Innovative instruments for Green Finance
National Roadmaps for Sustainable finance

• They can bridge high-level national targets with the technical details and needs of the financial system.

• They can enhance experience, and activate leadership and international cooperation.

• Some countries are already moving ahead launching their roadmaps, including Indonesia. The Central Bank of Sri Lanka is currently aiming to develop a sustainable finance roadmap to guide the local banking and finance industry.

Specific actions can include:

• Consultation with banks, institutional investors and financial regulators at national level

• Identify innovative mechanisms to scale access to green finance

• Increase the demand for sustainable financing products

• Mechanisms to improve the monitoring of sustainable finance implementation

• Green asset portfolio analyses and disclosure to assess risks

• Education frameworks on sustainable finance

• Alignment of national roadmaps with international standards.
The Indonesian *Roadmap for Sustainable Finance* specifies “a detailed work plan on the sustainable finance program for the financial service industry” (OJK 2014: 15). Among the tools that it introduces, some of the main ones are the following:

<table>
<thead>
<tr>
<th>Tool</th>
<th>Timeframe</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regulation on principles and definition of sustainable finance</td>
<td>2015-2016</td>
<td>Development of supervision guidelines on SF implementation and issuance of an umbrella of policies on SF definitions and principles.</td>
</tr>
<tr>
<td>Policies to increase sustainable finance portfolios</td>
<td>2015-2016</td>
<td>Implement regulations to increase financial; service institutions portfolios on sustainable finance</td>
</tr>
<tr>
<td>Prudential incentives</td>
<td>2015-2016</td>
<td>Provision of incentives such as certain level of risk-based balanced asset (ATMR) in consideration of a risk mitigation mechanism</td>
</tr>
<tr>
<td>Fiscal incentives</td>
<td>2016-2018</td>
<td>Provision of incentives such as tax holiday or feed-in-tariff, in collaboration with relevant ministries.</td>
</tr>
<tr>
<td>Non-fiscal incentives</td>
<td>2016-2018</td>
<td>Aims to provide transparency to the wider public and for OJK (Financial Services Authority) supervision.</td>
</tr>
<tr>
<td>Sustainable finance award (SFA)</td>
<td>2016-2024</td>
<td>Granted to FSI that lead the implementation of sustainable finance.</td>
</tr>
<tr>
<td>Green lending models for priority sectors</td>
<td>2015-2019</td>
<td>Provision of green lending models with focus on the national energy security plan.</td>
</tr>
</tbody>
</table>
Tools to Mainstream **Environmental risks** into business operations

**Banking Industry Regulations**

- Voluntary

India Corporate Social Responsibility, Sustainable Development and Non-Financial Reporting—Role of Banks.

Japan Principles for Financial Action towards a Sustainable Society

Mongolia Sustainable Banking Principles

Turkey Sustainability Guidelines for the Banking Sector

- Mandatory

Bangladesh Environmental Risk Management Guidelines for Banks and Financial Institutions

China Green Credit Policy (GCP) and Green Credit Guideline (GCG)

Vietnam Environmental and Social Risk Management Guidelines

Indonesia Sustainable Finance Roadmap
### Examples of Banking Industry Regulations

#### ESG instruments

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
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</thead>
</table>
| Risk management                   | • Environmental and social impacts assessments  
• External ESG reporting  
• Commitments regarding to ESG in the agreements  
• ESG risk rating standards  
• Compliance risk list and review |
| Stakeholder Engagement and        | • International Standard Initiatives  
• Sustainability Reporting  
• Social Responsibility Projects  
• Green Credit Definitions      |
| Communication                     |                                                                          |
| Corporate Governance              | • Corporate Governance Principles  
• Corporate Governance external revision                      |
| Capacity Building                 | • Sustainable banking training packages                                  |
| Monitoring and reporting           | • Reports on sustainability-related activities  
• Performance indicators  
• Annual Results public disclose |
| Banks Internal Activity Impact    | • Structure for internal measuring and reporting  
• Internal audits on Green Credit performance  
• Green credit Strategies disclosure |
Tools to Mainstream Environmental risks into business operations

International voluntary standards

• IFC's Environmental and Social Performance Standards define IFC clients' responsibilities for managing their environmental and social risks.

• The Equator Principles provide a risk management framework that can be adopted by financial institutions for determining, assessing and managing environmental and social risk in projects. They have been adopted by 89 financial institutions in 37 countries, including China and Japan.

• UNEP FI's Principles for Sustainable Insurance were developed to support sustainable finance in the context of insurance industry.

• The Sustainable Stock Exchanges Initiative explore how to improve investment transparency and performance on ESG through dialogue with investors, companies and regulators and corporate disclosure.

• The UN Principles for Responsible Investment (PRI) aim to incorporate sustainability concerns into the investment planning of investors.
## International Initiatives

### Environmental tools

<table>
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<tr>
<th>Best practices</th>
<th>Engagement and communication</th>
<th>Capacity building</th>
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<tr>
<td>Policy and governance frameworks</td>
<td>Best practice guidance</td>
<td>Practical toolkits</td>
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<td>Implementation guidelines</td>
<td>Convening signatories</td>
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<td>Monitoring and reporting systems</td>
<td>Annual reporting</td>
<td>Developing signatory statements</td>
</tr>
<tr>
<td>Secretariat functions</td>
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</tbody>
</table>
Case Study: Greening the banking system in China

The China Bank Regulatory Commission
• Is responsible for the supervision and administration of banks’ green credit operations, and E&S risk management
• Instruction bank of 2004 to cease lending project out of compliance with relevant law
• Demands banks to assess environmental risks in loan investment choices, since 2007
• GCG (2012)
• Green Credit Monitoring & Evaluation mechanism

The Government
• Developed Green Credit Policy (2007), Green Credit Guidelines (2012), credit black list, and National Climate Change Program.
• Upgraded the State Environment Protection Agency into a full cabinet ministry: Ministry of Environmental Protection
• Green securities and green insurances policies in 2008
• Banks Environmental and Social Policies: China Development Bank and Exim Bank
• Green Finance Comitee

Voluntary based initiatives
• China Industrial Bank and Bank of Jiangsu joined the Equatorial Principles
• Green Banking Innovation Award granted by Chinese NGOs.
• 7 Banks have joined the UNEP Finance Initiative with the aim to promote sustainable finance
Voluntary Information disclosure tools

Benefits of disclosure

- Information exchange between policy makers and markets
- Harmonization of the existent information and definitions → Eased data comparison
- Greater knowledge on business exposure to risk → Better informed decisions → more appropriate value of assets according to its resilience

Tools:

Environmental and social Indexes and benchmarks

Investors are willing to pay a premium for companies that perform better on sustainability because they are less risky to the environment, communities and the Investor. Indexes can create incentives for green investments where the market driver is not sufficient.

Indonesia's Kehati Index, a sustainability index is an example of a sustainability index that has consistently outperformed the market, pointing to a premium associated with sustainable businesses.

In 2010 the Hang Seng Index in Hong Kong launched a Corporate Sustainability Benchmark Index.

The Shanghai Stock Exchange launched a social responsibility Index in 2009
Voluntary Information disclosure tools

Voluntary reporting and disclosures initiatives

They can drive private section action towards environmental and climate sustainable strategies and policies. Certain initiatives have already enacted a solid basis for this:

• Global Reporting Initiative (GRI) international standard for sustainability reporting

The Global Reporting Initiative (GRI) promotes the use of sustainability reporting as a way for organizations to become more sustainable and contribute to a sustainable global economy. GRI’s mission is to enable all companies and organizations to report their economic, environmental, social and governance performance, GRI produces free Sustainability Reporting Guidelines.

• The Carbon Disclosure Project (CDP)

Collects data on how companies identify and manage climate risks. This information is shared with institutional investors for assessing the climate risk and corporate governance of their investments.

• Principles for Responsible Investing (PRI)

Present ESG disclosure by institutional investors and corporations as one of its core aspects.

• Sustainability accounting Standards Board (SASB) guidance on material issues

Its mission is to develop and disseminate sustainability accounting standards that help public corporations disclose material, decision-useful information to investors.

• International Integrated Reporting Council (IIRC)

Aims to create a globally accepted framework for a process that results in communications by an organization about value creation over time. The IIRC published the first version of its International Integrated Reporting (IR Framework) in December 2013.

• Sustainable Stock Exchanges Initiative (SSE)
Voluntary Information disclosure tools

Voluntary corporate governance provisions for disclosure

• Corporate governance codes

In Malaysia, The Code on Corporate Governance recommendation 1.4 states that “The board should ensure that the company's strategies promote sustainability”. A related comment states that attention should be given to ESG and that “The board should ensure the company discloses these policies and their implementation in the annual report and corporate website.”

Indonesia’s Code of Good Corporate Governance sets out the purpose of “Stimulating the company awareness of social responsibilities.” It also notes that in case of negative impacts “the company shall convey any information to the communities that could be affected by such company's activity.”

• Sustainability guidelines

In 2011 the Singapore Stock Exchange (SGX) issued a policy statement on sustainability and its voluntary Guide to Sustainability Reporting for Listed Companies. It states that companies that operate in high-impact sectors such as agriculture, forestry and paper should “set the tone and undertake sustainability reporting”. In October 2014 SGX announced that sustainability reporting will move into the “comply or explain” regime following a one-year consultation process.

In Philippines, The PSE Corporate Governance Guidelines for Listed Companies encourages companies to implement on an ‘adopt or explain’ basis, where the focus is on the governance aspect of sustainability.

In June 2012 the Stock Exchange of Thailand’s (SET) Corporate Social Responsibility Institute (CSRI) released guidance documents for listed companies and other interested organizations. These documents are one of the most comprehensive set of documents released by a stock exchange in Asia.
Mandatory Information disclosure tools

Corporate mandatory disclosure requirements

• Company acts

In Indonesia, Company Law Rule 40 Limited Liability Companies Law Article 66 states that annual reports should contain a “report on the implementation of Social and Environmental Responsibility”.

In the Philippines the CSR act mandates large tax payers corporations to take responsibility for their operations, and to disclose CSR activities in their annual report.

• Listing rules

Bursa Malaysia listing rule 9.25 requires companies to disclose in their annual reports “A description of the corporate social responsibility activities or practices undertaken by the listed issuer and its subsidiaries or if there are none, a statement to that effect.”

The Securities and Exchange Board of India (SEBI), through a circular dated 13 August 2012, made it mandatory for the top 100 listed companies by market capitalization to report their environmental, social and governance (ESG) initiatives.

In China, the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE) mandated certain listed firms to disclose ESG information starting for financial year end in December 2008.

In 2015 Vietnam issued Circular No. 155/2015/TT-BTC on Public Disclosure for listed companies. This circular demands listed companies to report related impact of the company on the environment and society.
Green Finance
Delivery
Instruments
Green finance delivery Instruments

Capital / debt / equity facilitation
• Seed capital
• Grants
• Concessional and non-concessional debt
• Equity investment
• Debt-for-nature swaps

Risk sharing
• Guarantees
• Insurances
• Catastrophe bonds
• Contingent credit

Capacity Building
• Information tools
• Readiness
• Technical Assistance
Green finance delivery Instruments: Capital / debt / equity facilitation

Seed capital
Governments or MDBs can provide a minimal initial investment in order to spur private investment and capital raising.

E.g.: UNEP’s Seed Capital Assistance Facility addresses investment gaps in early stages, by providing financial support on a cost-sharing and co-financing basis to low-carbon and clean energy projects via private equity, venture capital, and project development companies.

Grants
Grants are typically provided for non-revenue generating activities such as knowledge management programs, capacity building programs, ongoing activities that do not generate financial return, and technical and costing plans.

Generally, the main source of grants for climate change action has been international financial institutions, bilateral institutions, and international climate funds.

Grants are often released in combination with debt capital.

E.g.: Convergence, an institution focused on blended finance that integrates private, public, and philanthropic investors, announced in January 2017 that it will award a USD 7.3$ grant to ADM Capital and ADM Capital Foundation (ADMCF) for the design of a Tropical Landscapes Finance Facility (TLFF) and Tropical Landscapes Bond (TLB) in Indonesia.

In partnership with UNEP, ICRAF, and BNP Paribas, the grant will provide long-term financing for projects that improve access to rural electricity, reduce greenhouse gas emissions, and enhance smallholder farmers’ livelihoods.

The facility will also include loan capital.
Green finance delivery Instruments: Capital / debt / equity facilitation

Concessional and non-concessional lending

Lending instruments provide borrowers with capital in exchange of a repayment of that capital along with an interest based on a pre-determined interest rate.

It provides access to finance without relinquishing ownership

Public loans can contribute to attract additional finance from the private sector

- Non-concessional loans are offered near or at market rates. Typically used for infrastructure or revenue generating projects

- Concessional loans are offered on more generous terms than market rates, for example through features like zero or low interest rate, extended repayment schedule, and interest rate modifications during the life of the loan.

Eg.: In 2014, USD6.1 million of concessional loan from the CTF were approved for expansion of the Renewable Energy Accelerator Program in Philippines to address damages caused by the typhoon Haiyan, and to enable a 150 MW total pipeline of solar PV and biomass projects.

CTF loans were priced at low rates and long tenor in order to provide incentives for the sector’s growth, and to catalyze commercial bank debt.
Green finance delivery Instruments: Capital / debt / equity facilitation

**Equity investment**

Equity financing refers to the sale of an ownership interest to raise funds for business purposes. To facilitate the project, public actors can also invest into it.

They include:

- **Venture capital**, by which capital investors provide early stage capital to entrepreneurs and start-up companies, or project developers. They take high risks and expect high returns.

- **Stocks**, which typically gives holders a share of the ownership of a corporation, as well as voting rights. It is a source of long term permanent capital for the corporation. In case of liquidation, the holders will get the remaining assets of the company only after the liabilities of the rest of creditors are satisfied.

Equity funds of pooled investment can be created to increase investment growth through capital dividends in several projects or companies.

For example, *Asia Climate Partners (ACP)* is a private equity fund for clean energy, resource efficiency, and environmental investments in Asia.

- ACP is managed by ADB, Robeco, and ORIX Corporation and supported by UK Government.
- It has a target of $750 million, with $100 million coming from the ADB.
- The fund's objective is to invest in privately held companies that are benefiting from the macroeconomic and environmental dynamics in emerging Asia, have a positive impact on the environment and society, and have the potential to generate a commercially attractive annual return.
Green finance delivery Instruments: Capital / debt / equity facilitation

**Debt-for-nature/climate swaps**

Is a bilateral agreement by which the donor of debts cancel or reduces a developing country debt stock or service in exchange for a commitment in climate action or environmental protection. The savings from the reduced debt must be invested in climate-related projects.

- **Risks:** Governance problems, transaction costs, budget squeeze, risk of inflation, etc.
- **Advantages:** mobilization of resources, financial benefits for the debtor, potential attraction of additional funding, benefits over climate change and poverty.

This type of financing should be very in line with debtor needs in order to ensure that the budget is not removed from priority spending areas.

E.f.: In 2014, the USA provided USD 32 million for a debt for nature swap with Indonesia under the Tropical Forest Conservation Act to fund forest protection measures on Sumatra.

**Challenges:**

I. Since Indonesia had to invest an amount equivalent to the full value of the outstanding principal and interest rates, there might be risks of budget squeeze.

II. The swap’s amount was comparably small, representing only a 0.02% or overall debt.

However, it set an example of good practices in governance, with a local oversight body integrating multiple perspectives: Indonesian Government, USAID, The Nature Conservancy, WWF Indonesia, and NGO Pelangi.
Green finance delivery Instruments: risk mitigation

Guarantees
Guarantees allows borrowers to obtain cover for their obligations towards a lender in case of non-performance or default in exchange of a fee.
They can have a partial or entire coverage of the investment.
Example: India Solar Power Generation Guarantee Facility.
• It’s a guarantee facility of $150 million backed by ADB, which covers partial nonpayment by the borrower. It covers a 50% of the value of the loan amount for solar power generation projects.

Insurances
Insurances are the best examples of private financing for adaptation, but governments can play a role as regulators, providers, or insurers of last resort.
Innovative insurance services can provide protection against possible losses for investors and assets holders.
Climate insurance wont necessary require additional finance, since the insured can generally finance the insurance program
They can facilitate risk reduction and preventive practices by directly rewarding investment in risk reduction by lowering the premium
Climate insurance can enhance adaptive capacity and productivity by securing private investments.
In contrast, insurances can have a high cost, often above the expected loses. Therefore, they will often be unaffordable for the poor.
### Green finance delivery Instruments: risk mitigation

#### Innovative insurance instruments

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weather-indexed insurance</td>
<td>It defines a correlation between crop yields and rainfall or other weather events. Payouts will be generated for insured parties in case of lose-causing weather event. For example, in case of rain shortage during a crucial period for crop growth.</td>
<td>China Life insurance against typhoons</td>
</tr>
<tr>
<td>Meso-level insurance</td>
<td>It protects intermediaries providing goods and services in rural markets from losses which may occur if their clients experience losses from extreme weather events.</td>
<td>Flood Index insurance for the NGO Manab Mukti Sangstha in Bangladesh</td>
</tr>
<tr>
<td>Sovereign insurance program</td>
<td>Private insurers have been reluctant to offer nationwide policies covering high risk hazards. Public-private partnership can be developed to build insurance capital pools guaranteed by the state and funded by mandatory private contributions.</td>
<td>Turkish Catastrophe Insurance Pool (TCIP),</td>
</tr>
<tr>
<td>Indexed Micro-insurance</td>
<td>It aims to lower the cost of the insurance in order to cover low-income markets. To do so, it will reduce its scope to specific risks in exchange of a regular payment.</td>
<td>Mongolia layered insurance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Australia good Shepherd Microfinance</td>
</tr>
</tbody>
</table>
Case study: Mongolia Layered Micro-insurance

**Context**
- Traditional insurance is often not available in sparsely populated areas of Mongolia.
- Livestock are exposed to extreme climatic conditions.
- Extreme climatic events increasingly jeopardize rural livelihoods.
- Agricultural sector represents 22% of Mongolian economy.
- Index based insurance can provide financial security to population in these areas.

**Mongolian Index-Based Livestock Insurance Project (IBLIP)**
- PPP: Individuals herders absorb the first 6% of the losses. Commercial insurance cover the next 24% at actuarial rates. Mongolian Government covers losses above 30%.
- Utilization of and index of livestock mortality rates at local level.
- Pays out whenever the mortality rate exceeds a specific threshold.
- Low administrative cost for insurance companies.

**Benefits**
- Provides incentives for herders to manage and invest in their livelihood activities.
- Secures indemnity payments to insured.
- Reduces covariant risk.
- Avoids transaction costs, moral hazard and adverse selection problems.
- Opens the market for private innovation and reinsurers.
Green finance delivery Instruments: risk mitigation

Other innovative risk mitigation instruments

• Catastrophe Bonds

The risk is absorbed by the financial markets via investors, and not by international insurers. The issuers fund payments for the buyers when specific catastrophe event occurs. Investors receive regular interest payments proportional to the probability of loss of the capital invested and measured in terms of index.

Philippines entered into a credit arrangement with the World Bank with a Catastrophe Deferred Drawdown Option (CAT-DDO). In 2015, Philippines issued a $300M catastrophe bonds for typhoon protection.

Japan is the biggest Cat bond market in the region. In March 2014 Tokio Marine sponsored the $245m Kizuna Re II Ltd. Japan earthquake cat bond. In the same year Sompo Japan and Nipponkoa sponsored a $100m Japan typhoon cat bond. Zenkyoren sponsored the $300m Nakama Re Ltd quake bond in May 2014 as well as a $375m Japan quake cat bond.

In 2015, China issued a $50million catastrophe bond for earthquake risks.

• Contingent Credits

Governments can pay a fee for the option of a guaranteed load at a pre-agreed rate, contingent on a disaster or catastrophic event. This can help to address the credit scarcity in post-disaster situations.

In 2015, Philippines secured a World Bank catastrophe contingent line of loan credit, with the value of $500 million.
Green finance delivery Instruments: Capacity building

Readiness

For climate finance to be effective, the international community must do more than simply increase resource flows toward isolated local interventions. Countries must address key issues required to promote transformations at the national level. In other words, they must become ready.

Climate finance readiness include the capacity of countries to plan for, access, deliver, monitor and report on climate finance, both international and domestic, in ways that are integrated with national development priorities and SDG targets.

UNDP (2012) set four main components for climate finance readiness:

- National capacity to develop finance planning
- Capacities to access different types of finance at the national level
- Finance delivery and implementation capacity
- Capacities to monitor, report and verify on financial expenditures and associated impacts.

To address this, climate finance readiness programs from international actors have emerged in recent years, including:

- ADB project on Legal Readiness for Climate Finance and Climate Investments.
- Readiness and Preparatory Support Initiative under the GCF and the Climate Finance Readiness Program run by GIZ and KfW and commissioned by Germany’s Ministry for Economic Cooperation and Development. It currently operates in countries such as Bangladesh, Cambodia, Tajikistan or Vietnam.

For example, in Vietnam, with support from GIZ, the Ministry of Planning and Investment is working on coordinating and assessing international climate finance, building capacity, and activating actions to support the country to fulfill the direct access option of the GCF.
Green finance delivery Instruments: Capacity building

Information tools

Information databases and research, as well as monitoring, reporting and sharing of information related to climate change and capacity-building activities are key to promote best practices and effective climate interventions.

Currently, the region still faces many gaps in capacity for climate change data collection, dissemination and accessibility.

Available options for dissemination and accessibility include: databases, reports, knowledge platforms, e-learning courses, etc.

Technical Assistance

Technical assistance can promote investment in mitigation and adaptation by directly closing the knowledge gap and indirectly addressing the gaps in policy regulation, risk, and financial viability.

Technical assistance programs and activities can include:

• Support for funding proposal development
• Support for project development
• Policy strategic advice
• Evaluation and lesson sharing regarding data and information
• Guidance for national institutions to unlock additional climate finance
Case study: Institutional strengthening and Capacity building of Indonesia’s NDA to access **GCF readiness funds**

**Objectives**
- Strengthen Indonesia’s National Designated Authority (NDA) for the Green Climate Fund (GCF), the Ministry of Finance’s Fiscal Policy Agency.
- Improve the NDA’s climate finance readiness and allow it to better access and utilize the GCF readiness funds.
- Complement the activities funded by GCF’s readiness funds for the NDA

**Outputs**
- Inception report
- GCF readiness request and readiness proposal
- Interim gap analysis regarding policies, procedures and technical capacity in the Ministry of Finance
- Recommendations for NDS institutional set up
- Training course for NDA core staff
- Recommendations to bring NDA policies and procedures in line with GCF requirements
- Learning paper on NDA strengthening and GCF readiness

**Benefits**
- Provided guidance for NDA institutional set up, interim policies and procedures to enhance NDA best practices
- Provided technical support and assistance to the NDS for accessing the GCF readiness fund
- Built capacity of NDA staff on processes and requirements for accessing and implementing the GCF readiness funds
- Shared communication lessons about climate finance dialogue at national and global levels.
Breakdown of ADB climate change investments approved in 2016 by instrument (of a total of $4.4 billion)

- Equity Investment (0.001%)
- Grant (5%)
- Guarantee (0.002%)
- Loan (95%)
Central Banks: Innovative Tools for **Green** Finance
Policy tools to impact investment

Disclosure Requirements

- Without effective disclosure of climate-related financial risks, the impacts of climate change may not be correctly priced in by financial markets.
- Improved transparency of climate-related risks helps a more appropriate pricing of risks and allocation of capital, and provides the basis for green macro-prudential regulation and climate-related stress testing.

Green Macroprudential Regulation and Climate-related Stress Testing

- Macroprudential instruments to address climate risk include countercyclical capital buffers; higher risk weights for either carbon-intensive and dependent sectors (such as transport, mining and energy) or for particularly carbon-intensive and dependent companies within these sectors; restrictions on exposure concentration to carbon intensive and dependent assets; and climate-related stress tests.
- A climate-related stress test scrutinizes the likely impact of hypothetical climate scenarios on the health of individual financial institutions and the financial system as a whole in order to assess the resilience of individual institutions and the system to adverse shocks.
- Macroprudential supervision ought to take into account externalities that may give rise to financial instability and identify the ecological imbalances that may cause material financial risks.
Policy tools to impact investment

Directed Green Credit Policy Instruments

- They include subsidized loan rates for priority sectors, differential rediscount rates, direct budgetary subsidies, credit floors, credit ceilings and proliferation of specialized financial institutions.

- Out of these, the most commonly used instrument is subsidized loan rates for priority sectors.

- To incentivize commercial banks to lend to priority green sectors at lower loan rates, a central bank can use differential rediscount rates where banks extending credit to green investment can rediscount bills at lower rates.

- “Financial institutions are compensated partially, fully or even overcompensated for lending at subsidized rates of interest to priority borrowers when they rediscount priority loans at the central bank on concessional terms” (Fry 1995).

Green Differentiated Reserve Requirements

- They can be, for instance, linked to the composition of commercial bank portfolios or the geographical location of credit.

- The reserve requirement ratio is the share of deposits that banks and other depository institutions such as savings institutions and credit unions must hold in reserve and not lend out. Reserve requirements have a significant impact on banks' ability to create credit and thereby also an economy's money stock.

- Allowing lower required reserve rates on privileged green assets would be a way of favoring green investments over conventional investments.

- Banque du Liban supports green credits by lowering the reserve requirements of commercial banks by an amount of 100-150% if the bank's customer can provide a certificate of energy savings.
Policy tools to impact investment

Differentiated Capital Requirements

- Capital requirements can be differentiated according to the type of bank and their lending.

- Adjusting capital adequacy ratio minimum requirements (i.e., the ratio of a bank's capital over its risk-weighted credit exposures required by the regulator) or the risk weightings of different assets directly affects banks' ability to create credit.

- For instance, the capital requirements regulation under Basel III foresees a capital reduction factor for loans to small and medium enterprises (SMEs), which means that SMEs typically receive a differentiated treatment for their loans compared to large enterprises.

Green Differentiated Reserve Requirements

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Accepting Carbon Certificates as part of Commercial Banks Legal Reserves

- Carbon certificates can be distributed to low-carbon projects and make them exchangeable for concessional loans. This would reduce the capital costs for low-carbon projects.
Policy tools to impact investment

Green Quantitative Easing and Reserve Management

- Quantitative easing (QE) is an unconventional monetary policy that was first employed by the Bank of Japan in the early 2000s to fight deflation when nominal interest rates already were at the zero lower bound.

- It consists of large-scale asset purchases from banks and other financial institutions via open market operations.

- These asset purchases include mainly government bonds, even though some central banks have also bought corporate bonds and equities.

- While there are conflicting views regarding the efficacy of QE in general, the argument has been made that asset purchases under QE could be directed toward the purchase of green financial assets such as green bonds.

Green Finance Guidelines and Frameworks

- As of January 2017, 37 countries are represented in the Sustainable Banking Network (SBN), a knowledge-sharing network of banking regulators and banking associations established support the development of environmental and social risk management.

- In 2012, the China Banking Regulatory Commission (CBRC) issued Green Credit Guidelines to encourage banking institutions to, by focusing on green credit, actively adjust credit structure, effectively fend off environmental and social risks, better serve the real economy, and boost the transformation of economic growth model.

- In 2014, CBRC complemented the Green Credit Guidelines by introducing a Green Credit Monitoring and Evaluation mechanism and a key Performance Indicators Checklist.

- China’s green credit policies have “evolved from a principle based approach in 2007 to a standardized, metrics-driven performance assessment of all licensed banks.”
Innovative Green Bonds Policy Tools
Innovative Green Bonds Policy Tools

The fundamental actions and proven market boosters are tools commonly used in a transition phase to jump-start general bond market development. The difference here is that they are being applied specifically to facilitate investment in green projects.

Fundamental actions

The most fundamental actions are marketbuilding activities that have low fiscal impacts, and that have proven success in supporting bond markets. They include:

• Establish green project pipeline
• Strengthen local bond markets
• Strategic public GB issuance

Proven Support Tools

They have been used to further support bond market growth, but their use for labelled green bonds will vary depending on the policy priorities and fiscal space in different countries. Including:

• Strategic public GB investment
• Credit enhancement
• Tax incentives
• Instruments to aggregate assets and structure risks
Innovative **Green** Bonds Policy Tools

**Innovative Additions**

There are innovative ideas that can be explored, currently being used by certain leading players. The urgency and severity of the climate challenge means broadening the legitimate and necessary role of central banks and financial regulators may be warranted, as a number of emerging economies have recognized.

When exploring these potential areas for action, the public sector should consider possible unintended consequences of supporting green bonds through these mechanisms. This proposed public sector action plan for the financial system complements climate policies in the real economy for a rapid transition to a low carbon and climate resilient economy. These tools include:

- Adjust risks weightings for green investments
- Preference green investments in central bank operations
Innovative Green Bonds Policy Tools. Case Study: China’s approach

Chinese Policy Support for Green bonds

- In April 2015, a Green Finance Task Force, co-convened by the People’s Bank of China (PBoC) and the UNEP Inquiry into the Design of a Sustainable Financial System, published a range of green bond policy proposals, including the development of official Chinaspecific Green Bond Guidelines.

- Since then, the Green Finance Committee – a separate quasi-government entity – has been tasked with implementation of the recommendations. Official guidelines for green bonds have now been developed and launched in 2015.

- The green bond definitions build on the previous domestic definitions for green credit, set out by the China Banking Regulatory Commission (CBRC) in 2013.

- The government has proposed a wide range of other supportive policies to support rapid growth of a Chinese green bond market, such as tax incentives and preferential risk weightings.

- The official Chinese Green Bond Guidelines also sets out criteria for management of proceeds; the process issuers must comply with to ensure that proceeds are going solely to the green assets they disclose.

- Over time, it is expected that China will explore how to align the domestic guidelines as much as possible with international best practice to avoid fragmenting the market and better attract international investors to green bonds from Chinese issuers.