of total assets, compared to 10.5% of assets held by insurers, 2.6% by pension funds and 6.4% by finance companies. There are already some flows of private green investment—for example, a review by Bank Indonesia of green financing by banks found that green investment in May 2013 was about US\$1 billion, which is already equivalent to a significant portion of the public budgets allocated to green relevant line ministries. According to the 2014 *Asia Sustainability Investment Review*, sustainable investments in Indonesia's capital markets reached US\$1.14 billion at the end of 2013.

Today, the majority of banks, as well as non-bank-financial institutions do not consider environmental, social and governance factors in their lending or investment process as a main consideration. While climate change is seen as a threat to Indonesia's long-term economic development, lending and investment horizons remain short-term. However, Indonesia's financial markets have seen a number of important design innovations over the past years aimed at encouraging green lending and investment, such as the development of sustainability ratings in its rapidly growing stock market, the SRI-KEHATI index and the recent launch of the SRI KEHATI-ETF. While these are innovations that mirror developments in OECD countries, they are almost unique for a developing country.

Furthermore, the Indonesian Government has begun to take steps to green some aspects of the financial system. In December 2014, OJK, the financial services regulator, launched a *Roadmap for Sustainable Finance in Indonesia*, which lays down a comprehensive work plan for promoting sustainable finance for the period 2015-2019. The *Roadmap* will constitute an integral part of OJK's Master Plan for Indonesia's Financial Sector. Despite being at an early stage, the *Roadmap* is unique internationally as a systematic plan grown out of a decade of development of sustainable finance in Indonesia.

As part of this *Roadmap* OJK might develop a binding regulatory framework for green finance which, among others, could include the establishment of compulsory environmental and social management systems and associated reporting in both banking and capital markets.

Given that Indonesia is the country with the world's largest Muslim population, the development potential for Islamic finance is vast. OJK might therefore foster the development of Islamic finance as a means of aligning the Indonesian financial system with sustainable development.

1 Introduction

To place the economy onto a sustainable development pathway requires an unprecedented shift in investment; away from greenhouse gas (GHG), fossil fuel and natural resource intensive industries and toward more resource efficient technologies and business models. These shifts must be part of an even larger mobilization of the finance needed to enable broad and equitable economic growth, through resilient energy systems, cities, agriculture, transport, water, healthcare and education.

This is true both globally and in Indonesia. Funds for this investment will need to come from both the private and public sectors, including both domestic and international sources.

Weak and uncertain ‘real economy’ policies are often identified as barriers holding back sustainable investment. Countries with more transparent, coordinated long-term and credible policies capture more investment and build new industries, technologies and jobs while reducing emissions faster and more efficiently than countries with weak and disjointed policies (Deutsche Bank 2010). In particular, a lack of strong carbon prices, fossil fuel subsidies and weakly enforced environmental regulations are often highlighted as the cause of underinvestment in the green economy. This is true also in Indonesia, where real-economy reforms to electricity and fuel subsidies, fiscal and regulatory policies to promote green industries, and strengthened environmental protection have been identified as key priorities for transforming the economy toward green prosperity, in support of national medium and long-term development plans (UNEP 2011). More generally, improvements to the overall investment climate, including factors such as ease of doing business and the enforcement of property rights, will be also key to fostering investment.

However, such ‘real economy’ policies are not the only tools that policy makers have for influencing investment flows. Policy makers around the world are increasingly recognizing that weaknesses and failures within the financial system itself may be constraining its ability to respond to risks and opportunities for viable, resilient investments (see box on page 2). Central banks and financial regulators from Bangladesh to Brazil and from China to South Africa are experimenting with ways of explicitly incorporating sustainability considerations into rules governing financial markets (UNEP Inquiry 2014a, 2014b). Financial market standard-setters, including credit rating agencies such as S&P, are advancing standards that increasingly factor in environmental risk (S&P 2014).

1.1 This Study

To date, there is still limited understanding of the broad landscape of private green finance in Indonesia. While some research has been conducted on sustainable financing in the banking sector, there has been relatively little systematic research into the specific features and flows of green finance from private capital markets, even though Indonesia has reasonably sophisticated financial institutions and markets.¹

This study is therefore intended to contribute to the exploration of the state of green investment in Indonesia within the wider economic and financial sector context. Its aims are:

- ☉ To examine how and to what extent different types of investors and lenders currently finance green investments in Indonesia in order to better understand the drivers and subsequent impacts on capital flows.
- ☉ To identify and analyse gaps in financing, regulatory barriers and potential financial policy innovations in order to increase green finance in Indonesia.
- ☉ To enhance the dialogue on increasing the flow of green finance to steer the transition to a low carbon economy in Indonesia and coordinate closely with related initiatives.
- ☉ To contribute to growing international experience on aligning financial systems to sustainable development.

¹ In 2012, PWC and IFC (2012) carried out a survey in the Indonesian financial sector as part of a larger study on environmental and social risk management in the East Asia and Pacific region. In 2013, Bank Indonesia and the German Development Institute conducted a green finance survey in the Indonesian banking system (Volz et al. 2015).

International Experience

Around the world, investment flows are failing to enable balanced growth, spark full employment and allocate capital for the development of resilient infrastructure. Resources are still being over-invested in inefficient, environmentally damaging activities and under-allocated to build green, efficient and inclusive economies. Many countries have started to take measures to promote green finance and to address the problem of short-sighted investment horizons. The Asia-Pacific region is one of the most active in innovating towards a sustainable financial system. There is widespread adoption of new green disclosure requirements across banking and capital markets. Green credit guidelines are being introduced by banking regulators. Sustainability indexes and benchmarks are becoming common in securities markets, and credit rating agencies are incorporating climate risk into their solvency analysis. Innovations in micro-finance including mobile-money are seeking to close the gaps in access to finance.

The Central Bank of Brazil and the China Banking Regulatory Commission both require commercial banks to establish systems for environmental and social risk management. The EU has set requirements for large companies to disclose information on their environmental and social policies. The Bank of England is assessing the vulnerability of insurance companies to climate related risks. Norway's sovereign wealth fund will give more consideration to climate change related risks in its investments. The Central Bank of Bangladesh requires 5% of bank lending to be for clean energy, pollution control and enhancement of energy efficiency. In South Africa, regulatory rules require that enterprises disclose their finance and sustainability policies, while the Securities Commission Malaysia issued rules for institutional investors making an explicit requirement that they include corporate governance and sustainable development into the investment decisions. The Australian Securities Exchange has also issued the new requirements for governance of listed companies, requiring that the listed companies shall disclose whether they are facing substantive economic, environmental and social sustainability risk exposure and how to manage these risks.

Market players and private standard setters have also taken a number of positive steps, including leading credit rating agencies,² stock markets and institutional investors. US\$45 trillion in assets now support the UN-backed Principles for Responsible Investment, and US\$24 trillion supporting the 2014 Global Investor Statement on climate change.³ The green bond market is developing rapidly with an estimated US\$500 billion+ of bonds already linked to green economy and climate investment themes.

While these policy and market innovations indicate potential, they have not yet reached scale. Industry initiatives may be held back by institutional inertia and require policy support to reach a critical mass. Country-level innovations may also require changes to international policy frameworks—such as the Basel rules (Alexander 2014). Many policymakers are rightly cautious about intervening in the financial system to achieve real economy goals, and knowledge about what could work is still at an early stage.

Sources: UNEP Inquiry (2014). *Aligning Finance to Sustainable Development: Insights from Practice*. Geneva: UNEP and UNEP Inquiry (2015). *Aligning the Financial Systems in the Asia Pacific Region to Sustainable Development*. Geneva: UNEP.

² See, for example discussion in S&P (2014).

³ www.iigcc.org/publications/publication/2014-global-investor-statement-on-climate-change

2 Financing for Sustainable Development in Indonesia

Indonesia's *National Long-Term Development Plan* for the period 2005 to 2025 (Rencana Pembangunan Jangka Panjang Nasional, RPJPN 2005-2025) envisages a “green and ever-lasting Indonesia”. One of the RPJPN's eight national development missions is the realization of “a greener and sustainable Indonesia”. It recognizes that “the long term sustainability of development will face the challenges of climate change and global warming which affect activities and livelihood” and requires the Government of Indonesia pursues its economic growth targets in accordance with socially balanced, resource-efficient and environmentally friendly management. This is part of a vision to establish a country that is developed and self-reliant, just and democratic, and peaceful and united. Economic development is aimed at achieving efficient and modern mining and agricultural sectors, a globally competitive manufacturing sector and productive service sector. Social objectives include reaching a level of income per capita in 2025 of approximately US\$6,000, with a relatively good level of equity and less than 5% of people in poverty.

At the 2009 G20 Summit in Pittsburgh, President Yudhoyono proclaimed the goal of reducing Indonesia's GHG emissions by 26% with national efforts and 41% with international financial assistance in relation to a business-as-usual (BAU) baseline by 2020. In order to meet the government's ambitious climate goals, a *National Action Plan for Green House Gas Reduction* (Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca, RAN-GRK) was developed by the National Development Planning Agency (BAPPENAS) and approved by President Yudhoyono in September 2011.⁴ RAN-GRK has the objective of “the implementation of various activities both directly and indirectly to reduce greenhouse gas emissions in accordance with the national development targets” (President of the Republic of Indonesia 2011). It defines five priority sectors for climate change mitigation to reach the 26% target (Table 1).

Table 1: RAN-GRK priority sectors and envisaged action

Action plan→ Implementing ministries	Forestry	Environment	Public works	Agriculture	Transport	Energy and Mineral Resources	Industry
Forestry and peat land: Fire control, network system management, water management, land rehabilitation, plantations, community forest, illegal logging eradication, deforestation prevention, community empowerment.							
Agriculture: Introduction of low-emission paddy varieties, irrigation water efficiency, organic fertilizer use.							
Energy and transport: Bio-fuel use, fuel efficiency standard, Transportation Demand Management, public transport and roads, demand side management, energy efficiency, renewable energy.							
Industry: Energy efficiency, use of renewable energy, etc.							
Waste: Use of final landfill, waste management and urban integrated wastewater management.							

Source: BAPPENAS (2011: 8).

⁴ In the course of 2015, the RAN-GRK estimates of finance needs will be expanded to 2030 as part of developing Indonesia's Intended Nationally Determined Contribution for the UNFCCC process.

1.1 Investment Needs

Under the *National Medium Term Development Plan* for the period 2015-2019 (Rencana Pembangunan Jangka Menengah Nasional, RPJMN 2015-2019) annual total investments needs were put at IDR3,945 trillion (about US\$300 billion) for 2015 and are set to increase to IDR6,947 trillion (about US\$530 billion) by 2019 in order to raise economic growth from a target of 5.8% in 2015 to 8.0% in 2019 (President of the Republic of Indonesia 2015).⁵ The RPJMN 2015-2019 sets forth a sustainable development strategy that balances social, economic and environmental development. It seeks to mainstream sustainable development principles across all development sectors to maintain the sustainability of communities' social life, economic welfare and environmental quality. The RPJMN 2015-2019 demands that "development activities must not degrade the carrying capacity of environment and the balance of the ecosystem".

Taking the RPJMN 2015-2019 estimates as a yardstick for Indonesia's future investment needs, annual financing in the order of US\$300-530 billion will be needed. A large share of this will need to go into critical infrastructure, as well as environmentally sensitive areas such as agriculture, forestry, energy, mining and waste. In addition, financing for micro, small and medium sized enterprises (MSMEs) and industry is critical for creating jobs and boosting productivity. All of this investment will need to be sensitive to environmental and associated policy risks. Funds for this investment will need to come from both the private and public sectors, including both domestic and international sources.

Looking at climate change specifically, differing estimates of the investments needed to reach the national GHG reduction goals were released by BAPPENAS (2010, 2011) and UNFCCC (2009). UNFCCC (2009) and BAPPENAS (2011), in its RAN-GRK implementation guide, use the same BAU-scenarios in which they predict 2.95 Gigatonne (Gt) CO₂ emissions until 2020, leading to estimated mitigation cost in the order of US\$8.9 billion (Table 2).⁶ Based on these estimates, the Indonesian government committed itself to allocate US\$8.9 billion from different sources for the 26% goal and estimated a need for an additional US\$17.96 billion of international funding in order to reach the 41% target (UNFCCC 2009). For the Indonesian Climate Change Sectoral Roadmap (ICCSR), BAPPENAS (2010) assumed a much higher BAU-scenario with 18.72 GtCO₂, which subsequently yields a much higher estimated mitigation cost of approximately US\$69 billion.

In Indonesia's *First Mitigation Fiscal Framework* (MFF), the Indonesian Ministry of Finance estimated that the annual cost of actions in forestry and peat lands, energy and transportation sectors required to reach the 26% emission reduction target by 2020 would be between IDR100 trillion and IDR140 trillion (US\$10.7 billion and US\$15 billion at the time) (cf. Table 3; MOF 2012). The Ministry assumed that between one and two thirds of the cost of new initiatives would be financed publicly, including fiscal incentives to stimulate private investment. Mitigation cost for agriculture, industry, and wastewater were not considered in the first MFF.

⁵ Indonesia's National Long-Term Development Plans, which span over 20 years, are broken down into four National Medium-Term Development Plans with five-year horizons each.

⁶ See also the estimates of the National Council on Climate Change (Dewan Nasional Perubahan Iklim, DNPI), which is responsible for coordination of climate change policy and programmes (cf. DNPI 2009).

Table 2: Emission reduction potential per priority sector

	UNFCCC (2009) BAPPENAS (2011)			BAPPENAS (2010)		
Sector	Percentage of emission reduction goal (26% of 2.95GtCO ₂)	Cost (bn US\$) ^a	Percentage of emission reduction (additional 15%)	Cost (bn US\$) ^a	Percentage of emission reduction goal (26% of 18.72 GtCO ₂)	Total cost (bn US\$)
Energy	1.29	0.01	0.36	8.00	0.82	63.49
Transportation		1.07	0.28	1.07	0.49	2.01
Industrial processing	0.03	0.06	0.14	0.25	0.23	0.47
Agriculture	0.27	0.38	0.11	0.43		
Forestry	22.78	4.95	11.02	3.94	21.03	0.34
Peat land		1.76	2.03	3.73		
Waste	1.63	0.65	1.07	0.53	1.12	2.3
Total	26.00	8.9	15	17.96	23.69	68.61

Sources: UNFCCC (2009: 27), BAPPENAS (2010: 125; 2011: 8)

Note: a: costs are converted from IDR into US\$ at the exchange rate of December 1, 2009.

Table 3: Contributions to emission reduction and indicative cost

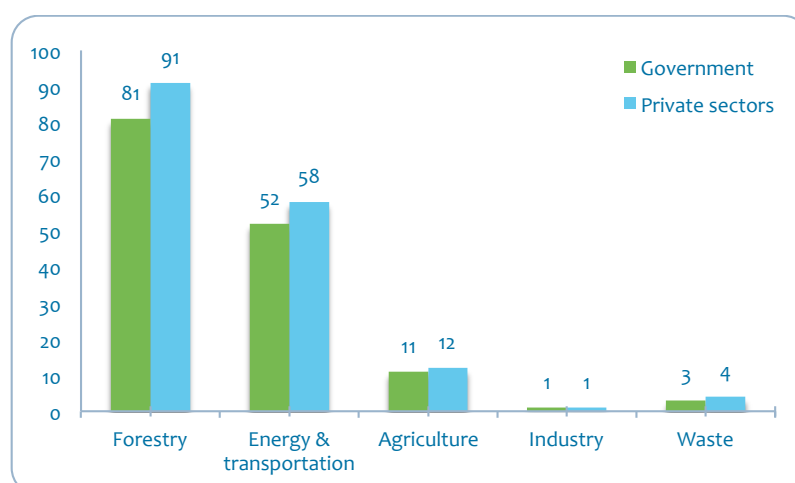
Sources of emission reduction	Emission reduction (m tCO ₂ e in 2020)	Indicative costs (IDR trillion/year)		
		Public	Private	Total
Maintaining RAN GRK expenditure at 2012 levels	116	16	0	16
Additional RAN GRK expenditure in line with GDP	31	4	0	4
Improving cost effectiveness of existing expenditure	78	1-2	0	1-2
Power generation emissions 26% lower, incl. geothermal	104	15-45	15-45	40-70
Policies to limit deforestation to 450,000ha/year	260	1-2	20-30	21-32
Reductions required from new initiatives	121	6	11	17
RAN GRK target for forest, peatland, energy & transport	710	45-75	45-85	100-140
Reductions from agriculture, industry & waste water	57	Not covered in this first MFF		
Total RAN GRK target	767			

Source: MoF (2012: xxxv). Note: Indicative costs are expressed in 2012 prices.

In Ministry of Finance data presented by OJK (2014b), the estimated total funding required to support the GHG emissions reduction by 26% including agriculture, industry, and waste were put at much higher IDR314 trillion (approx. US\$24.8 billion) per year, or IDR1,570 trillion (US\$123.9 billion) for the period 2015-2019

(Figure 1). Government funding was expected to cover 47% with the rest coming from private sector financing.

Figure 1: Indicative costs related to sector contributions toward the targeted GHG emissions reductions (in IDR trillion per year)



Source: Compiled with data from OJK (2014: 11).

The costs of necessary investments in the energy sector have been calculated for three different scenarios for the country's two main power systems, the Java-Bali Power System and the Sumatera Power System. Investment costs for developing the Java-Bali Power System are estimated at between US\$55 billion and US\$68 billion by reaching emission reductions between 9% and 26.4% from the sectoral BAU level; the estimated investment cost for the Sumatera power system amount to about US\$10 billion (BAPPENAS 2010: 109-110).

2.1 Public Funding Availability

Discussions of 'green finance' are often understood in terms of public spending on green projects, or investment financed through international concessional loans and grants tagged as 'climate finance'.⁷ According to Tänzler and Maulidia (2013), the amount of climate finance pledged to Indonesia "lie[s] somewhere in the area of USD3.1 - 4.4 billion, [and is] predicted to rise to over USD5.3 billion in the near future."⁸

According to the MFF, the Indonesian Ministry of Finance devoted IDR7.7 trillion (US\$0.6 billion)—less than 1% of total public expenditure—of the 2012 central government budget to implementing the RAN-GRK (MOF 2012). Between 2008 and 2012 the Indonesian government also allocated IDR4.0 trillion (US\$0.3 billion) in off-budget government financing to government investment agencies as revolving loan financing for reforestation and geothermal energy (MOF 2012). The latest review of public climate finance in Indonesia gauges that at least IDR8,377 billion (US\$951 million) of climate finance from public sources, including both

⁷ International sources of climate finance available to Indonesia are plenty and include, inter alia, the UNFCCC's Global Environment Facility and Green Climate Fund; the Climate Investment Funds including the Clean Technology Fund and the Forest Investment Program, both of which are administered by the World Bank; the Global Climate Partnership Fund which was set up by German Ministry for Environment, KfW and IFC; the Japan International Cooperation Agency (JICA), the French Development Agency (AFD) and the World Bank's Climate Change Development Policy Loan; the UK's International Climate Fund; Germany's International Climate Initiative; Japan's Fast Start Finance, the ADB's Carbon Market Initiative, Climate Change Fund and Clean Energy Financing Partnership Facility; and international commitments to Indonesia for forest conservation through the UN's Reducing Emissions from Deforestation and Forest Degradation+ program (REDD+). In 2009, the Government of Indonesia also set up the Indonesia Climate Change Trust Fund (ICCTF), which since then has received contributions from DFID, AusAID and SIDA.

⁸ An earlier estimate by Brown and Peskett (2011) gauged that Indonesia had secured pledges for international financial support for climate change related issues of about US\$4.4 billion.

domestic and international public flows, was disbursed in 2011 (MoF and CPI 2014). This is significantly below the Indonesian government's estimates of the level of annual public finance required by 2020 to meet the national emission reduction targets.

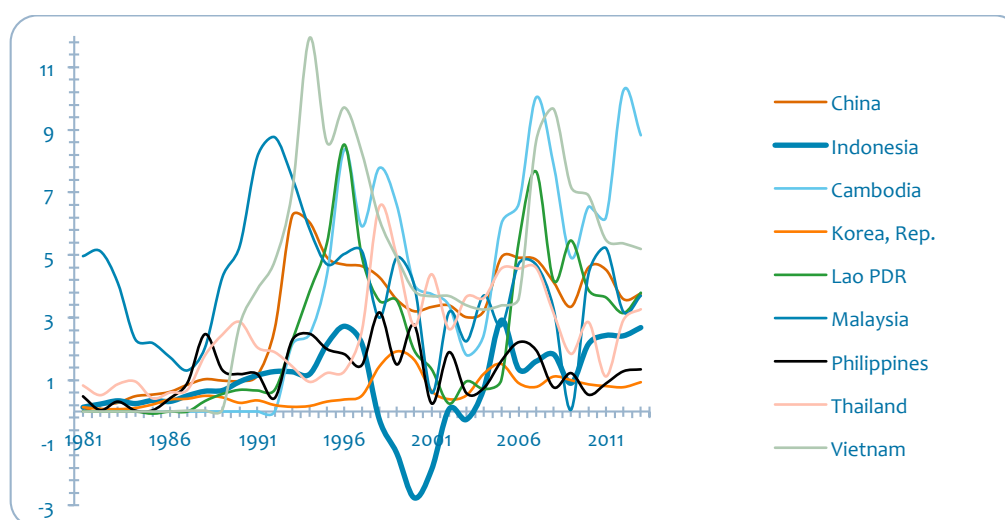
It is clear then that the sums of public money disbursed for mitigation and adaption measures, but also more broadly for sustainable development, are small compared to the actual investment needs. In its *Study Report on Green Planning and Budgeting Strategy for Indonesia's Sustainable Development 2015–2020*, the MOF (2015) predicts that without adoption of a Green Planning and Budgeting Strategy, “Indonesia will suffer from losses and damages associated with climate change and the degradation of natural resources”, with daunting effects on the country's growth rate, which is predicted to be 3.5% lower than the government's 7% growth target by 2050. The report is therefore unambiguous that a growing share of existing government expenditure must be devoted to green activities.

At the same time, significant amounts of available international climate finance have remained unspent, such as large parts of the US\$1 billion made available by the Norwegian government for combating deforestation through REDD+ (ASrIA 2014a). This indicates that the problem is not simply the availability of funds, but that there are bottlenecks within the public and private institutions that could mobilize them, as well as inadequate financing structures and business models. It is therefore critical to consider the policy frameworks and institutional barriers that hold back sustainable investment.

2.2 Foreign Direct Investment

Foreign direct investment (FDI) is a potentially important source of private external finance. FDI has played an important role in the development of most East Asian economies. Indonesia, however, is an exception in that inward FDI flows have been significantly lower than in most other countries of the region. FDI flows to Indonesia amounted to 60.6 trillion IDR in 2013 (US\$4.7 trillion, not including oil & gas, banking, non-bank financial institutions, insurance and leasing), accounting for only 0.88% of GDP over the period 1981–2013. This is much lower than the average share of 2.81% of GDP for all developing East Asian and Pacific countries (cf. Figure 2). Even if only the years 2004–2013 are considered, Indonesia's average FDI-to-GDP-ratio of 1.9% is considerably lower than that of Thailand (3.2%), Malaysia (3.6%), China (4.2%), Vietnam (5.9%), or all developing East Asia and Pacific countries (3.9%). As pointed out by Lipsey and Sjöholm (2011: 35), FDI inflows to Indonesia “have been lower than could be expected from Indonesia's size, population and other country characteristics.” Salim (2014: 272) relates Indonesia's difficulties in attracting FDI to “disincentives such as limited infrastructure, and relatively complicated and time-consuming investment procedures, which remain unsolved.”

Figure 2: Foreign direct investment, net inflows (% of GDP)



Source: Compiled with data from WDI, January 2015.

The Indonesian government generally encourages FDI, however, the **Foreign Investment Law requires approval through the Indonesia Investment Coordinating Board** (Badan Kordinasi Penanaman Modal, BKPM). In its *FDI Strategy Paper 2010*, BKPM (2010: 49) highlighted it would “place emphasis on investment that mitigates the pernicious effects of climate change. This can be investment that brings clean technology to resource extraction or uses sustainable design in the building of infrastructure.” Apparently there are, however, no formal sustainability standards to FDI imposed by BKPM. Foreign investors to Indonesia can generally hold up to 100% ownership, although in certain industries foreign ownership is restricted to between 45% to 95% while industries on an “**Investment Negative List**” (Presidential Regulation 39/2014) are closed to foreign investment altogether. Sectors with restricted foreign ownership include telecommunications, transport services, energy and mineral resources, agriculture, forestry, maritime and fisheries, healthcare, pharmaceuticals, finance and banking, education, and alcoholic beverages, among others. Many of these sectors are the ones most likely to benefit from green investment, and given the restrictions on potential foreign investment in these areas, domestic finance will have to fill the gap.

Figures 3 and 4 show the destination sectors for FDI and the source countries, respectively. In 2013, as in previous years, the largest share of FDI went into manufacturing (55.3%), followed by the services sector (22.7%), mining (16.8), and food crops and plantation (5.6%). The most important source countries in 2013 were Japan (16.3%) and Singapore (16.3), followed by the US (8.4%), South Korea (7.7%) and the UK (3.9%).

Figure 3: Destination sectors of FDI in 2013 (% of total FDI)

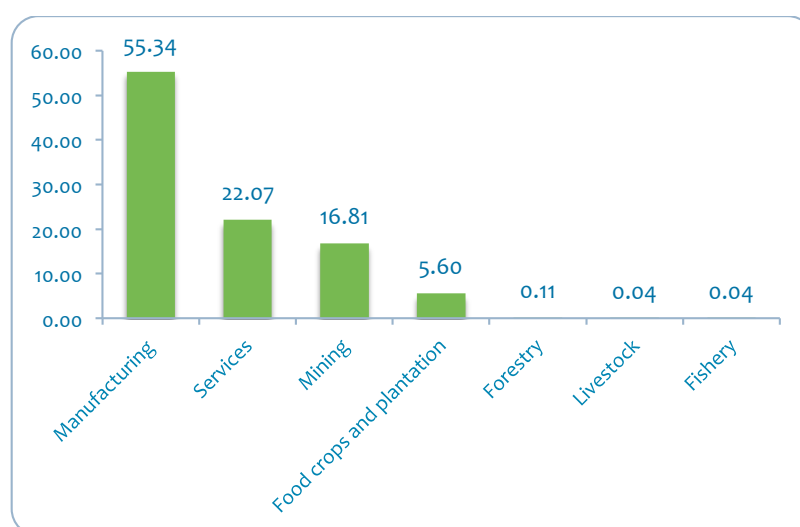
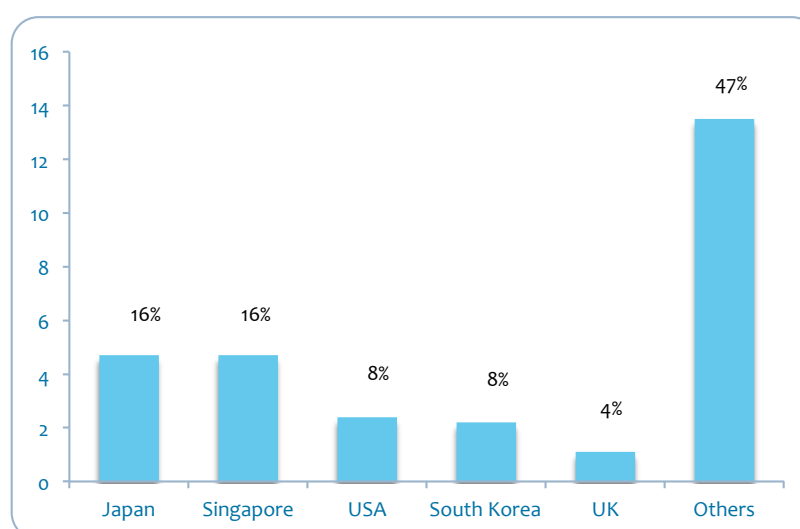


Figure 4: FDI by country of origin in 2013 in US\$ billion (and as % of total FDI)



Source (figure 3 and 4) : Compiled with data from BKPM.

3 Indonesia's Financial System

3.1 Financial Regulatory Authorities, Public Authorities and Industry Bodies

To facilitate the following analysis of sustainable finance in Indonesia, this section provides a brief overview of the relevant financial regulatory authorities, public authorities and industry bodies:

- ◎ **Indonesia Financial Services Authority (Otoritas Jasa Keuangan, OJK):** OJK is the financial regulator established in January 2013 with authority to regulate, supervise, examine and investigate the financial services sector in Indonesia. OJK is an independent entity reporting to the parliament (People's Representative Council). Its mandate includes banking, capital markets and non-bank financial institutions (NBFI, including pension, insurance, finance companies, venture capital, guarantee companies, and microfinance institutions). With its establishment, OJK assumed responsibility for capital markets from the Indonesian Capital Market and Financial Institution Supervisory Agency (Badan Pengawas Pasar Modal dan Lembaga, BAPEPAM-LK), the abandoned capital markets agency under the Ministry of Finance responsible for capital markets and NBFI. In January 2014, OJK took over banking regulation and supervision from Bank Indonesia.
- ◎ **Bank Indonesia:** The Indonesian central bank is responsible for monetary policy, macro prudential regulation, the payment systems and foreign exchange. Its mandate is to achieve and maintain rupiah stability by maintaining monetary stability and financial stability for supporting sustainable economic development. It interprets "sustainable economic development" in line with national policy as "pro-growth, pro-job, pro-poor, and pro-environment". It has recently passed responsibility for regulation of banking to the OJK. Bank Indonesia also reports to the People's Representative Council.
- ◎ **Ministry of Finance (Kementerian Keuangan):** Besides setting and managing central government budgets together with the National Development Planning Agency (BAPPENAS), the Ministry of Finance is responsible for the formulation, stipulation, and implementation of financial policies.
- ◎ **Directorate General of Debt Management (Direktorat Jenderal Pengelolaan Utang, DJPU):** DJPU is the unit in the Ministry of Finance responsible for government debt securities management.
- ◎ **Indonesia Deposit Insurance Corporation (Lembaga Penjamin Simpanan, LPS):** All banks that operate in Indonesia are obliged to become a member of the deposit insurance system managed by LPS. Bank deposits are insured up to IDR2 billion (about US\$165,000).
- ◎ **Indonesian Stock Exchange (PT Bursa Efek Indonesia, BEI/IDX)** is a private company that is self-regulating and enacts its own rules on listing and membership requirements. It monitors trading, settlement, and listed companies' compliance with its regulations. It also receives corporate action notifications from companies and announces them to the market.
- ◎ **Indonesian Clearing and Guarantee Corporation (PT Kliring dan Penjaminan Efek Indonesia, KPEI):** KPEI is a limited liability company that acts as a clearing and settlement guarantee institution for stock exchange transactions.
- ◎ **Indonesian Central Security Depository (PT Kustodian Sentral Efek Indonesia, KSEI):** KSEI is a private limited liability company that acts as the only central depository for equity and corporate bonds in the Indonesian market.
- ◎ **Financial industry associations** include: Indonesian Securities Investor Association (Asosiasi Perusahaan Efek Indonesia, APEI); Indonesian Pension Fund Association (Asosiasi Dana Pensiun Indonesia, ADPI); Association of Indonesian General Insurance Companies (Asosiasi Asuransi Umum Indonesia, AAUI); Indonesian Mutual Fund Managers Association (Asosiasi Pengelola Reksa Dana Indonesia, APRDI); and Indonesian Credit Card Association (Asosiasi Kartu Kredit Indonesia, AKKI).

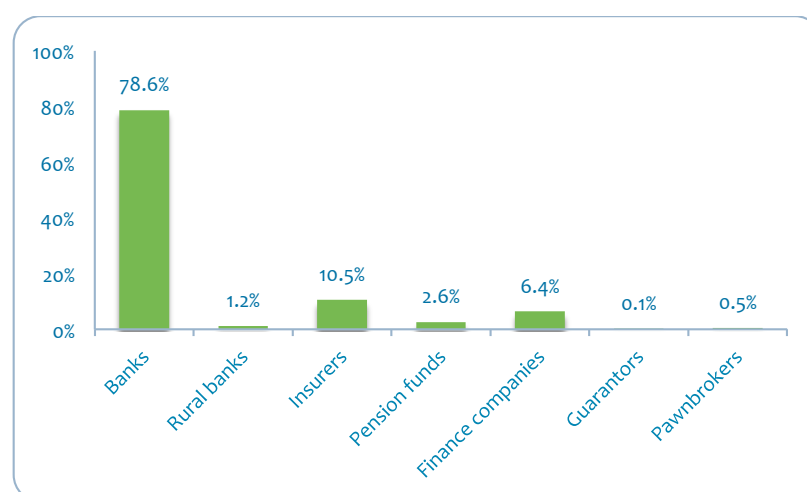
To develop a sustainable financial system in Indonesia, it will be important to involve all relevant

stakeholders in the financial sector, in addition to overcoming real economy barriers to sustainable investments. OJK is clearly in a lead role and, as will be discussed below, has already taken important steps and developed a comprehensive *Roadmap for Sustainable Finance*. OJK has been able to build upon the work previously conducted by Bank Indonesia on sustainable finance. As macroprudential regulator, Bank Indonesia may still have an important role to play in dealing with climate and other ecological risks to the Indonesian economy (Schoenmaker et al. 2014; Volz 2014). The Ministry of Finance can affect the lending and investment decisions of banks and NBFIs, as well as the investment decisions of individuals and of non-financial corporations through various tax and subsidy schemes. The stock exchange can affect corporate behaviour through listing requirements. And last but not least, financial industry associations can play an important role in disseminating information on sustainable finance as well as training and capacity building activities.

3.2 Sources and Channels for Capital Allocation

Indonesia's financial system is dominated by banking. The banking sector holds 78.6% of total assets of all financial institutions, which stood at IDR6 611.67 trillion (US\$ 550 billion) in June 2014 (excluding venture capital firms, investment managers and securities companies) (Figure 5).

Figure 5: Asset composition of financial institutions in June 2014



Source: Compiled with data from Bank Indonesia (2014: 14).

Between 2010 and 2014, between 68% and 78% of private sector financing was provided by the banking sector (Table 4). Corporate bond issuance accounted for only between 8% and 11% of private sector's total external financing.

Table 4: Bank and non-bank financing to private sector (in trillion IDR)

	2010	2011	2012	2013	2014 (Q1:Q2)
Bank credit	327.92	434.25	507.77	585.01	175.29
Non-bank financing	156.76	158.96	154.32	161.02	71.51
Capital market	112.95	100.01	97.57	115.04	58.61
IPO and rights issues	76.35	54.28	30.10	57.54	30.43
Corporate bonds	36.60	45.74	67.46	57.50	28.18
Finance companies	43.81	58.95	56.75	45.98	12.90
Total	484.68	593.21	662.09	746.03	246.8

Banking

The banking system has two tiers, comprising 119 commercial banks and 1,643 rural banks (January 2015), which are usually owned by regional governments. Commercial banks include the four large state-owned banks,⁹ 35 foreign exchange banks, 30 non-foreign exchange banks, 26 regional development banks (Bank Pembangunan Daerah, BPDs), 14 joint venture banks, and 10 foreign-owned banks. 11 of the commercial banks are Islamic banks. Of the rural credit banks, 163 are Islamic banks. Rural banks play an important role in Indonesia and provide, mainly at the village level, deposit and credit services to a large number of individual clients with small financial resources.¹⁰ However, 98% of all banking assets are held by the commercial banks (Table 5). Among the commercial banks, about 70% of total banking assets are concentrated in the ten largest banks—Bank Mandiri, Bank Rakyat Indonesia, Bank Central Asia, Bank Negara Indonesia, CIMB Niaga, Bank Danamon Indonesia, Bank Permata, Bank Pan Indonesia, Bank Tabungan Negara, and Bank Internasional Indonesia.

Table 5: Bank industry operations, 2007 – August 2014

		2007	2008	2009	2010	2011	2012	2013	Aug 14
Total assets (in bn IDR)									
	Commercial banks	1,986,501	2,310,557	2,534,106	3,008,853	3,652,832	4,262,587	4,262,587	4,211,039
	Rural banks	27,741	32,533	37,554	45,742	55,799	67,397	67,397	67,610
Total banks									
	Commercial banks	130	124	121	122	120	120	120	120
	Rural banks	1,817	1,772	1,733	1,706	1,669	1,653	1,653	1,653
Total bank offices									
	Commercial banks	9,680	10,868	12,837	13,837	14,797	16,625	16,625	16,821
	Rural banks	3,250	3,367	3,644	3,910	4,172	4,425	4,425	4,448

Source: Compiled with data from Indonesia Banking Statistics, August 2014.

At 38%, the ratio of domestic credit to the private sector to GDP in Indonesia is on a similarly low level as in Brunei Darussalam (35%), the Philippines (36%) and Cambodia (45%), and much lower than in other Southeast Asian countries like Thailand (154%), Singapore (129), Malaysia (214) and Vietnam (97%) (World Development Indicators data for 2013). The cost of intermediation in Indonesia's banking system is high, with average net interest rate margins for the country's big banks being 7 percentage points—the highest among the G20 countries as well all ASEAN countries.¹¹ According to Bloomberg, the average return on equity for the country's five largest banks is 23% (Vallikappen and Moestafa 2015). Real lending rates are high, while lending is generally short-term, which is typically a constraint for green investments.

In this context, it is important to mention Indonesia's problems with financial inclusion. Only 20% of adults have an account at a formal financial institution; among the poorest 20% of the population the share of

⁹ The 'big four' state-owned banks are: Bank Negara Indonesia (BNI), Bank Rakyat Indonesia (BRI), Bank Tabungan Negara (BTN), and Bank Mandiri. Together they hold about a third of all earning assets in the banking sector.

¹⁰ Basic banking services are also provided by about 13,000 cooperatives that are supervised by the Ministry of Cooperatives and Small-Medium Enterprises.

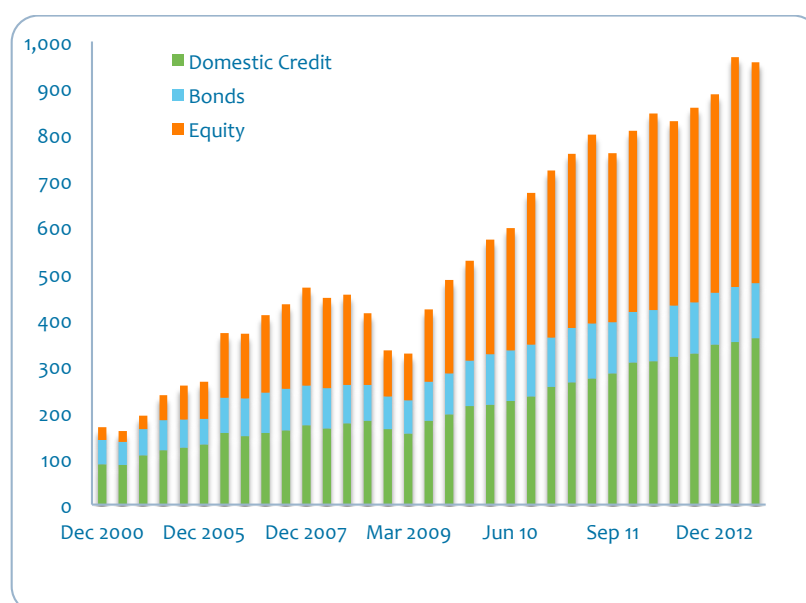
¹¹ Banks charge an average of 12% on loans, while the average deposit rate is 5%.

adults holding an account is even lower with only 8% (Demirgüç-Kunt and Klapper 2013). According to the World Bank's latest Enterprise Survey report on Indonesia, access to finance is a significant constraint on doing business, with only 51% of Indonesia companies having a checking or savings account and only 18% making use of a bank loans or formal credit lines (World Bank 2010). According to Machmud and Huda (2011: 272), only 56% of all small- and medium-sized enterprises (SMEs) in Indonesia have access to formal financial institutions. The access to finance problem is connected to Indonesia's weak institutional and legal framework, as a "lack of information about borrowers, restrictions on collateral, and the difficulty and expenses of recovery in cases of default, all make lenders generally hesitant to grant loans, especially to small businesses or to new forms" (Tipton 2008: 427). Many SMEs rely on internal sources of finance (retained earnings, loans from employees or owners' private savings) or resort to informal external sources, including relatives, friends or loan sharks (Machmud and Huda 2011). The lack of access to bank finance is seen as a major barrier toward green investments (UNIDO 2009).

Capital markets

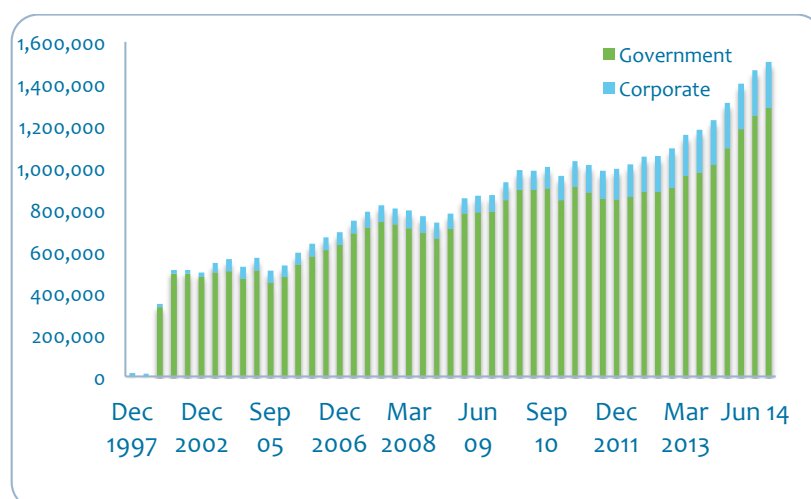
Equity markets have grown eighteen fold from US\$26.8 billion to US\$477.5 billion between 2000 and 2013 (Figure 6). Over the same time, Indonesian bond markets have merely doubled in size, from US\$52.8 billion to US\$118 billion. In June 2013, credit extended by the banking sector was still three times larger, at US\$359.7 billion, than the size of domestic bond markets, at US\$118.0 billion. Bond markets, especially corporate local currency bond markets, which have grown from a meagre IDR15.2 trillion (US\$2.6 billion) in December 1997 to IDR220.2 trillion (US\$22.2 billion) in June 2013 (Figure 7), clearly have an important role to play as a source of long-term funding for green investment.

Figure 6: Equity, bonds and domestic credit (in billion US\$), December 2000 – June 2013



Source: Compiled with data from ADB AsianBondsOnline, January 2015.

Figure 7: Size of local currency bond market (in billion IDR), December 1997 – September 2014



Source: Compiled with data from ADB AsianBondsOnline, January 2015.

Indonesian capital markets are highly institutionalized and dominated by foreign investors. According to the Indonesian Central Securities Depository (Kustodian Sentral Efek Indonesia, KSEI), foreign investors held 64.8% of tradable stocks listed in the Indonesian Stock Exchange in November 2014 (Table 6). Foreign investors are estimated to hold almost 80% of free floating Indonesian stocks (Nangoy 2014).¹² In the government bond market foreigners held 33.4% of outstanding bonds in November 2014 (Figure 8).¹³ Foreign banks and leveraged funds are estimated to hold about 10-25% of foreign holdings in the government bond market; real-money funds, 45-60%; and central banks and sovereign wealth funds, 25-30% (Standard Chartered 2014: 52).

Table 6: Distributions of tradable stocks based on investors' nationality, 2011–2014

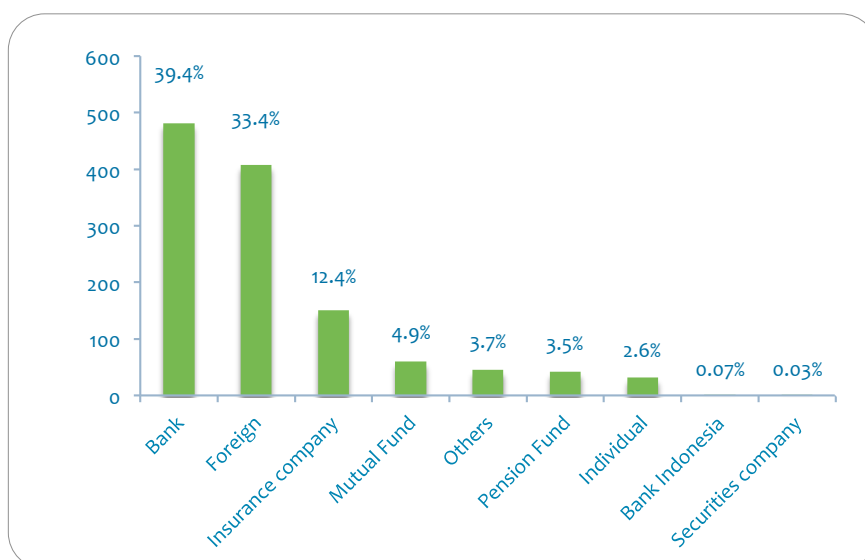
Investors' nationality	Nov. 2014		2013		2012		2011	
(Equity only)	(IDR billion)	%	(IDR billion)	%	(IDR billion)	%	(IDR billion)	%
Local investor	1,001,403	35%	868,718	37%	1,040,619	41%	839,319	40%
Individual	164,533	16%	157,417	18%	140,026	13%	150,951	17%
Institution	834,317	83%	709,834	81%	899,339	86%	687,203	81%
Others	2,552	<1%	1,466	<1%	1,254	<1%	1,166	<1%
Foreign investor	1,845,835	64%	1,475,457	63%	1,484,385	59%	1,251,886	60%
Individual	13,728	<1%	25,687	2%	31,145	2%	23,704	2%
Institution	1,260,240	68%	975,049	66%	1,025,196	69%	907,916	72%
Others	571,867	31%	474,720	32%	428,044	29%	320,266	26%
Total	2,847,239		2,344,174		2,525,005		2,091,205	

Source: Compiled with data from KSEI, November 2014. Note: Institutional investors include insurance, mutual funds, pension funds, financial institutions, corporations, securities companies, and foundation.

¹² Between 2002 and 2007, foreign institutions held almost 70% of the free-float value of the Indonesian equity markets, with individuals holding less than 5% (KPMG 2013: 13).

¹³ According to data from ADB's AsianBondsOnline, the share of foreign holding of local currency government bonds reached an all-time high with 38.1% in December 2014.

Figure 8: Government bond ownership, November 2014 (in IDR trillion and %)



Source: Compiled with data from DJPU.

In the mutual fund industry, the total net asset value (NAV) was IDR266.22 trillion (US\$21.09 billion) at the end of 2014. Equity-based funds accounted for a large share of the market (IDR90.16 trillion), with smaller market shares by fixed-income funds (IDR30.2 trillion), mixed-asset funds (IDR18.34 trillion), protected funds (IDR42.8 trillion), foreign-exchange funds (IDR16.1 trillion) and Sharia-compliant funds (IDR9.17 trillion). Even though the number of funds, as well as NAV, has been growing over the last years (Table 7), the mutual fund industry remains nascent. According to OJK, about 250,000 people have invested in mutual funds as of December 2014, only a small fraction of the Indonesian population.

Table 7: Total net asset value (NAV) of mutual funds and number of products (end-year)

	2011	2012	2013	2014
Total NAV (IDR trillion)	202.40	223.03	192.54	266.22
Number of funds	767	809	823	828

Source: Compiled with data from OJK

With assets amounting to IDR694.23 trillion, insurance firms held 10.5% of total assets of financial institutions in June 2014 (Figure 5), including 12.4% of outstanding government bonds (Figure 8). There are currently 49 life and 83 loss insurance companies in Indonesia (Table 8). Foreign investors are involved in 19 joint venture life insurance companies, which have more than half of the life market share, and 18 joint venture loss insurance companies, which have only around a 10% non-life market share.

Table 8: Number of insurance firms

Insurance profile	State-owned	Private national	Joint venture	Total
Life insurance	1	29	19	49
Loss insurance	3	62	18	83
Reinsurance	2	2		4
Social insurance programs	2			2
Insurers of civil servants, army and police	3			3
Total	11	93		141

Source: Compiled with data from Bank Indonesia (2014: 11).

3.3 Flows of Green Finance

Banking

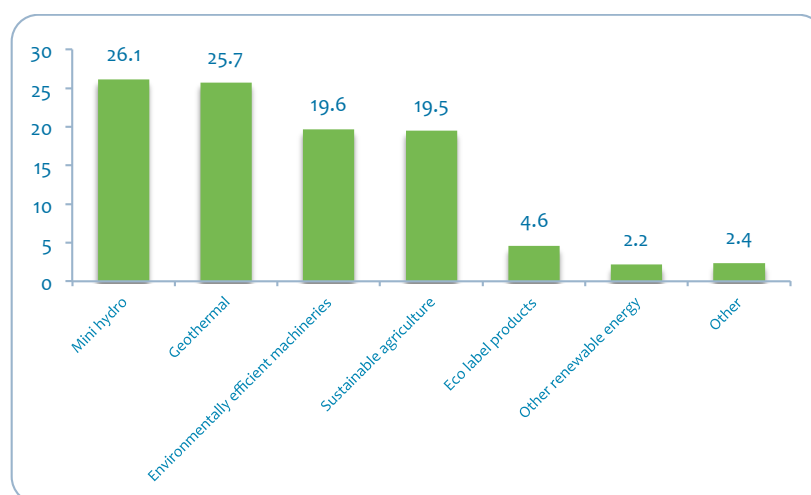
A review by Bank Indonesia of green lending by banks—where green lending was defined as lending across four categories: renewables, sustainable agriculture, green industry and ecotourism—found that amongst 29 banks surveyed between 2011 and 2013 the share of lending identified as green was very small, with only 1.2% of total lending described as green in 2011 (Table 9). The share of green lending increased slightly to 1.3% in 2012 and 1.4% in 2013, amounting to IDR10.2 trillion (about US\$1 billion). It is noteworthy that the portion of green financing as share of total financing in Islamic banks is double compared with conventional banks, according to this survey. However, another, more comprehensive banking survey carried out by the German Development Institute and Bank Indonesia in 2013 did not find any discernible differences between conventional and Islamic banks with respect to green lending or green banking practices (cf. Section 4.4). Most of the financing identified as green went into renewable energy, while around 20% went into environmentally efficient machineries and sustainable agriculture each (Figure 9).

Table 9: Banks' green financing portfolio, 2011-2013

	2011			2012			May 2013		
	GF (in trillion IDR)	Total financing (in trillion IDR)	GF as share of total financing (in %)	GF (in trillion IDR)	Total financing (in trillion IDR)	GF as share of total financing (in %)	GF (in trillion IDR)	Total financing (in trillion IDR)	GF as share of total financing (in %)
24 conventional banks	5.48	500.4	1.10	7.7	66.4.17	1.16	8.62	681.47	1.27
5 Islamic banks	1.02	37.9	2.68	1.6	56.18	2.85	1.61	63.57	2.53
Total	6.4	538.3	1.19	9.3	720.35	1.29	10.2	745.04	1.37

Source: Siregar (2014: 5).

Figure 9: Distribution of green financing by project (in %), 2012



Source: Compiled with data from Bank Indonesia/OJK.

Capital markets

The Indonesia market for sustainable investments remains in an early stage of development. According to the 2014 *Asia Sustainability Investment Review*, sustainable investments reached US\$1.14 billion at the end of 2013, which is almost a doubling since 2011 (ASRIA 2014b: 34). Table 10 provides an overview of the strategies used for sustainable investments in the Indonesian market.

Table 10: Breakdown of strategy

Strategy	Assets under management as of 31 December 2013 (in US\$ million)	As % of total sustainable investments
Negative/exclusionary screening	1,101	96.41
Positive/best-in-class screening	3	0.26
Sustainability-themed investing	7	0.61
Integration of ESG issues	31	2.71
Corporate engagement and shareholder action	-	
Total	1,142	100

Source: ASRIA (2014b: 34).

Sustainable investment in Indonesia is almost entirely based on Shariah-compliance, with 99% of sustainable assets being described as Islamic assets (ASRIA 2014b). Assets managed consistent with Islamic law or Sharia principles are included in the *Asia Sustainability Investment Review* on the ground that such assets require additional screening compared to conventional asset management. As explained by ASRIA (2014b: 12), “[i]n many instances, these funds have much in common with certain 'ethical funds' (e.g., exclusion of alcohol as used by many other funds based on religious principles).” Most Sharia-compliant assets are based on negative or exclusionary screening, but some Sharia funds are also managed by integrating environmental, social and governance (ESG) issues.

The low level of sustainable investment is in sharp contrast to the investment opportunities that a fast-growing emerging economy like Indonesia offers. The low level of investment in renewable energy epitomizes the challenges Indonesia faces. On the one hand, as discussed above, Indonesia has enormous investment needs in its energy infrastructure to keep the economy growing. On the other hand, as can be seen in Table 11, Indonesia’s potential in renewable energy is enormous, yet little of this potential has been tapped thus far. For instance, the Ministry of Energy and Mineral Resources estimates that Indonesia has a potential of 28.53 GW from geothermal—about 40% of the world’s entire geothermal reserves. But only 4% of this has been developed hitherto. Likewise, less than 6% of the country’s hydro power resources and only 1% of the biomass resources have been developed for energy generation. Overall, over the period 2006-2013, only US\$5.7 billion have been invested in clean energy (Table 12, see also Figure 10). In the last two clean energy investment rankings published by the Pew Charitable Trust (2013, 2014), Indonesia ranked only 19 out of 20. Hence, there is a large growth potential in renewable energy, which will need large amounts of investment to be released.

Table 11: Renewable energy potential vs. installed capacity

Renewable energy source	Potential	Installed capacity	Installed to potential ration (%)
Hydro power	75.67 GW	4.2 GW	5.55
Geothermal	28.53 GW	1.19 GW	4.2
Micro/mini hydro	500 MW	86.1 MW	17.56
Biomass	49.81 GW	445 MW	0.89
Solar power	4.8 kWh/m ² /day	14.1 MW	–
Wind power	3-6 m/2	1.4 MW	0.015
Nuclear (uranium)	3 GW	–	–

Source: Ministry of Energy and Mineral Resources.

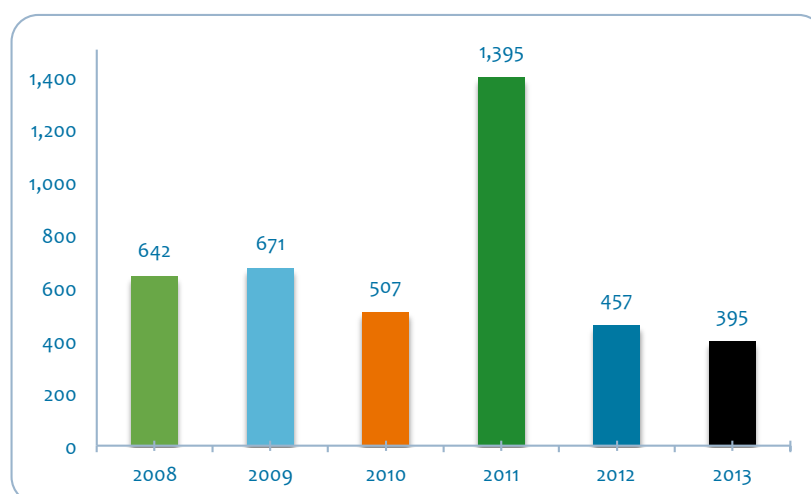
Table 12: Total clean energy investments by type, 2006-2013(in US\$ million)

VC/PE investments	59.270
Corporate finance investments	41.515
Asset finance investments	5,615.216
Total	5,716.001

Source: Climatescope 2014, <http://global-climatescope.org/en/country/indonesia/#/details>.

Note: VC/PE investments include: early- and late-stage venture capital funding of pure-play clean energy companies and funds raised privately for the purpose of expansion. Corporate finance investments include: clean energy deals from mergers and acquisitions, public markets, joint ventures and corporate debt. Asset finance investments include: new build, refinancing and acquisitions of renewable energy generating projects.

Figure 10: Annual investment in clean energy, 2008-2013 (million US\$)



Source: Compiled with data from Climatescope (2014).

Overall, despite some positive trends, the sustainable investment market is still embryonic. As pointed out by ASRIA (2014b: 34), “investors continue to channel funds towards assets that maximize short-term risk adjusted investment returns, with environmental, social or governance considerations of less concern”.

3.4 Policies to Promote Sustainable Finance

Bank Indonesia and subsequently OJK have progressively addressed sustainability issues. **Legislation requiring environmental assessments for loans has been gradually strengthened.** Environmental impact assessments have been integrated in bank obligations for large loans since 1998. Bank Indonesia Act 10/1998 obligates banks to conduct an environmental impact assessment for large loans or high risks loans.¹⁴ In January 2005, Bank Indonesia issued Regulation No. 7/2/PBI/2005 on Asset Quality Rating for Commercial Banks, where Article 11.1.e requires banks to appraise the “measures taken by the debtor to conserve the environment” as part of an assessment of the debtor’s business prospects.¹⁵ The implementation of Regulation No. 7/2/PBI/2005 was discussed at a national workshop on “The Roles and Benefits of Sustainable Development from Banking Perspectives” that Bank Indonesia hosted jointly with the Ministry of Environment (Kementerian Lingkungan Hidup, KLH) in Batam in December 2005. At this workshop, the Director of Bank Indonesia’s Research and Banking Regulation Department emphasized that “[g]overnment regulations such as environmental impact analysis (AMDAL) requirements and performance ratings program (PROPER) can be used as an early warning system and promote good corporate governance. Other institutions, such as public accounting offices, appraisals companies and rating agencies also play an important role” (Syahdan 2005). In 2012, Article 11.1.e of Bank Indonesia Regulation No. 14/15/PBI/2012 concerning the Assessment of Commercial Bank Asset Quality reiterated banks’ obligation to consider the “efforts undertaken by the debtor in the framework of environment conservation” as part of their assessment of debtors’ business prospects.

In practice, however, banks merely check whether the debtor has a valid UKL-UPL or AMDAL license without carrying out further environmental risk analysis. Bank Indonesia has also encouraged banks to take into consideration the PROPER rating for debtors that have received such rating by the Ministry of Environment.¹⁶

In 2010, the Governor of Bank Indonesia and the State Minister of the Environment signed a Joint Agreement on Coordinating the Increased Role of Banking in Environmental Conservation and Management. In this memorandum of understanding (MOU), Bank Indonesia and KLH agreed on a joint work program for the period 2011-2013, which included a number of seminars and workshops for bankers on environmental risk assessment and green finance prospect, joint research on green financing, and the development of practical measures to promote green finance. Bank Indonesia started awareness building in the banking industry through focused group discussions and seminars in 2011. The first two **capacity building workshops for bank officers and supervisors** were carried out in 2012, one with the support of the UNEP Finance Initiative (UNEP FI) on environmental and social risk assessment, and another one with the support

¹⁴The Elucidations to the Act of the Republic of Indonesia No. 7 of 1992 Concerning Banking as Amended by the Act of the Republic of Indonesia Number 10 of 1998 state: “Prudential principles must be adhered consistently, meanwhile the regulation on bank activities have to be improved especially those relating to the extension of funds, including the increasing role of an Analysis on the Environmental Impact (“AMDAL”) for big scale company or high risk company.” All Indonesian companies are required by the “Regulation on Environmental Permits” to obtain an environmental license as precondition for receiving a business license. The environmental license can be obtained by completing one of the two environmental impact assessments, either the UKL-UPL (Upaya Pengelolaan Lingkungan Hidup dan Upaya Pemantauan Lingkungan Hidup) assessment or the more comprehensive AMDAL (Analisis Mengenai Dampak Lingkungan) assessment for companies in sectors with a potentially significant impact on the environment.

¹⁵The assessment of “business prospects” is one of three rating factors for credit quality. The other two are “performance of the debtor” and “repayment capability” (cf. Bank Indonesia Regulation No. 7/2/PBI/2005, Article 10).

¹⁶The PROPER rating was introduced by KLH in 1995 (Program for Pollution Control, Evaluation, and Rating). PROPER aims to enhance industrial compliance with pollution control regulation. Companies get colour-coded from gold (beyond compliance) to green (good compliance), blue (satisfactory level of compliance), red (not complying) and black (seriously not complying) (cf. World Bank 2003). Thus far 1,400 companies have been audited by the program. Firms with a black PROPER rating can theoretically have their licence withdrawn and be closed down.

of USAID on the financing of renewable energy projects.¹⁷ Together with KLH, Bank Indonesia organized four more training workshops on environmental analysis and risk mitigation of renewable energy project financing with the support of USAID in the course of 2013 (cf. USAID 2013). In collaboration with USAID and KLH, Bank Indonesia also developed **Green Lending Model Guidelines for Mini Hydro Power Plant Projects**, which were shared with banks nationwide in 2013. The Guidelines are voluntary and shall support banks in developing new lending practices. Also in 2013, Bank Indonesia carried out a comprehensive research project on green banking together with the German Development Institute, comprising surveys in the banking sectors on banks' interest in developing a green lending business as well as corporate surveys to investigate the potential corporate demand for green credit (cf. Volz et al. 2015). The findings from the banking survey, some of which will be discussed in Section 4.4, were presented and discussed with financial industry representatives and government officials at a large workshop at Bank Indonesia in April 2013. The research team's recommendation for introducing a three-phased green banking framework in Indonesia accompanied by capacity building measures is summarized in Annex 1.

Bank Indonesia (and later OJK) has also been an active participant in the Sustainable Banking Network, an informal group of bank regulators and banking associations that was launched by the International Finance Corporation (IFC) in September 2012. The Network has been used to learn and adapt from the practices of other countries and for a cross-fertilization of ideas.

To improve access to finance, Bank Indonesia introduced two regulations (No.14/26/PBI/2012 and No.14/22/PBI/2012) requiring banks to increase productive loans and loan access for SMEs. As a consequence, since the beginning of 2013 Indonesian banks are required to give 20% of total loans to SMEs.

With the start of 2014, OJK, the financial services authority that was created in 2013, took over bank regulation and supervision from Bank Indonesia. As the regulatory authority for banks, non-bank financial institutions and capital markets, OJK has since followed up on Bank Indonesia's green banking activities and broadened the focus to include all financial services. In continuation of Bank Indonesia's collaboration with KLH in the area of green banking, **in May 2014, OJK and KLH signed an MOU on Improving the Roles of Financial Services Institutions in Environmental Protection and Management by Developing Sustainable Financial Services** (KLH and OJK 2014). At the occasion of signing the MOU, the Minister of Environment emphasized that OJK is in "a strategic position to regulate [the] economy through policy on credit channelling/financing that is environmentally-friendly and [to] stimulate [...] other non-bank financial services entities with environmental viewpoint to emerge, such as stock, insurance and other financial services" (ibid.). Likewise, the Chairman of the OJK Board of Commissioners highlighted "the importance of improving the roles of financial services institutions in environmental protection and management by developing sustainable financial services" (ibid.).

Main goals of OJK-KLH MOU on Improving the Roles of Financial Services Institutions in Environmental Protection and Management by Developing Sustainable Financial Services

1. *Harmonization of financial services policy with environmental policy;*
2. *Harmonization of environmental policy with financial services policy;*
3. *Use of environmental data and information for developing sustainable financial services;*
4. *Research to draft policy concept for sustainable finance; and*
5. *Development of environmental competency in the financial services sector*

Based on: KLH and OJK (2014).

¹⁷ The workshops funded by USAID focused on the review of renewable energy proposals, especially proposals for 1-10 MW mini-hydro projects.

Following up on one of the recommendations from the green banking research project with the German Development Institute in 2013, OJK, BAPPENAS and GIZ commissioned a study to develop an operational definition of sustainable finance that could be applied across the Indonesian financial system as the basis of an envisaged sustainable finance framework (cf. Bromund 2014). Meanwhile, six further capacity building workshops were organized with KLH in 2014, two of which were conducted in collaboration with USAID and two together with GIZ and BAPPENAS (GIZ, BAPPENAS and OJK 2014). OJK also worked with IFC and USAID on a *Clean Energy Handbook for Financial Service Institutions*, which was published in February 2015 (OJK 2015). The *Handbook* comprises lending manuals of five types of renewable energy investments: mini hydro, biogas, biomass, photovoltaic and wind.

In August 2014, OJK launched a *Working Group for Improving the Roles of Financial Services Institutions in Environment Protection and Management by Developing Sustainable Financial Services* for the period 2014-2019 (cf. OJK 2014a). Based on the inputs of the working group and the previous research findings and recommendations, OJK published its *Roadmap for Sustainable Finance in Indonesia 2015-2019* in December 2014 (OJK 2014b).¹⁸ The main elements of the Roadmap are outlined in the following section.

At the start of 2015, OJK is developing a sustainable finance micro-site on the OJK website. This is intended as an information hub on all matters relating to sustainable finance in Indonesia, including relevant publications and information on OJK initiatives. OJK has also started discussing details of the *Roadmap* with relevant stakeholders and invited domestic and international partners to provide support in developing a coherent working program for the period 2015-2019.

3.5 OJK's Roadmap for Sustainable Finance

The *Roadmap for Sustainable Finance* lays down a “detailed work plan on the sustainable finance program for the financial service industry” (OJK 2014b: 15). It specifies “the measures and recommendations that need to be adopted in the form of an integrated work plan involving all financial service institutions” (ibid.). The *Roadmap* is intended to become an integral part of OJK's *Master Plan for Indonesia's Financial Service Sector* (MPSJKI).

Drawing on Bromund (2014), the *Roadmap* defines sustainable finance as “comprehensive support from the financial service industry to achieve sustainable development result[ing] from a harmonious relationship between economic, social and environmental interests” (OJK 2014b: 16). It describes sustainable finance along four dimensions (OJK 2014b: 16):

1. “Achieve industry, social and economic superiority in order to address the threats of global warming and mitigate other environmental and social issues;
2. Aims to encourage the shifting of the target towards a competitive low carbon economy;
3. Strategically promoting environmentally friendly investment in various business / economic sectors; and
4. Supporting the principles of development in Indonesia as stated in the RPJM, namely the 4P (pro-growth, pro-jobs, pro-poor and pro-environment).”

Going forward, it will be important to make this definition of sustainable finance operational so that financial institutions can clearly classify whether an asset is deemed sustainable or not.¹⁹ An operational definition of sustainable finance is the precondition for any sort of sustainable finance incentive scheme or regulation.

The goals of the OJK's sustainable finance program are threefold (OJK 2014b: 16-17):

1. To improve the resilience and competitiveness of financial service institutions (FSIs) and enable them to grow and develop in a sustainable manner through improved risk management and an ability to innovate and produce environmentally friendly products and services.

¹⁸ OJK received support in developing the Roadmap from IFC, GIZ and USAID.

¹⁹ For a concrete proposal, see Volz et al. (2015).

2. To unleash financing resources that will be required to achieve Indonesia's pro-growth, pro-job, pro-poor and pro-environment developmental goals as put forward in the RPJP and RPJM.
3. To contribute to the national commitments regarding climate change mitigation and adaptation and support the transition toward a competitive low carbon economy.

To achieve these goals, the *Roadmap* puts forward **four principles of sustainable finance** (OJK 2014b: 17-18):

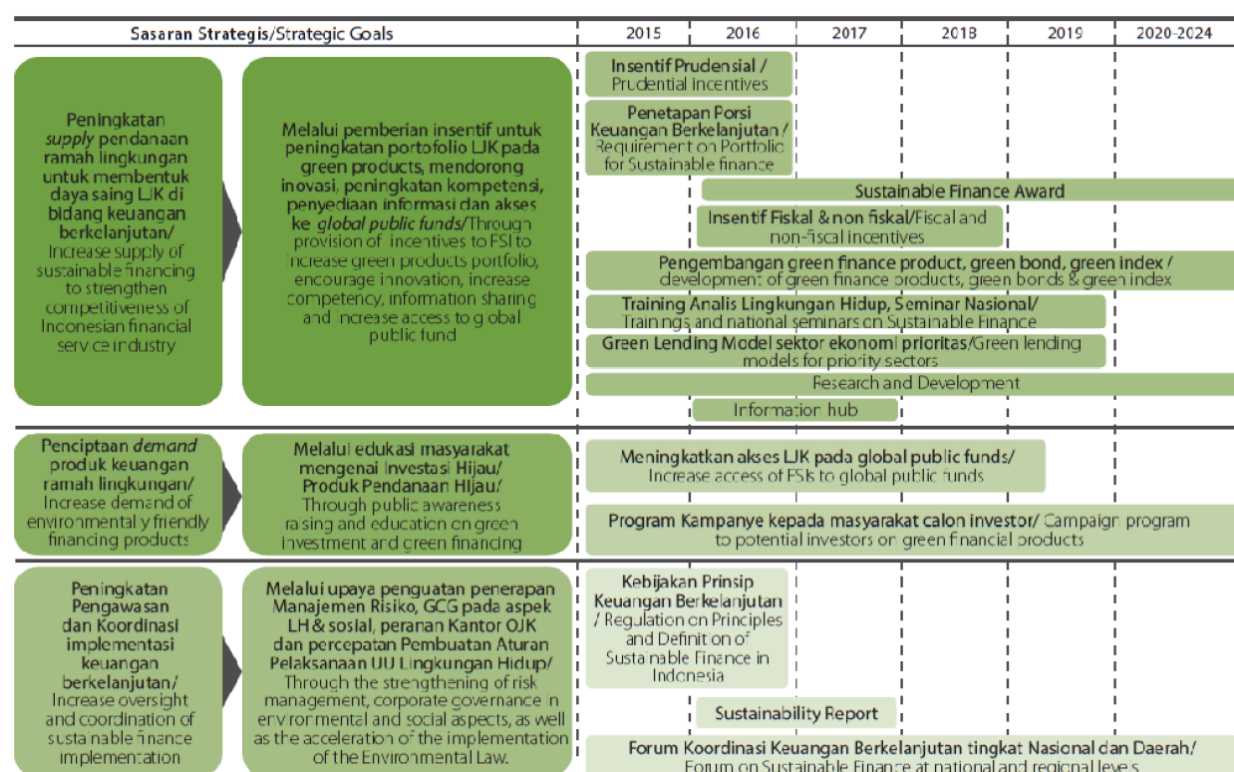
1. **“Risk Management Principle** which integrates aspects of environmental and social protection in FSI's risk management to avoid, mitigate and minimize the negative impacts that may arise and promote increased value in the FSI's financing and operational activities.
2. **Sustainable Priority Economic Sector Development Principle** that is inclusive by increasing financing activities primarily in the industry, energy, agriculture (in the broadest sense), infrastructure and MSME sectors and at the same time striking a balance between the economic, environmental and social aspects; and provides financial services to the community who has limited or no access to financial services in the formal sector.
3. **Environmental and Social Governance and Reporting Principle** by implementing robust and transparent environmental and social governance practices in the Financial Service Institution's operational activities, as well as ensuring that the same environmental and social governance practices are implemented by the FSI's clients; and periodically reports the progress of FSIs in implementing the principles of sustainable finance to the public.
4. **Capacity Enhancement and Collaborative Partnership Principle** by developing human resource, information technology and the operational capacity of each relevant LSI in implementing the principles of sustainable finance; and establishes cooperation between the FSIs, regulator, government and leverages on the partnership with domestic and international institutions to advance progress in the area of sustainable finance.”

In the *Roadmap*, OJK envisages strategic activities aimed at increasing the supply of environmentally friendly financing, increasing the demand for environmentally friendly financing products, and developing the oversight and coordination with other authorities for implementing the sustainable finance agenda. The *Roadmap's* implementation plan presented in Annex 2 comprises no less than 19 activities that are envisaged for the period 2015-2024, ranging from the introduction of new regulatory provisions relating to sustainable finance; refining policies for risk management to include environmental and social aspects; developing prudential, fiscal and non-fiscal incentives for financial institutions to enhance sustainable finance; developing green lending models for priority sectors; demanding mandatory sustainability reports from financial institutions; introducing sustainable finance awards; to fostering the development of green product both for banking and nonbanking industries. A graphical overview of the goals and activities envisaged in the *Roadmap* is presented in Figure 11.

While the details of the foreseen activities are (maybe necessarily) quite general at the current stage and OJK still needs to flesh out the particulars of the envisaged sustainable finance regulation, the *Roadmap* provides the starting point for an ambitious process that could significantly contribute to bringing about the much-needed green transformation of the Indonesian economy. It puts forward a bold strategy to raise awareness in the financial sector of the need to incorporate environmental and social risk considerations in lending and investment decisions and to gradually build up the capacities in the financial industry needed to develop sustainable financing practices.

As discussed in Section 4.1, for the time being only a small fraction of total financing is channelled into sustainable investments. If OJK follows up on the *Roadmap's* implementation plan, this could result not only in a fundamental reshaping of Indonesia's financial sector but also a much-needed boost in sustainable investment. To make the *Roadmap* and the sustainable financing program a success, it will be crucial to address the most pertinent bottlenecks to sustainable lending and investment. The following section attempts to identify these bottlenecks, including in the real economy, and discuss initiatives and incentives that could help to foster sustainable lending and investment.

Figure 11: Strategic activities to implement the Roadmap



Source: OJK (2014b: 21).

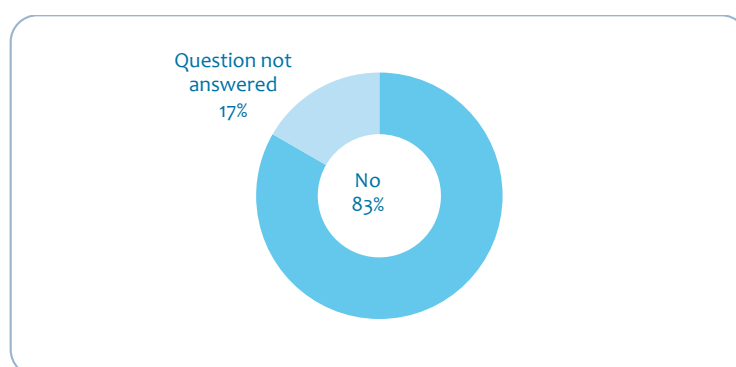
3.6 Barriers to Sustainable Finance in Indonesia and Recent Developments

Critical ‘real economy’ priorities for attracting green finance to Indonesia include: enforcing existing environmental regulation; improving processes for licensing, permitting and negotiating power purchase agreements for renewables; improving the state of the energy grid; and phasing out fossil fuel subsidies. However, there are also important barriers in the financial system which need to be addressed.

Banking

The share of green credits in banks’ portfolios is negligible thus far, and for the time being, sustainability is still mostly a concern for corporate social responsibility departments. A non-published survey among 14 Indonesian financial institutions (including NBFIs) carried out by PWC and IFC in 2012 posed the question of whether there is “a consensus among financial institutions/commercial banks in your country that there is a need for higher environmental and social standards in lending/investment?” The results were very clear: not a single respondent answered yes (Figure 12).

Figure 12: Is there a consensus among financial institutions/commercial banks in your country that there is a need for higher environmental and social standards in lending/investment?



Sustainability is only slowly gaining traction in the Indonesian banking sector, but awareness is rising not least due to Bank Indonesia's and OJK's efforts in promoting sustainable finance. In December 2005, largely state-owned PT Bank Negara Indonesia (BNI) became the first Indonesian signatory of the UNEP FI Statement of Commitment. The only other Indonesian member of UNEP FI is regional government-owned PT Bank Jabar Banten (BJB), which joined in December 2011. No Indonesian bank has thus far signed the Equator Principles. Under the slogan 'BNI go green', BNI has developed a comprehensive CSR program (cf. Bromund 2014). BNI has also published an annual *Sustainability Report* since 2009. In 2012 and 2013, BNI was awarded the *Sustainable Business Award Indonesia* in the category Banking & Finance.²⁰

An interesting example of green banking practice of a bank operating in Indonesia is Bank Asia Ltd., a bank that is publicly listed in Bangladesh, where Bank Bangladesh, the country's central bank, introduced a comprehensive green banking policy already in 2011. On its website, Bank Asia declares its goal to be a "bank where every decision will be taken with both financial and environmental considerations in mind."²¹ To this end, Bank Asia has circulated its "Green Banking Policy Guidelines and Green Office Guide ... to all ... employees for creating awareness on Green Banking activities & providing instructions about conserving energy, water, saving paper, etc."

Several international development agencies have tried to establish partnerships and green credit facilities with Indonesian banks. The interest among Indonesian banks has been rather cautious. Examples of past and present credit facilities include a soft-loan program for Pollution Abatement Equipment that the Japan Bank for International Cooperation had with BNI; KfW's Industrial Efficiency and Pollution Control refinancing line over IDR10 billion with BNI and government-owned Eximbank (also known as the Indonesian Export Financing Agency); and two credit facilities (over US\$100 million each) for 'Renewable and Energy Efficiency Projects' that Agence Française Développement (AFD) arranged with state-owned PT Bank Mandiri, Indonesia's biggest bank by assets. Where an agreement to establish a green credit line with a local partner bank could be reached, disbursement of credit often proved difficult. For example, the Asian Development Bank developed a US\$30 million Energy Efficiency Project Finance Program together with Eximbank in 2011—the first loan under this program was not released until 2014 (Sipahutar 2014). A major problem reducing the attractiveness of such schemes is apparently that both lender and debtor usually have to comply with comprehensive formal requirements in the credit approval process (Volz et al. 2015). For the Energy Efficiency Project Finance Program, Eximbank has been requested by the ADB to establish an environmental and social management system, a requirement many Indonesian banks would rather avoid.

In 2013, Bank Indonesia and the German Development Institute carried out a comprehensive green banking survey among Indonesia's commercial banks (DIE-BI green banking survey).²² 68 banks or 56.7% of all Indonesian commercial banks returned a completed questionnaire. The survey was complemented by semi-structured qualitative interviews with the nine largest Indonesian banks, two regional banks and three Sharia banks. The findings shed light on Indonesian banks' views on green finance and the bottlenecks to enhancing green lending.

While a majority (49/68) of banks generally consider green finance as a promising business area, in contrast to 12 banks which expressed no interest at all, only six banks consider green finance a "very promising" business area (Figure 13a). 26 banks considered green finance moderately promising and 17 banks found it a bit promising. 69% of the responding banks said they plan to expand their activities in green finance (Figure 13.b). However, only 4% consider this a priority; 19% plan to increase green lending moderately and 46% only slightly.

²⁰ <http://www.bni.co.id/en-us/investorrelations/financialperformance/sustainabilityreport.aspx>

²¹ http://www.bankasia-bd.com/home/green_banking

²² For the full survey results see Volz et al. (2015).

The low level of green lending discussed before is reflected in banks' organizational structures: 94% of the responding banks have no unit responsible for green finance (Figure 13c). Furthermore, the availability of appropriately qualified and experienced staff with regard to environmental assessments of credits appears to be a major problem: 81% of the responding banks said that qualified staff is scarce or very scarce (Figure 13d). No responding bank perceived the availability of qualified and experienced staff as good or even very good.

Banks were also asked to what extent environmental risks are considered in credit decisions, if at all. Mirroring the results for a lack of staff experienced in environmental risk assessment, 77% of responding banks admitted they lacked the necessary tools to assess environmental credits risks. Most of the interviewed banks also stated that they lack in-house tools to assess environmental risk. The standard practice for banks is simply to confirm the existence of AMDAL and UKL-UPR licenses or check the PROPER rating if the firm in question has been rated.

Even if environmental risk assessment appears to be of little importance in individual credit decisions, banks stated that they consider environmental risks when it comes to their overall lending portfolio. When asked to what extent environmental or climate change risks impacted on their portfolio diversification strategy, 35% of responding banks stated that they consider it to a high extent, and another 34% said they consider it to a medium extent (Figure 13e). However, none of the responding banks considered the impact of environmental or climate change risks to a very high extent; 18% considered it to a low extent and 7% completely ignored it in their portfolio diversification strategy. From the interviews, it did not become clear how exactly environmental or climate change risk is incorporated into portfolio diversification strategies and to what extent these affect the overall sectoral configuration of lending portfolios.

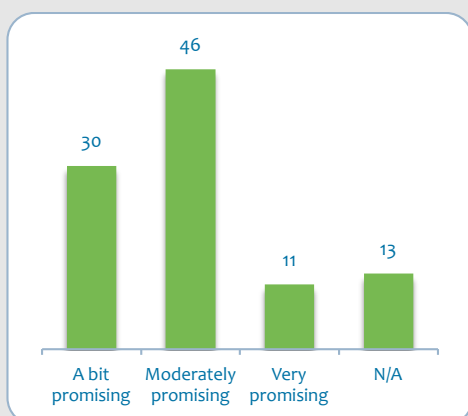
Interestingly, when banks were asked for the reasons why their green lending exposure was so low, only four banks or 6% of responding banks stated that green investments were more risky (Figure 14a). This is a remarkably low figure, given that green investments are usually associated with higher risk related to long loan tenor, as well as risk related to technology and political uncertainty. The small number of Indonesian banks that selected high risk in the bank survey as a major obstacle to financing green projects may be due to the fact that only few Indonesian banks actually have experience in green lending. Indeed, 46% of the responding banks indicated that they do not have enough experience in financing green projects and thus refrain from doing so. A lack of experience can result in higher administrative costs for the assessment of green project proposals, in comparison to conventional projects, as was highlighted in the interview sessions. In the interviews, when explicitly asked about different forms of lending risk, most banks actually expressed the view that green loans were more risky, principally because tenors were longer. With those lenders who possessed some experience in financing renewable energy projects, the perception of higher risk was a combination of longer loan tenors and lack of competencies to assess risk for novel, green technologies.

It is also interesting that 41% of responding banks indicated that there is a lack of demand for credits for green projects among their customers. This underscores the limits to green bank lending posed by an insufficient pipeline of investable green projects, a problem also highlighted by several interviewees. Only one bank stated that financing of green projects is not profitable enough. By and large, it appears that a number of factors, including risk related to longer tenors and high transaction costs due to lack of green lending experience and small volumes, constitute major barriers to green lending.

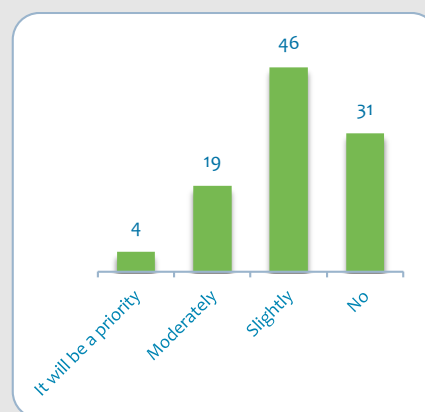
The survey and interview finding that banks' lack of capacities in processing and assessing green credit is a severe hindrance for the development of green lending is also reflected in the answers to the survey question "What kind of support from the banking supervision authority would help your bank to engage more in Green Finance?" (Figure 14b): 79% and 75% of responding banks called for more capacity building and technical assistance, respectively; 84% demanded better access to information.

Figure 13: Results from DIE-BI green banking survey, 2013 (answers in %)

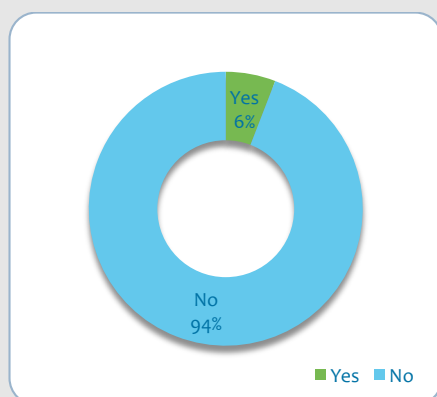
(a) Do you consider green finance as a promising business area?



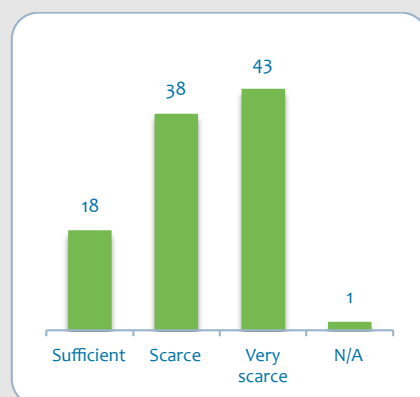
(b) Do you plan to extend your activities in green finance?



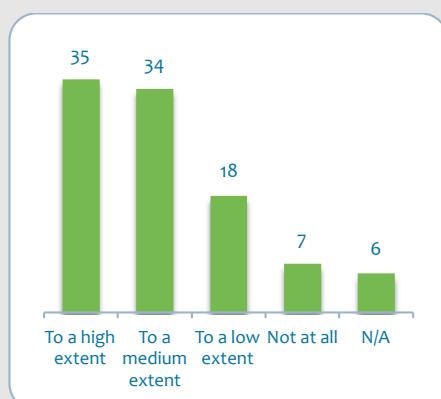
(c) Does your bank have a unit responsible for Green Finance?



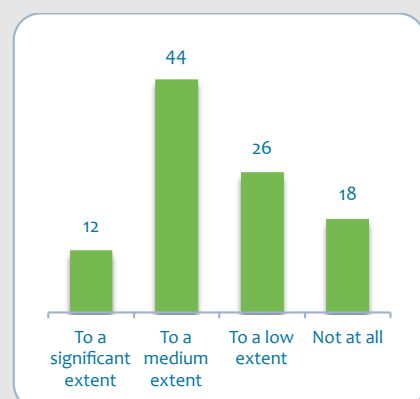
(d) How would you describe the availability of appropriately qualified and experienced staff in the banking sector with regard to environmental assessments of credits?



(e) To what extent do environmental or climate change risks impact on your portfolio diversification strategy?



(f) Do you think that a regulatory framework for Green Finance would be conducive to foster green investments?

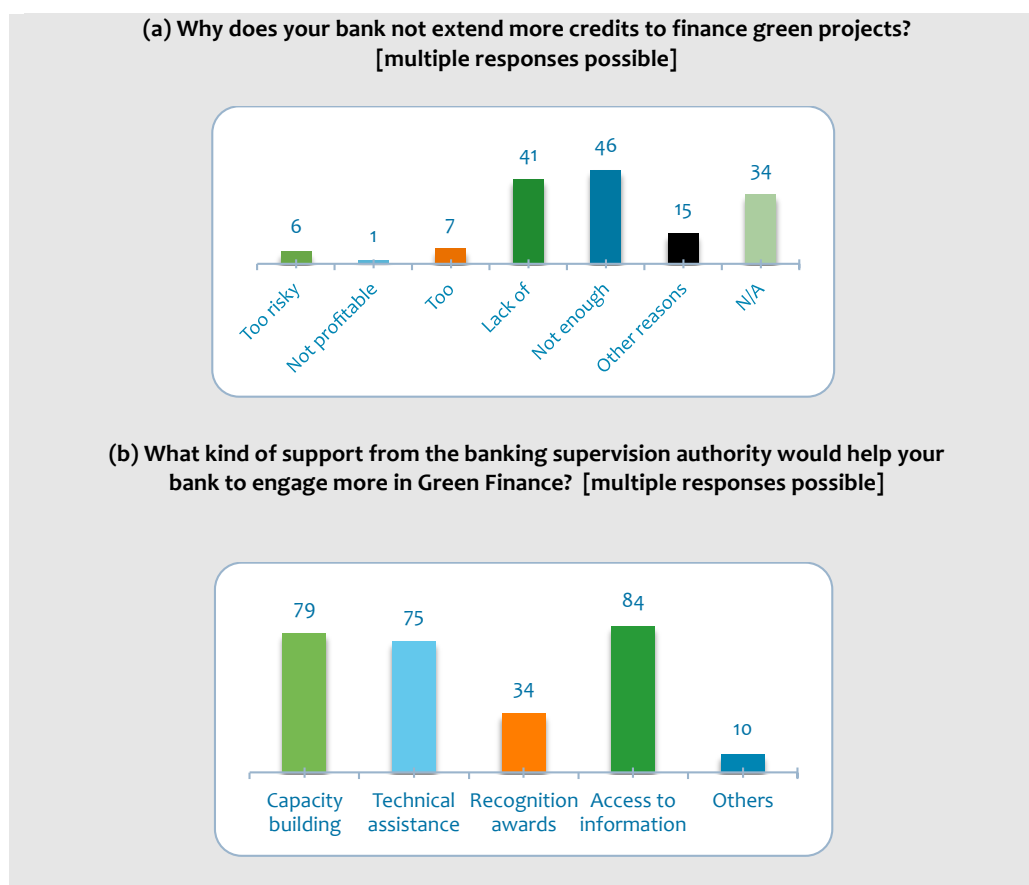


Source: Volz et al. (2015).

Overall, it seems that while there is a general interest in developing green lending business, most banks, especially the large ones, feel little urgency in doing so given that they have been able to generate high profit margins with their conventional lending business. Indonesia's banks have a "generally conservative approach to business" (PWC 2012: 59), with lending being mostly short- and medium-term.²³ As a consequence, there has been little effort thus far to develop the "seemingly less lucrative green finance market" (Volz et al. 2015: 118). It should be pointed out, however, that the problems holding back the financing of many green projects appear very much the same as those restraining infrastructure financing more generally: "For the banks, the problem is that infrastructure projects typically require a long gestation period, and it is often more than a decade before profits materialize. That length of time is beyond the comfort zone of most Indonesian banks, whose loan officers expect to evaluate credit requests based on a faster turnaround" (PWC 2012: 59).

Interestingly, questioned on their view on a prospective regulatory framework for green finance, 56% of responding banks showed a positive attitude, saying that a regulatory framework for green finance would be conducive to foster green investments "to a medium" or "significant extent" (Figure 13f). 18% thought that a regulatory framework would not be conducive at all to foster green finance and 26% believed it would make little difference. In interviews, bank officials generally expressed the view that binding regulation making environmental risk analysis mandatory would help to create a level playing field, which would also allow banks to reject profitable yet environmentally harmful projects without fear that other banks would finance them in their stead.

Figure 14: Results from DIE-BI green banking survey, 2013 (answers in %)



Source: Volz et al. (2015).

²³ Indonesian banks usually extend only short-term credits that are commonly rolled-over with renegotiated interest rates. As pointed out by PWC (2012: 59), "[o]nly select clients receive repayment terms that extend into multiple years, which means that it is difficult to use bank financing to fund infrastructure development."

Given their commitment to ethical and social business practices, one may expect Islamic banks to put a greater emphasis on ESG consideration than conventional banks, but interestingly the results of the DIE-BI green banking survey and interviews give no indication that Islamic banks currently act any differently from conventional commercial banks when it comes to sustainability issues. This may be due to the generally low level of awareness of sustainability challenges in the Indonesian society at large. This may also be an explanation why the lending practices of the BPDs, the regional banks which are owned by regional governments who could request them to apply higher sustainability standards in their local lending business, do not seem to differ much from those of privately owned commercial banks.²⁴ Given Indonesia's ambitious sustainability goals, over time the central and regional authorities may increasingly demand publicly owned financial institutions to put greater emphasis on lending for sustainable investment.

In an analysis of policy and regulatory barriers to sustainable investment in Indonesia, ASrIA (2015: 9) raised concerns that an “[a]doption of Basel III international banking standards through forthcoming macroprudential regulation will affect banks’ capital adequacy requirements and banks’ liquidity stores, and is likely to discourage future climate finance flows towards long-term debt for project finance.” However, it should be pointed out that liquidity has been persistently high, especially among the large banks. But Basel III may indeed limit the incentive for banks to develop long-term lending models, which would be crucial for sustainable infrastructure and energy financing.

To foster long-term lending, ASrIA points to the need to develop long-term wholesale-funding markets. At the moment, Indonesian banks depend almost entirely on customer deposits, which accounted for 91.17% of total funding in 2012; issued securities accounted for only 1.19% of bank's total funding (Alvarez et al. 2013: 4). Since deposits are mostly short-term, maturity mismatches would arise if Indonesian banks were to finance long-term projects with their current funding structure. To ensure that long-term assets are funded with long-term liabilities, banks will need to develop long-term refinancing sources. The development of corporate bond markets—and sukuk bond markets for Islamic finance—will be very important in this respect.

Capital Markets

To investigate the reasons behind the currently low share of investment into sustainable assets in the Indonesian capital markets, interviews were conducted in January 2015 with representatives of mutual funds, pension funds, insurance companies and a number of financial industry associations. Except for general insurance companies, a consistent picture emerged across the different segments of the industry: For the time being, hardly any institutional investors in Indonesia integrate ESG factors into the investment decision making process. In line with this, there seem to be very few professional investment staff in the industry that have been trained in ESG issues. To date, there are no disclosure requirements for NBFIs in Indonesia that address environmental or long-term systemic risk factors whatsoever. At the same time, there are no regulatory hurdles that would hinder investment into sustainable assets. For insurance or reinsurance companies, for instance, the required Risk-Based Capital (RBC), Indonesia's insurer solvency regime, poses no constraints on long-term investment.

Although there seems to be a broad agreement across the investment community that Indonesia's exposure to polluting and environmentally damaging investments could pose a systemic risk to the financial system and long-term growth of the economy, this realization does not affect financial firms' investment decisions. Also, the level of awareness on the risk of stranded assets and the broader divestment movement that is

²⁴ While BPDs have high market shares in their respective regions, they managed only 8.9% of Indonesia's banking assets in 2014. The same year, only 33% of BPD lending was directed to the corporate sector, with a focus on wholesale and retail trade financing, followed by construction and agriculture lending.

growing internationally is very low and is not filtering into decision making.²⁵ There are at least three reasons for this dissonance. First, because investments in Indonesian capital markets are typically short-term (between one and two years), long-term risks like climate change are considered unlikely to have an immediate impact on today's investments. Second, as long as there is no regulatory requirement, investors are unwilling to carry out voluntary environmental risk analysis as part of the investment process because this causes additional costs, and a decision to put off projects that would be realized otherwise could reduce profits. Indeed, there seems to be a widespread concern that inclusion of ESG criteria could worsen fund performance, while projects rejected because of ESG concerns would be still realized by competitors. It is hence noteworthy that interviewees consistently suggested that OJK should make screening of ESG criteria mandatory to create a level playing field. Third, Indonesian capital markets have very few "sustainable" assets for institutional investments.

An interesting exception to the widespread ignorance of ESG criteria is PT Indonesia Infrastructure Finance (IIF), which is a specialized infrastructure investor owned by the Government of Indonesia (through PT Sarana Multi Infrastruktur), ADB, IFC, DEG and Sumitomo Mitsui Banking Corporation. Since IFC requires all of its clients to apply Performance Standards on Environmental and Social Sustainability, IIF has to adhere to '8 Social and Environmental Principles' (Annex 3). The application of these principles has, in at least one case, caused IIF to pull out of a project that was then financed by a competitor.

A further interesting exception with respect to the analysis of environmental and climate change-related risk are general insurance companies. Over the last years, Indonesia has been exposed to several natural disasters that are commonly associated with climate change, such as flooding and landslides. Given that the latter have an immediate effect on property or motor vehicle insurers (the two most important types of non-life insurance in Indonesia), the Association of Indonesian General Insurance Companies has started to collect data on claims related to flooding and landslides and develop risk maps accordingly. These risk maps are shared among the members, who adjust their risk premia accordingly. Given that Indonesia is highly vulnerable to the effects of climate change (Yusuf and Francisco 2009; World Bank and GFDRR 2012; World Bank 2014), it would be reasonable for other financial institutions to also consider environmental risk.²⁶

Besides financial indicators, good corporate governance was frequently referred to as a major factor affecting investment decisions. Adherence to environmental legislation was widely considered an important element of good corporate governance, and some interviewees even expressed the thought that corporations that take into account environmental and social considerations may over the long run outperform competitors, as they are implementing practices that may sooner or later become mandatory for all firms. In this context, is noteworthy that in January 2014 the Indonesian Stock Exchange (IDX) introduced new corporate governance requirements for listed companies based on the *Indonesia Corporate Governance Manual* that OJK published together with the IFC in the same month (OJK and IFC 2014). In February 2014, OJK, supported by IFC, launched an Indonesian Corporate Governance Roadmap. Moving forward, IDX could play an important role in strengthening ESG practices among listed companies through its listing requirements.²⁷

Interestingly, IDX together with the KEHATI Biodiversity Conservation Trust Fund, recently started a remarkable experiment. In June 2009, IDX and KEHATI launched a Social and Responsible Investment (SRI) index comprising 25 companies listed at IDX. For this SRI-KEHATI index, 25 stocks are selected based on both negative (excluded sectors) and positive (enhanced social and environmental management) criteria (cf. Annex 4). Even though KEHATI has described the SRI-KEHATI index as the "first Green Index in ASEAN", the

²⁵ The fact that a number of Indonesian palm oil firms have been affected by divestment decisions of international investors, including Norway's Sovereign Wealth Fund, because of unsustainable business models (see, for example, Lang 2013; Malone 2014) is not widely known in Indonesia.

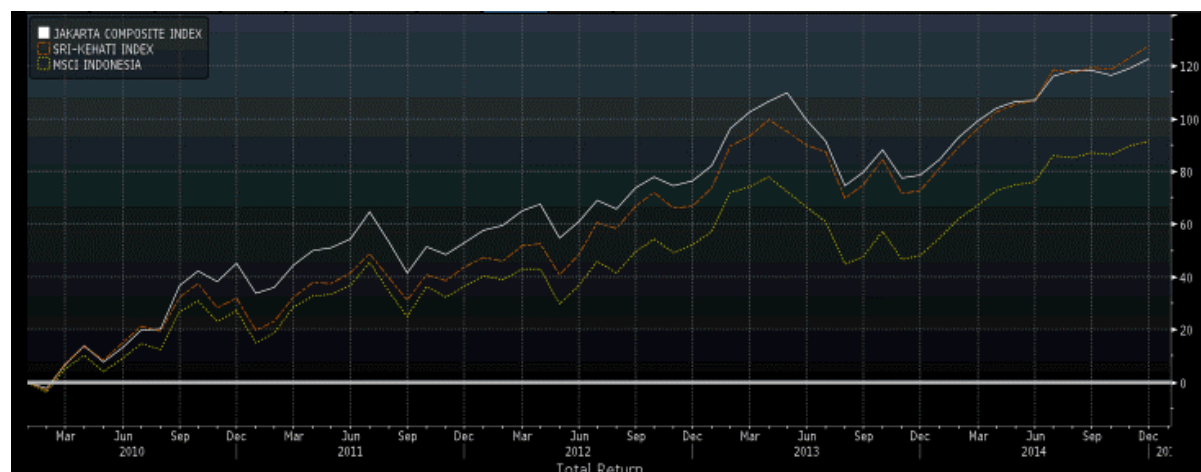
²⁶ There are indeed examples of non-insurance financial institutions in Indonesia that suffered losses from environmental disasters. One bank was faced with payment defaults during the big Jakarta flooding in 2012 because it had bought a large portfolio from a consumer financing firm that had extended credit for mopeds—many of which were destroyed during the flooding.

²⁷ See EIRIS (2010) on the role of stock exchanges can play in improving ESG standards.

criteria for “green” are rather low. Nonetheless, for Indonesia this is the first financial market initiative that explicitly incorporates sustainability considerations.

The results are encouraging: As shown in Figure 15, the SRI-KEHATI index has consistently outperformed the MSCI Indonesia, and during 2013 its performance has been very similar to the Jakarta Composite Index. In September 2014, PT Indo Premier Investment Management launched the SRI KEHATI-ETF, an exchange-traded fund listed on IDX that tracks the SRI KEHATI index. The SRI KEHATI-ETF is possibly the first sustainability-themed investment product in Indonesia.

Figure 15: SRI-KEHATI, Jakarta Composite Index and MSCI Indonesia (total return)



Source: IDX.

A further sustainability-themed investment was launched in December 2014. Supported by a partial credit guarantee from IFC, PT Ciputra Residence, a residential property developer who has committed to apply IFC’s green building standards, issued an IDR500 billion (around US\$40 million) bond at the IDX. This is the first of its kind: there have been no green bond issuances before, and no standards or ratings for green bonds have been developed in Indonesia up till now. The Roadmap Implementation Plan (cf. Annex 2) envisages the “[p]rovision of required supports [sic] to relevant government institution[s] and industry practitioners in the development and issuance of green bonds.”

A somewhat unusual yet interesting project has been the Mangrove Rehabilitation Program by KEHATI and the Ministry of Finance. The 20 banks and brokerage institutions that acted as selling agents of government bond ORI010 in the period September 20 – October 4, 2013 had to donate a share of the selling agent’s fee to a rehabilitation project for mangrove forests. Besides raising IDR1.1 billion (around US\$ 100,000) for the good cause, the project may be a good example for raising awareness that investment decisions can have an impact, negative as well as positive.

These are only tiny steps towards greening Indonesia’s capital markets. Yet market participants generally agreed that there was potential demand for sustainability-themed investments including green infrastructure bonds. Also, some mutual fund managers reported growing interest among institutional investors in sustainable investment strategies. One large asset management company was even requested by several institutional investors to develop an ESG strategy. It is not known whether these demands came from domestic or foreign institutional investors. In either case, such customer demands may well cause a growing number of NBFIs to consider ESG strategies. Regulatory requirements concerning ESG disclosure would certainly help to advance sustainable investment, as would tax incentives.²⁸

²⁸After the Asian crisis, tax discounts on coupon and capital gains were one of the instruments to generate investor interest in local currency bond markets among mutual fund investors.

Bureaucratic and Other Hurdles

While some characteristics of Indonesia's financial markets—like the lack of experience and capacity regarding ESG risk analysis and a strong focus on short-term lending and investment—are certainly holding back green investments, it is important to emphasize that green investments, including investments in renewable energy, are also held back by difficult investment conditions, inconsistent policies and cumbersome permission procedures.²⁹ Interviews with several domestic and foreign investors and developers gave a uniform picture of the difficulties of developing renewable energy projects. The lengthy and uncertain permission process for renewable energy facilities, which usually take several years, is a strong disincentive for investors. Getting the permission in most cases takes much longer than the actual construction process. Some foreign investors also complained that permissions are often given to local brokers with no experience in project development. Moreover, getting a power purchase agreement for capacities larger than 10 MW from Perusahaan Listrik Negara (PLN), Indonesia's government-owned energy monopolist, can be a lengthy procedure, which is also complicated by suboptimal coordination between PLN, the Ministry of Energy and Mineral Resources and other (regional) authorities involved.

Although there is a huge potential for investment in renewable energy and foreign investors with ample liquidity have shown a strong interest, many foreign investors complain that the Indonesian government has not been particularly welcoming. The limits on foreign ownership in power plants of 49% for capacities below 10 MW introduced in 2014 has reportedly discouraged investment in smaller facilities, while the risk of investing in sites with larger capacities is very high due to unpredictable licensing and permit procedures. Facilitating investment in renewable energy sites would be made more straightforward by providing a clear framework and streamlined licensing procedures. Recent announcements by President Widodo to “create a ‘one-stop’ service for foreign investors” (Andhika 2014) have raised hopes among foreign investors, including those interested in investing in sustainable infrastructure and energy. It should be noted that real asset investments are needed for developing tradable assets in capital markets. Indeed, a portfolio of renewable energy assets would provide opportunities for securitizing cash flows and providing investment opportunities for capital investors. Various energy companies are reportedly working in this direction at the moment.

²⁹ This is a reflection of the generally difficult investment climate in Indonesia. In the World Bank's 2015 report on Doing Business (which is not without criticism, to be fair), Indonesia was ranked only 114 out of 189 countries (World Bank 2015). In Transparency International's Corruption Perceptions Index, Indonesia was ranked 107 out of 175 countries.

4 Conclusions

To set Indonesia on a path of sustainable, low-carbon development, it will be crucial that environmental and social risk screening becomes an integral part of lending and investment decisions in the Indonesian financial sector. Indonesia has an economy with a huge growth potential, but also enormous investment needs in critical infrastructure and environmentally sensitive areas such as agriculture, forestry, energy, mining and waste. Indonesia also faces social challenges in eradicating poverty and developing an equitable society.

With the *Roadmap for Sustainable Finance in Indonesia*, OJK has put forward a bold and visionary strategy to develop over the medium term a financial system where financial firms include environmental and social aspects in their risk management and where lending and investment decisions take into account ESG criteria. The *Roadmap* provides the starting point to raise awareness and gradually build up the capacities in the financial industry needed to develop sustainable financing practices. Despite being at an early stage, the *Roadmap* is unique internationally as a systematic plan grown out of a decade of development of sustainable finance in Indonesia. By making it an integral part of its *Master Plan for Indonesia's Financial Service Sector*, OJK is working toward the goal of mainstreaming sustainability in financing and investment.

While a majority of banks generally consider green finance as a promising business area, banks—especially the large ones which currently enjoy very high profit margins with their conventional business models, which are dominated by consumer-lending—feel little urgency in developing their green lending capacities. Building on its efforts to increase the share of productive loans to SMEs in total bank lending, OJK should work towards developing a binding regulatory framework for green finance which includes the compulsory establishment of environmental and social management systems.³⁰ As discussed, bank officials are generally positive about OJK's intention of making environmental risk analysis mandatory as this would help to create a level playing field and allow them to reject profitable yet environmentally harmful projects without fear that other banks would finance them in their stead. The same positive attitude prevails in capital markets, where market participants seemed generally open to integrate ESG factors into the investment decision making process as long as everyone else is obliged to do the same. Regulatory requirements for ESG disclosure would be an important means to advance sustainable investment. In this context, the Indonesian authorities may also consider the merits of imposing provisions for lenders' environmental liability and reforming the fiduciary duties of NBFIs (cf. Richardson 2008; UNEP FI 2009).

There are further measures OJK can adopt in order to incentivize certain types of lending, including differentiated reserve requirements with lower required reserve rates on privileged green assets or differentiated capital requirements with different capital adequacy ratios according to the characteristics of the banking institute and the type of lending they provide (cf. Volz 2014). OJK is currently discussing to progress green weightings on capital requirements, which would be a truly innovative decision that would set an example internationally. Another area that should be further explored by Bank Indonesia is the inclusion of environmental risk analysis in its macroprudential policy framework (van Tilburg et al. 2014; Volz 2014).

Besides regulatory and disclosure requirements for environmental and social risk analysis, the Indonesian authorities may also provide fiscal incentives to the financial sector to stimulate green lending and investment. However, as discussed before, thus far, the large Indonesian banks have been rather reluctant to sign up to subsidized credit lines from international development banks and agencies, apparently because such schemes typically entail that both lender and debtor comply with in their view cumbersome formal

³⁰ On the establishment of environmental and social management systems see, for instance: <http://firstforsustainability.org/risk-management/implementing-ifc-environmental-and-social-requirements/establish-and-maintain-an-esms/ifc-environmental-and-social-performance-requirements/>

requirements in the credit approval process. Still, subsidized credit lines may provide some incentive for smaller banks to develop their green lending business, but any such scheme should be linked to capacity building measures, and have a clearly defined runtime and criteria for success and failure.³¹ The Ministry of Finance could also create tax incentives for green investments such as tax discounts on coupon and capital gains for mutual fund investors investing in green bonds. Green fiscal measures can also be employed to generate interest in green investments among corporates and households, stimulating demand for green finance from the real economy.

Given that four of Indonesia's biggest lenders are state-owned banks, and that Indonesia has a wide-ranging network of publicly owned regional and rural banks, the central and regional authorities could indeed use their ownership status to request publicly owned financial institutions to put greater emphasis on lending for productive and sustainable investment. However, to counter the danger that this may result in politicised or crony lending by publicly owned financial institutions, it will be crucial to strengthen corporate governance of these institutions, including through tighter internal and external auditing, and improved accounting practices and risk management.³²

One major challenge for developing sustainable finance in Indonesia is to address the short-termism that prevails in Indonesia's financial markets. The practice of Indonesian banks to extend mostly short-term credits that are commonly rolled-over with renegotiated interest rates makes any kind of long-term financing of sustainable investment difficult. To foster long-term bank lending, Indonesia needs to develop local long-term wholesale-funding markets so that Indonesian banks can reduce their reliance on customer deposits as their major source of refinancing. At the same time, the further development of Indonesia's local currency corporate bond market with longer-term debt instruments would also enable investors to undertake more long-term investments. A longer investment horizon would likely increase investors' awareness of ESG risk factors.

A topic that deserves further analysis is the role that Islamic finance may play in aligning the Indonesian financial system with sustainable development. Since the outbreak of the Global Financial Crisis in 2008, there has been an interesting discussion as to whether Islamic finance may offer a more sustainable alternative to the Anglo-Saxon model of finance.³³ As pointed out by Akhtar (2007: 5), "Islamic finance confines itself to largely socially and development projects and institutions are not permitted to invest in prohibited or socially undesirable investments. Emphasis on ethical issues and rigorous self-regulation in terms of Sharia supervision ensures fair play and justice and offers superior consumer protection model. Furthermore it induces higher financial discipline and places stringent ethical standards for all stakeholders that offers a strong and unique model of governance." For the time being, the share of Islamic finance in Indonesia is very small—Islamic finance constitutes only 4.5% of total banking assets as of September 2014 (Vizcaino and Suroyo 2014)—and it is not clear that Islamic financial institutions in Indonesia consider ESG issues besides excluding certain sectors like alcohol, tobacco and gambling. As discussed, the DIE-BI survey and interviews in the banking sector suggested little difference in current practice. But as OJK is aiming to foster the development of Islamic finance, the scope for making sustainability an integral part of Islamic finance in Indonesia should be further explored in the context of implementing OJK's *Roadmap for Sustainable Finance*. The Committee for Sharia Financial Services Development (Komite Pengembangan Jasa Keuangan Syariah, KPJKS), which was established by OJK in August 2014, could be asked to develop concrete proposals to this effect. Neighbouring Malaysia, which is a leading market for Islamic finance, recently "announced guidelines for issuance of socially responsible sukuk (Islamic bonds), aimed at helping firms raise money for projects ranging from renewable energy to affordable housing" (Vizcaino 2014). Given

³¹ When contemplating subsidy schemes, it will be worthwhile to consider Rodrik's (2004) ten design principles for industrial policy.

³² As recently pointed out in a recent report by Fitch Ratings (2014), many BPDs "do not have appropriate corporate governance due mainly to weak internal controls, poor accounting practices and ineffective risk management. Intervention from regional governments also makes it difficult for the banks' management teams to conduct business prudently."

³³ For contributions in this discussion see, for instance, Aburawa (2011), Nagaoka (2011), Myers and Hassanzadeh (2013) and Alawode (2013). An early study on the role of Islamic financial institutions in sustainable development was conducted by Hassan and Chachi (2005).

that Indonesia is the country with the world's largest Muslim population, the development potential for Islamic finance is huge. OJK should use the opportunity to shape the development of this market so that it is fully aligned with the country's sustainability goals.

Indonesia's financial markets have already seen several important innovations over the past years. The first, and most important, is OJK's *Roadmap*, which holds the potential to fundamentally alter the way financial markets operate in Indonesia. Further policy innovations may be in the making, such as green weightings on capital requirements. We have also seen market innovations like the development of the SRI-KEHATI index and recently the launch of the SRI KEHATI-ETF and the first green bond. While these are innovations that mirror developments in OECD countries, they are almost unique for a developing country. Indonesia's leaders have realized the importance of aligning economic growth with social and environmental goals. Indonesia's financial firms should actively embrace the opportunities that sustainable investment and lending offer and support OJK's mandate to develop a sustainable financial system.

While this report has focused on bottlenecks in banking and capital markets that hold back green lending and investment, it should be emphasized once again that major bottlenecks lie also on the real economy side. Public interventions in the financial markets may be useful to address some bottlenecks, but it is clear that banks and NBFIs require a pipeline of investable projects if they are to increase their share of sustainable lending and investment. For this to happen, the Indonesian authorities will need to facilitate investments procedures. President Widodo's plan to streamline the government's permit process into a one-stop service is an important step in the right direction.

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Annex 1: Proposal for green banking framework

Phase 1 (1 year)

- Announcement of a detailed definition of green finance, with appropriate information for banks and capacity building measures that will help banks to implement the following required and suggested measures.
- Banks are encouraged to send their staff to regular capacity building measures related to green finance.
- Banks are requested to screen their existing portfolio and categorize outstanding loans as “green” or “non-green” according to the regulator’s official green finance definition. The same categorization should be applied for new loans.
- Within one year banks should provide the financial regulator with an overview of the share of green loans in their total portfolio.
- Banks need to introduce environmental and social risk management systems.

Phase 2 (3-5 years)

- Taking into account the initial position of banks with respect to green finance, the regulator announces a non-binding target for the share of green finance in banks’ portfolios that should be reached by banks within three to five years.³⁴
- Banks are required to designate a board member responsible for green finance and report every year to the regulator their share of green finance in their portfolio. The results will be openly published by the regulator in an annual report on green banking.
- There will be annual awards for banks with a high share or a rapidly increasing share of green lending.

Phase 3 (open-ended)

- The regulator will evaluate the progress made by individual banks in achieving the green finance targets set out at the beginning of phase 2 and decide on binding targets for the share of green finance in banks’ portfolios.
- Banks that do not achieve the binding target will be required to pay a penalty fee at the end of each year into a newly established green finance fund. Underperforming banks will also be required to present a plan for improvement. The regulator will continue publishing annually a report on Green Banking in Indonesia.
- Annual awards for banks with a high share or a rapidly increasing share of green lending.

Source: Volz et al. (2015).

³⁴ This approach would follow on Bank Indonesia's requirement that banks extend at least 20% of their credit to SMEs.

Annex 2: Roadmap implementation plan

No.	Activity	Timeframe	Notes
1	Regulation on principles and definition of sustainable finance in Indonesia	2015-2016	Issuance of an umbrella policy and regulations on sustainable finance, setting forth the definition and principles. Development of supervision guidelines on sustainable finance program implementation.
2	Policy and regulation to increase sustainable finance portfolios	2015-2016	Development of policies/regulations to increase financial service institutions' portfolios on sustainable finance. For example, by providing incentives to increase sustainable finance portfolios and special allowances to reduce productive portfolios. Increase of sustainable financing can be applied on both productive and consumptive sectors.
3	Prudential incentives	2015-2016	Provision of prudential incentives, such as a certain level of risk-based balanced asset (ATMR) in consideration of a risk mitigation mechanism.
4	Fiscal incentives	2016-2018	Provision of fiscal incentives, such as a tax holiday and feed-in-tariff, in collaboration with relevant ministries.
5	Non-fiscal incentives	2016-2018	Provision of non-fiscal incentives, such as targeted loans and a guarantee scheme, in collaboration with relevant ministries.
6	Information hub on sustainable finance	2016	Development of an integrated information system on sustainable finance, i.e. key information for FSI provided by relevant ministries, green lending models, information on new financial products and supervision procedures. The information is available for FSI, government officials and wider audience and presented in a microsite at OJK website.
7	Sustainability report	2016-2017	Issuance of a sustainability report will gradually become mandatory to provide transparency to the wider public and for OJK supervision. The sustainability report will be part of an integrated report.
8	Sustainable finance award (SFA)	2016-2024	Special award granted to commendable FSI that lead to the implementation of sustainable finance. The prize will be awarded by OJK in collaboration with Ministry of Environmental Affairs and Forestry and other relevant institutions.
9	Policy and regulation on risk management related to sustainable finance program implementation	2019-2024	Refinement of policies/regulations in the area of risk management relevant to sustainable finance to include environmental and social aspects.
10	Campaign program	2015-2019	Implementation of a campaign program to the public as potential investors in partnership with relevant institutions.
11	Green lending models for priority sectors	2015-2019	Provision of green lending models pertaining to priority sectors in 2015-2016 with special focus on supporting a national energy security plan.

12	Environmental analysts training	2015-2019	Provision of environmental analysts trainings in collaboration with training providers, universities and donor institutions. The target is to train 1,000 – 2,000 staff members of FSI, OJK officials and OJK supervisors in 5 years.
13	Development of green product both for banking and nonbanking industries	2015-2024	Development of green products for banking and non-banking industries. The activity might include using international best practices and standards as benchmarks.
14	Development of green bonds in Indonesia	2015-2024	Provision of required supports to relevant government institution and industry practitioners in the development and issuance of green bonds.
15	Development of green index in Indonesia	2015-2024	Support to the Indonesia stock exchange and capital market practitioners to develop green index.
16	Focus group discussions and seminars	2015-2024	Focus group discussions and seminars are to be held in collaboration with relevant ministries and donor institutions.
17	Research and development	2015-2024	Joint research in collaboration with national and international research centres on sustainable finance.
18	Increase access of financial service institutions to global public fund	2015-2024	Supports and facilitation for FSI to increase their access to global public funds taking into account risks mitigation mechanism (macro and micro prudential). Increase the participation of OJK in international forums related to climate change and sustainable development issues such as UNFCCC, APEC and G-20.
19	Coordination forum on sustainable finance	2015-2024	Establishment of Sustainable Finance Forum, with specific objectives: <ul style="list-style-type: none"> • To accelerate the issuance of government regulation on technical implementation of Law 32/2009 concerning Environmental Protection and Management. • To discuss lessons learned and challenges pertaining the implementation of sustainable finance program. • As a mean to conduct regular evaluation on the progress of sustainable finance program and increase active participation of OJK regional offices at regional levels.

Source: OJK (2014b: 27-30).

Annex 3: IIF's 8 Social Environment Principles

1. Social and Environmental Assessment and Management System (SEMS) Incorporates the following elements:

- Screening and categorization of projects.
- Social and environmental (S&E) assessment, S&E management.
- Organizational capacity.
- Training Community engagement and consultation.
- Monitoring, reporting and continuous improvement.

2. Labour and Working Conditions

- Establishes, maintains and improves worker-management relationship.
- Addresses child labour and forced labour.
- Promotes safe and healthy working conditions.

3. Pollution Prevention, Abatement, & Climate Change

- Addresses pollution prevention and management of impacts arising from project activities.
- Ensures conformance with global good practice and standards.
- Ensures that climate change issues associated with project activities are assessed, mitigated and monitored over the life of IIF's investment.

4. Community Health, Safety, & Security/Dam Safety

- Seeks to avoid or minimize the risks and impacts to community health, safety and security that may arise from project activities.
- Includes special requirements related to the safety of dams associated with projects.

5. Land Acquisition and Involuntary Resettlement*

- Refers to both physical displacement (relocation or loss of shelter) and economic displacement (loss of assets or access to assets that leads to loss of income sources or means of livelihood) as a result of project-related land acquisition.
- Does not apply to physical displacement or resettlement resulting from voluntary land transactions.
- Impacts are to be avoided, minimized, mitigated or compensated for through the process of Social and Environmental Assessment under Principle

6. Biodiversity Conservation and Sustainable Natural Resources Management*

- Includes protection, conservation and management of biodiversity, and promotes use of renewable natural resources.

7. Indigenous People (IP)*

Includes identification of all impacts (positive and negative) on indigenous people; social assessment, informed consultation and disclosure to indigenous people of development plan.

8. Cultural Property and Heritage*

- Recognizes the importance of cultural property and heritage for current and future generations, consistent with the Convention.
- Concerning the Protection of the World Cultural and Natural Heritage.
- Seeks to guide IIF project sponsors in identifying and protecting cultural heritage in the course of project design and execution.

** Applicability of this Principle will be determined during project screening and appraisal*

Source: http://iif.co.id/en_US/social-environment-principal

Annex 4: SRI KEHATI Index

As of 8 June 2009, in an effort to develop its programs, KEHATI has developed a close relationship with the business sector and in cooperation with the Indonesia Stock Exchange (BEI) has launched KEHATI SRI Index, following the standard and regulation of Sustainable and Responsible Investment (SRI).

The basic year used as initial index year with a 100 basis was 30 December 2006 and was publicized by BEI as KEHATI SRI Index at the position of 116,946. By launching KEHATI SRI Index, it was expected that the public would be made aware of the presence of an index showing which companies were regarded as beneficial and constantly managing sustainable development.

The objective of the index establishment is to materialize biodiversity conservation programs by raising awareness and consciousness toward biodiversity among the public, business sector and capital market, and to provide open information to the public at large in identifying the selected companies rated by the index. The companies are considered to have various considerations in running their business in relation to environmental concerns, business management, community involvement, human resources, human rights, their business behavior and way of operation with internationally accepted business ethics.

KEHATI has picked 25 selected companies considered eligible to meet KEHATI SRI Index criteria so that they can be used as guidance for investors. The presence of those companies will be evaluated twice a year, in April and October, and the result will be publicized by BEI, which can be followed through www.idx.co.id

The selection mechanism for the companies to be included in KEHATI SRI Index consists of two steps. The first step is an initial selection through negative and financial aspects. The second step is to evaluate fundamental aspects. The initial step is taken to ensure that the selected companies are eligible to meet the following pre-conditions:

1. Negative Selection: pesticide, nuclear, weapons, tobacco, alcohol, pornography, gambling, genetically modified organism (GMOs)

2. Financial Aspects:

- Market Capitalization of above Rp 1 Trillion
- Assets above Rp 1 Trillion.
- 10 percent Free Float Ratio
- Positive Price Earning Ratio (PER) during the last six months.

The fundamental aspects will be evaluated after the companies have successfully passed the initial step. The aspects include several areas.

3. Fundamental Aspects:

- Corporate Management
- Environment
- Community Involvement
- Business Manners
- Human Resources
- Human Rights

The evaluation is done through a review on secondary data, a questionnaire filled in by those who have passed the initial selection, and through other relevant data. As the result, 25 companies with the highest score were declared eligible to be included into KEHATI SRI Index.

Source: <http://www.kehati.or.id/en/indeks-sri-kehati-2.html>

About the partners

United Nations Environment Programme (UNEP) Inquiry ‘Design of a Sustainable Financial System’ was launched in January 2014 and will run until the end of 2015. The Inquiry is investigating policy options to improve the financial system’s effectiveness in mobilizing capital towards sustainable development. Ultimately, the Inquiry’s aim is to develop a portfolio of policy options – tools, instruments and pathways relating to banking, insurance, investment and relevant aspects of the monetary system. Across these sub-sectors, four main interventions are investigated: policy, regulation, fiscal policy; private standards (including accounting rules and ratings) and public finance as it relates to state-directed financial institutions.

A core part of the Inquiry’s work are a series of country level engagements to identify national innovations in norms, instruments or policies; and highlight developments that could have international resonance. Countries and regions include Bangladesh, Brazil, China, Colombia, Europe, India, Indonesia, Kenya, South Africa, Uganda, the United Kingdom and the United States of America. Insights being gathered from the Inquiry’s country engagements will shape the development of principles used to design a sustainable financial system.

International Finance Corporation (IFC) is the largest global development institution focused exclusively on the private sector in developing countries, and has been utilizing its investment and advisory services to develop local financial markets and leverage the private sector to advance innovative and viable solutions to ensure environmental and social sustainability. Recognizing that the majority of green investment to date has been domestic in origin, IFC has, since 2012, been supporting the G20’s Development Working Group in their efforts to mobilize private investment for inclusive green growth, including from domestic institutional investors.

In order to scale up domestic green investment, IFC, with funding support from GIZ, is partnering with the UNEP Inquiry in Colombia, Indonesia and Kenya to jointly undertake a mapping of the investor ecosystem in these countries, looking at existing practices, enabling environment, regulations, barriers, and instruments for green investment. This is intended to inform the potential development of a collaborative road-map to addressing the barriers to be produced jointly with the regulators and investors in each country. This work will feed into GreenInvest – a public-private investor platform being established in 2015 by the G20 to mobilize green investment and facilitate the tailoring of global instruments, tools and frameworks to national contexts.

ASrIA (the Association for Sustainable & Responsible Investment in Asia) is the leading organization in Asia dedicated to promoting sustainable finance and investment across the region. ASrIA aims to play a significant role as a thought leader, advocate and convener in facilitating Asia’s transformation to a sustainable future. Through the Asia Investor Group on Climate Change (AIGCC), ASrIA aims to create awareness among Asia’s asset owners and financial institutions about the risks and opportunities associated with climate change and low carbon investing.


The Alliance for Public Private Climate Finance Asia-Pacific was established in 2012 by AIGCC and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) (GIZ-AIGCC/ASrIA Alliance) to encourage and facilitate low carbon and climate-resilient development in Asia-Pacific. The mission of the Alliance is to (i) Provide advice on the creation of support mechanisms to channel capital into low carbon and adaptation projects in the region, (ii) Establish a dialogue platform for private sector investors and (iii) Support the capacity development of government institutions and stakeholders. In support of GIZ-AIGCC/ASrIA Alliance’s goals, ASrIA is carrying out an investigation into Policy and Regulatory Barriers to Climate Finance in Asia-Pacific, featuring a case study on Indonesia. Specifically, this will focus on the role that financial market policy and regulation can play in terms of enabling and incentivizing private capital flows towards climate finance, primarily as this relates to the region’s financial markets.

Selected Inquiry Publications

Downloadable from www.unep.org/inquiry/knowledge


INQUIRY PROGRESS BRIEFINGS

1




► **INVITATION**
(May 2014)
Introduction to the Inquiry.

2



► **INSIGHTS FROM PRACTICE**
(July 2014)
Highlights from the Inquiry's engagements in Bangladesh, Brazil, China, Europe India, South Africa and the United States.

3




► **PATHWAYS TO SCALE**
(January 2015)
Emerging themes and lessons.

ASIA-PACIFIC COUNTRY REPORTS

- **MONETARY POLICY AND SUSTAINABILITY**
The Case of Bangladesh (by Alex Barkawi, Council on Economic Policies and with Bangladesh Bank: forthcoming)
- **ESTABLISHING CHINA'S GREEN FINANCE SYSTEM**
(with People's Bank of China)
- **DESIGNING A SUSTAINABLE FINANCIAL SYSTEM FOR INDIA**
(with FICCI)
- **TOWARDS A SUSTAINABLE FINANCIAL SYSTEM IN INDONESIA**
(by Ulrich Volz, with the IFC and AsRIA)

FINANCE FOR DEVELOPMENT



► **ALIGNING AFRICA'S FINANCIAL SYSTEM WITH SUSTAINABLE DEVELOPMENT**
Briefing for the AU-ECA Conference of Ministers (March 2015)



Inquiry: Design of a Sustainable Financial System

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