



GREENING THE FINANCIAL SECTOR THROUGH PROVISION POLICIES: THE ROLE OF CENTRAL BANKS

PART OF THE AFI SERIES: DEFINING THE 4P FRAMEWORK



AFI SPECIAL REPORT



Supported by:



based on a decision of the German Bundestag

CONTENTS

EXECUTIVE SUMMARY	3
CLIMATE CHANGE AWARENESS IN THE FINANCIAL SECTOR	5
PAVING THE WAY FOR INCLUSIVE GREEN FINANCE	7
MONETARY POLICIES: A CATALYST FOR INCLUSIVE GREEN FINANCE	11
REGULATORY POLICIES THAT ENABLE INCLUSIVE GREEN FINANCE TO TAKE FLIGHT	19
INNOVATIVE POLICIES AND TECHNOLOGIES TO ACCELERATE A GREEN TRANSITION	23
KEY LESSONS AND TAKEAWAYS TO LEVERAGE IGF PROVISION POLICIES	27
CONCLUSION	30
ACRONYMS	32
AFI MEMBERS QUOTED IN THE REPORT	33
BIBLIOGRAPHY	33

ACKNOWLEDGMENTS

This special report is a product of the AFI Inclusive Green Finance Working Group (IGFWG).

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AFI sincerely thanks IGF Subgroup Leader Veronica Bayangos (Bangko Sentral ng Pilipinas) and the IGF Provision Subgroup members: Tempa Gyeltshen (Royal Monetary Authority of Bhutan), Joe-Jack Bossale (Banque Centrale du Congo), Apenisa Tuicakau and Latu Sera (Reserve Bank of Fiji), Mariama Sylla (Banque Central de la République de Guinée), Amr Ahmad and Aya Maraqa (Central Bank of Jordan), Mungunsaran Adiyabat (Financial Regulatory Commission of Mongolia), António Wade and Sandra Bila (Banco de Moçambique), Marwan Ibaisi (Palestine Monetary Authority), Yacine Niang (BCEAO), Chatura Ariyadasa (Central Bank of Sri Lanka), Saikou Touray (Central Bank of The Gambia) and Hannington Wasswa (Bank of Uganda).

The report was developed through consultations with representatives of AFI member institutions, whom AFI sincerely thanks for their invaluable contribution, particularly Mohsen Akbari (Da Afghanistan Bank), Md Iqbal Hossain (Bangladesh Bank), Latu Sera Kaukilakeba and Apenisa Tuicakau (Reserve Bank of Fiji), Walid Ali and Shereen Dahab (Central Bank of Egypt), Teresa Nainde Evaristo Pascoal, Jurandi António Paulino Panzo and Margareth Lopes Leite Velho da Silva (Banco Nacional de Angola) and Mungunsaran Adiyabat and Dolgorjav Munkhbayar (Financial Regulatory Commission of Mongolia).

The Inclusive Green Finance work stream is part of the International Climate Initiative (IKI), supported by the German Federal Ministry of the Environment, Nature Conservation and Nuclear Safety (BMU), based on a decision by the German Bundestag.

EXECUTIVE SUMMARY

As climate change becomes more serious, the impacts on natural, economic and social environments are becoming more real. For future generations, the extent of this damage and the capacity of the world's people to survive and prosper will depend on choices that are made today.

From a financial perspective, climate change has weakened established models, changed the course of financial trends and created more uncertainty. This has, in turn, cultivated market, credit and operational risks. "Climate change affects the financial system through two main channels. The first involves physical risks, arising from damage to property, infrastructure, and land. The second, transition risk, results from changes in climate policy, technology, and consumer and market sentiment during the adjustment to a lower-carbon economy" (Grippa et al. 2019). When physical or transition risks become a reality, financial markets can deteriorate rapidly and put financial stability at stake.

In developing countries, where most of the world's unbanked population live, the impacts of climate risks tend to be worse. While transition risks call into question long-term, complex and interconnected national strategies, the physical risks of climate change have a direct impact on the lives of people in fragile situations by destroying assets and infrastructure with strategic value, threatening economic stability and, sometimes, personal security. As representatives of emerging and developing economies, AFI members have pioneered some of the most innovative policy approaches to climate change.

The overall objective of **provision policies** is to help mobilize financial resources to build resilience, particularly for women, to ease climate-related post-disaster recovery, support the development of green projects and move the sector toward a less carbon-intensive economy that is more stable, secure and inclusive. This special report examines how central banks and other financial regulatory institutions are involved in efforts to green the financial system through provision policies. Highlighting real-world experience and know-how in the AFI network, it provides a comprehensive review of approaches AFI members have taken to roll out a sustainable green finance agenda.



“

We shall catalyse and support socially responsible and environmentally sustainable development initiatives...including fuller financial inclusion of underserved productive sectors and bringing in needed new dimensions in financial markets and institutions; to facilitate broad-based growth in output, employment and income, for rapid poverty eradication and inclusive economic and social progress.”

Bangladesh Bank, Strategic Plan 2020-2024

“

The principal objectives of the Bank shall be to promote monetary stability and financial stability conducive to the sustainable growth of the Malaysian economy.”

Central Bank Negara Malaysia's mandate

“

The prime objective of the monetary policy is to ensure price stability. Without prejudice to this objective, the Central Bank shall lend its support to the economic policies of the West African Economic and Monetary Union (WAEMU), with a view to achieving sound and sustainable growth.”

Article 8 of the statutes of the Banque Centrale des Etats de l'Afrique de l'Ouest (BCEAO)

The report is organized as a practical handbook with policy examples and opportunities grouped into the three main pillars of financial regulation: (i) money creation, (ii) sector regulation and (iii) payment system supervision. The first pillar covers the catalytic role of central banks in the provision of credit and, therefore, money creation. The second pillar covers the role of central banks as enablers, setting rules to support the sound development of the financial system. Finally, the third pillar addresses the transformative role of financial regulatory institutions as they engage with new technologies, expand their perspectives on innovative business models and collaborate with a wider range of actors. All inclusive green provision policies in place today can be connected to one of these functions, and some AFI members have already designed national strategies that combine several policies and innovative tools.

MONETARY POLICY

By enforcing aligned monetary policies, central banks can play a catalytic role in channelling funds to achieve inclusive and green finance objectives. For example, to build resilience to climate-related events, the Reserve Bank of Fiji has implemented multiple **refinancing facilities** to ease post-disaster rehabilitation while also incorporating climate change mitigation in their development strategies. Meanwhile, the Central Bank of Pakistan and Bangladesh Bank have responded with refinancing mechanisms that target the renewable energy sector and eco-friendly equipment. In Africa, Banco Nacional de Angola has engaged with the private sector to develop a refinancing mechanism for sustainable agriculture and other sectors of the productive economy.

With **lending targets** for green projects, Bangladesh Bank has issued a complete set of tools that includes reporting and rating requirements. Other central banks, like Nepal Rastra Bank, have issued similar lending targets based on their specific sustainable development challenges. Other monetary policies can serve climate resilience and mitigation, too. **Adjustments to base rates and collateral lists** have been used by Bangladesh Bank and Reserve Bank of Vanuatu to enhance financial stability and rehabilitation capacity after a disaster.

Finally, **lowering reserve requirements** can help motivate lending for climate change adaptation, and the Philippines and Vanuatu have experience in emergency disaster response that will be shared later in this report. Key lessons are drawn from combining refinancing schemes with lending targets and other incentives, such as reporting requirements.

REGULATORY POLICIES

By enforcing dedicated gender-sensitive regulatory policies, central bankers, regulators and policymakers can play a critical role in accelerating the greening of an economy and building resilience to climate change. To help the population cope with unexpected climatic shocks, some regulatory adjustments have been triggered. Examples include the **relaxation of credit default classifications** (Banco Central del Paraguay) and **automatic rescheduling of retail loans** in the event of disaster (Superintendencia de Banca, Seguros y AFP del Peru).

As greening economies becomes a global concern, the need for a clear and common language for green activities has led several AFI members to develop a **green finance taxonomy**. Different paths have been explored, but Bangladesh Bank has interesting lessons to share from embracing a responsive, bottom-up approach to what has become an evolving list of eligible green activities.

INNOVATION AND TECHNOLOGY

Confronted with climate change, financial authorities can consider innovative tools, such as **green quantitative easing programs** or **green-adjusted capital requirements**. Practitioners recognize that inclusive green finance is only possible by combining multiple policies, both constraining and incentivizing, within the broader framework of a coordinated national strategy to green local economies.

In recent years, technology has shaped digital financial services (DFS) and created innovative solutions to eventually connect sustainable financial inclusion to green activities. Financial regulatory authorities must adapt and engage with new stakeholders to stay current and deliver sound **payment system supervision**. Regulators have a **transformative role to play in sustainable finance** by providing gender-sensitive regulatory frameworks, which today are tested in secure environments like a **regulatory sandbox**. Experience has shown that active discussions with new partners on innovation and behavioural change are an opportunity for financial regulatory institutions to develop both supply and demand for inclusive green DFS.

As inclusive green finance (IGF) develops, a culture of accountability and impact-oriented collaboration must continue between private and public stakeholders. Models and technology will also need to evolve for regulators to guide gender-sensitive monitoring and oversee the implementation and outcomes of IGF policies.

CLIMATE CHANGE AWARENESS IN THE FINANCIAL SECTOR

RECOGNIZING THE SYSTEMIC RISK OF CLIMATE CHANGE IN THE FINANCIAL SECTOR

The primary objective of central banks is to ensure a sound financial system and price stability. The vast majority also support national development policies as part of their mandate. Climate issues have only recently been added to their concerns. Several factors have contributed to this shift, namely, regular lobbying by countries that have already been directly impacted by climate change, the 2008 financial crisis that prompted central bank policymakers to resort to unconventional tools and the recent rise of green bond markets.

Global recognition of climate change as a systemic risk threatening financial stability is examined in the recent Bank for International Settlements (BIS) report, “The Green Swan: Central Banking and Financial Stability in the Age of Climate Change” (Bolton et al. 2020).

The report highlights the responsibility of central banks and financial regulatory authorities to coordinate measures to fight climate change, including the search for appropriate policy mixes and the development of new financial mechanisms at local and international levels to support the global transition to more resilient and green economies.

To reach the level of investment needed to achieve global climate resilience and mitigation by 2030, “we need all financial players – public, private, domestic, international – and including markets and regulators, to work together effectively to mobilize at least \$1.5 trillion in climate finance that is needed every year,” said Eric Usher, Head of the United Nations Environment Programme Finance Initiative (UNEP FI).¹ This mobilization goes far beyond the rise of impact investment funds. Instead, it requires a complete shift in the financial system.

16% The Paris Agreement calls for balancing climate financing for adaptation and mitigation, insisting on the need to allocate more funds to climate adaptation policies, which currently account for only 16 percent of total climate finance investments (OECD 2015).

¹ COP23 Finance for Climate Day High-level Event, 13 November 2017: See: <https://www.un.org/sustainabledevelopment/blog/2017/11/financing-low-carbon-climate-resilient-future-takes-center-stage-un-climate-conference/>



Portable solar panel used for charging a mobile phone in a remote area of Cholistan Desert, Pakistan. (Photo by farhan riaz/Shutterstock)

This report presents a mix of provision policies and other types of policies that have been modified to respond to both the imminent adaptation needs and emerging mitigation opportunities of local economies.

INCLUSIVE GREEN FINANCE AT THE CROSSROADS OF INCLUSION AND CLIMATE CHANGE

Climate change tends to affect vulnerable groups disproportionately, such as women, the elderly, persons with disabilities, and children and youth, especially those from low-income populations. People living in rural areas or in low-lying coastal zones are the first to experience climate disasters like floods, droughts and storms.

Youth are critical to driving economic growth, but environmental degradation and the impacts of climate change on young people's livelihoods, economic opportunities and other aspects of their development can exacerbate existing inequalities.

Youth are critical to driving economic growth, but environmental degradation and the impacts of climate change on young people's livelihoods, economic opportunities and other aspects of their development can exacerbate existing inequalities. The majority of the world's youth live in rural areas in Sub-Saharan Africa and in South Central and Southeast Asia (UNDP 2013) where climate change threatens crop and livestock production, forestry, fisheries and aquaculture, and perpetuates food insecurity for smallholder farmers, vulnerable communities and rural residents. By implementing policies and regulations that focus on youth as a vulnerable group, or by investing in and supporting youth-driven initiatives and projects, the global community can help ensure the next generation is in a better position to engage in sustainable agriculture and be more resilient to change (FAO 2019).

Vulnerable countries can mitigate the negative effects of climate change more quickly through greater financial inclusion. There is ample research showing that financial inclusion is effective at building individual and collective resilience to climate change, especially among women. Recent history has demonstrated that integrating inclusivity and social considerations in the design of new climate policies can help larger and more diversified economies avoid the negative impacts on low-income groups that can spur social unrest.

Several members of the AFI network are at the forefront of implementing policies that build resilience and mitigate the sweeping environmental, health,

social and economic effects of climate change. This combination of financial inclusion and climate change in a common policy framework is a new and evolving area known as inclusive green finance (IGF) (AFI 2020).

By linking green policies with financial inclusion policies, regulators have a powerful way to steer economic development toward a more resilient and environmentally friendly path. More and more countries are working to accelerate this transition with a coordinated National Financial Inclusion Strategy (NFIS) that makes some IGF policies mandatory.²

8

Eight AFI member institutions have already explicitly or implicitly linked climate change and financial inclusion in their financial sector strategies.

Their experience, among others, gives AFI the opportunity to build a reference catalogue of new and emerging practices.

² The AFI Financial Inclusion Strategy Peer Learning Group (FISPLG), in coordination with the IGFWG, is developing a Guideline Note, "Integrating IGF Policies in National Financial Inclusion Strategies".

PAVING THE WAY FOR INCLUSIVE GREEN FINANCE

STEERING IGF POLICY WITH THE 4P FRAMEWORK

The IGF policies implemented by AFI members can be divided into four categories known as the 4Ps: Promotion, Prevention, Provision and Protection (AFI 2020). Central banks and financial regulatory institutions can tap into the IGF 4P framework to support their social and climate agendas.

The 4Ps are interrelated. In the engagement phase, promotion policies prepare the private sector to offer financial services for green projects or climate action activities to qualified beneficiaries, for example, through awareness raising, information sharing, capacity building and data collection. They foster ownership among stakeholders and set the conversation for sustainable finance strategies and roadmaps.

Prevention policies aim to avoid undesirable outcomes by lowering financial, social and environmental risks, and help to establish standards in the financial sector through the issuance of new risk assessment guidelines. Meanwhile, protection policies reduce financial risk by “socializing” potential losses through insurance, credit guarantees, social payments or other related risk-sharing mechanisms.

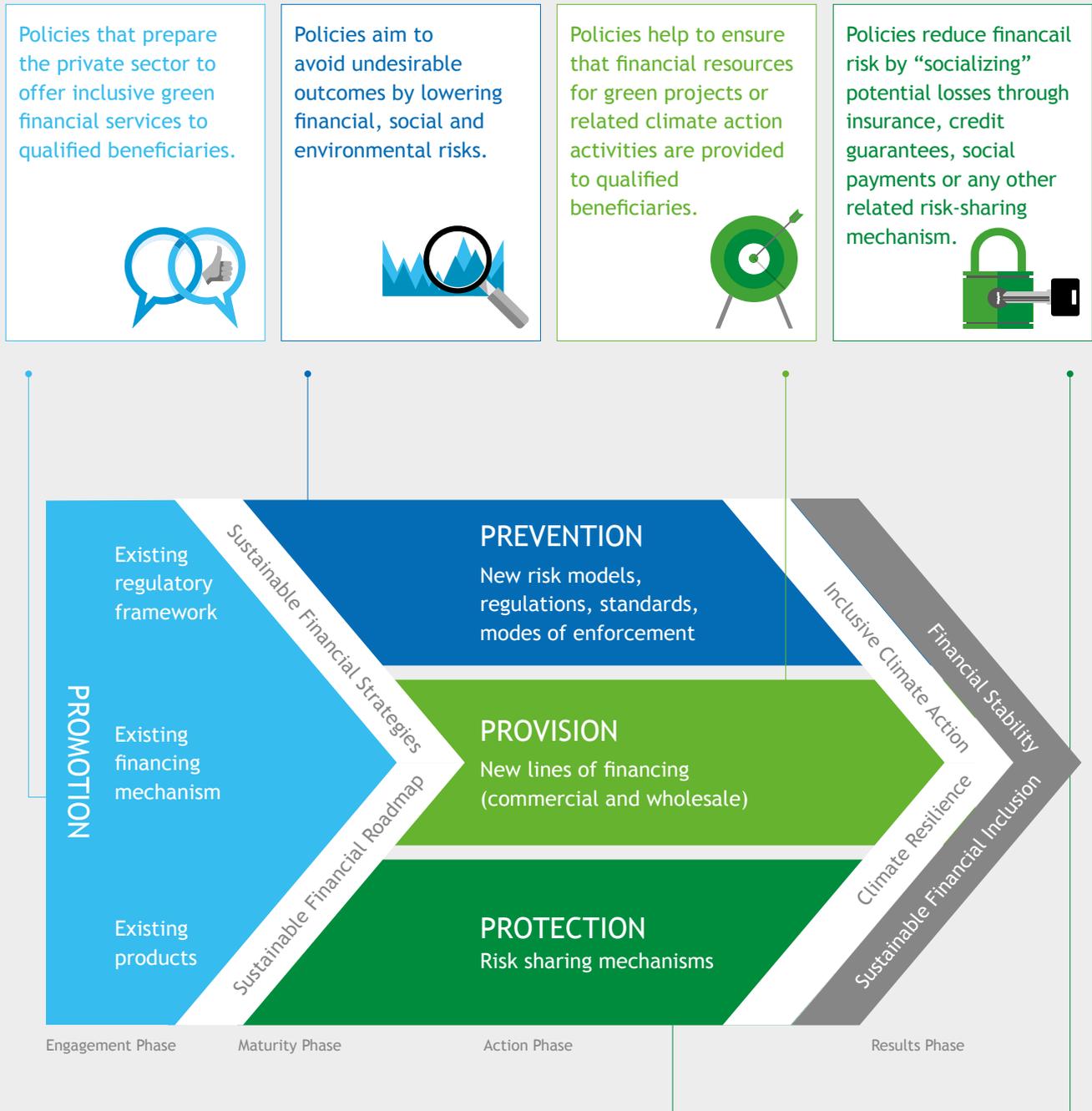
Provision policies, which are the focus of this report, ensure that financial resources are allocated effectively to inclusive green projects (too often known as “deprived sectors”) through adequate monetary and regulatory measures and supported by relevant payment systems.

Even though provision policies are the core of the 4P framework, they cannot be implemented successfully without the other three P’s. Moving from promotion to the more mature provision phase is a multi-staged process that does not tend to have standardised steps or procedures. AFI’s work to encourage peer learning about existing IGF policies provides some concrete examples, practical steps and valuable lessons.



Young African girl collecting pure water. (Photo by Riccardo Mayer/Shutterstock)

FIGURE 1. THE AFI IGF 4P FRAMEWORK



ENFORCING EXISTING MECHANISMS TO GREEN FINANCIAL SYSTEMS

Most IGF provision policies appear to be designed by repurposing existing tools. For example, rather than contributing to the supply of credit across all sectors, standard policies can be “greened” by adding specific criteria. This involves adapting existing monetary and regulatory tools to address recent challenges with mainstreaming inequality reduction and the climate change response.

New IGF policies have emerged alongside these tools in response to technological changes. New solutions have appeared on the fringe of traditional banking systems, with the rise of new players like mobile money providers, crowdfunding and other platform-based DFS, and even a self-sustaining and rapidly evolving crypto-assets ecosystem. These new payment system components may be extremely useful in accelerating the outcomes of IGF policies. In addition to technology, innovative policies have emerged from the global financial crisis, and more recently in response to the crisis caused by the COVID-19 pandemic.

Central banks and regulators have several possibilities to develop and support an inclusive and green national agenda, starting with greening their traditional monetary and regulatory roles, ensuring that appropriate resources are directed toward IGF targets, establishing rules to enable efficient responses and sound transitions, and using innovations to accelerate and disseminate expected IGF outcomes. Defining which departments oversee IGF implementation is an internal choice. Some central banks have opted to create a sustainable finance department, especially when “sustainable growth” is mentioned explicitly in their mandate as a primary objective. Others may incorporate these issues as a more cross-cutting objective in their organization (AFI 2021).

THE RISE OF IGF PROVISION POLICIES IN THE AFI NETWORK

To understand the scale and scope of the efforts AFI members have made to green their financial systems, the AFI Management Unit and IGF team conducted a survey among members of the IGF Working Group (IGFWG) in June 2020.³ The objective of the survey was to update current IGF policies and better understand the policies that members are planning to implement. This information could then be used by other members to consider which policies could be adapted and implemented in their own contexts.

13

The IGF survey confirmed that more and more countries are developing IGF policies, with 8 reporting that at least one provision policy supporting inclusive green objectives has been enforced. Another 5 cases emerged from a thorough research.

The green and inclusive monetary provision policies implemented by AFI members use three types of tools: refinancing mechanisms, lending targets and lowering of reserve requirements. Other conventional monetary tools have also been adapted, such as adjustments of base rates or of eligible collateral, and the incorporation of green assets in central bank portfolios.

Three types of provision policies fall under the regulatory role of central banks:

- (i) the relaxation of bank account requirements on a permanent basis or following a disaster,
- (ii) the release of a new taxonomy for green finance and
- (iii) laying the foundation for a local green bond market.

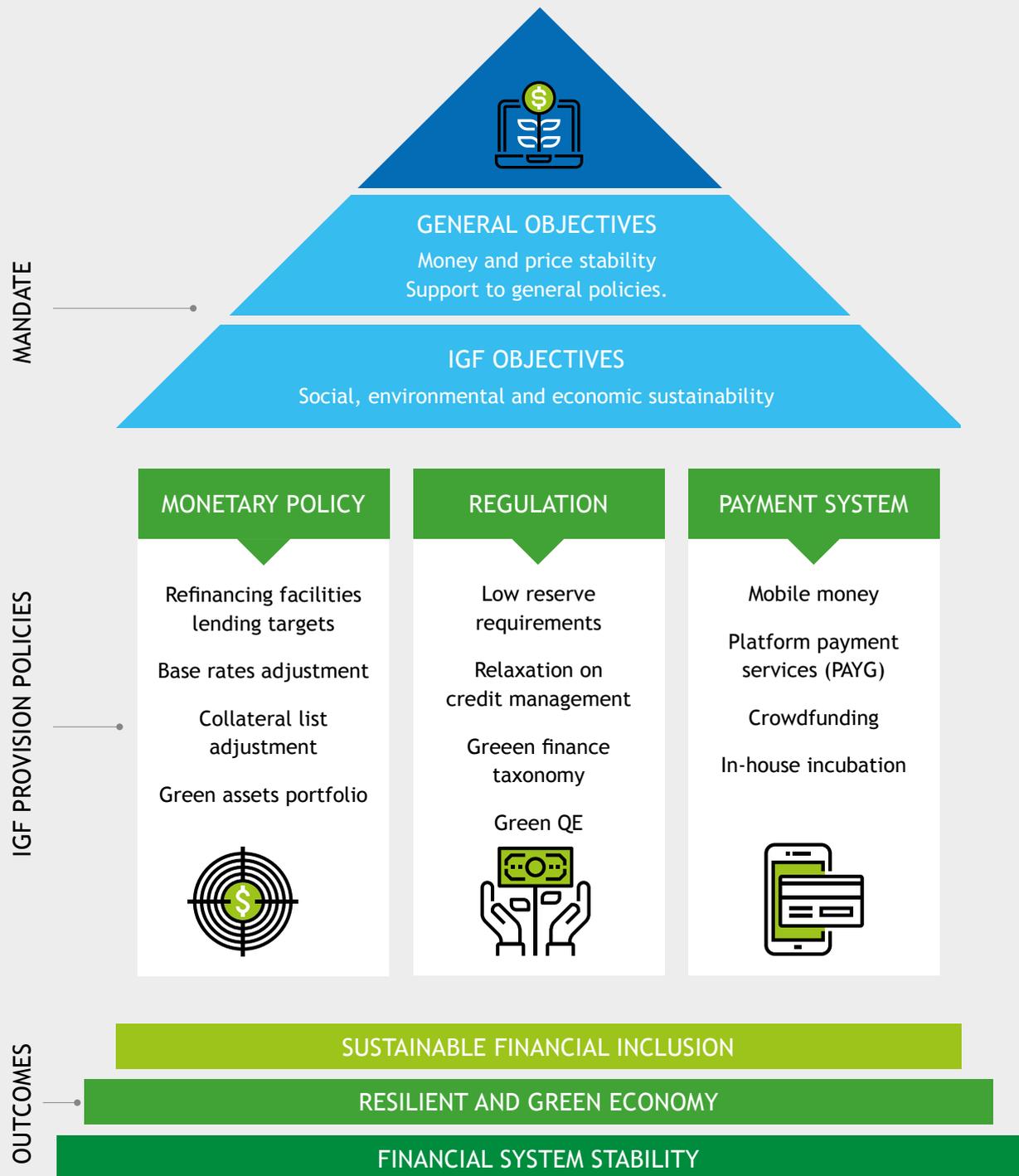
Innovative initiatives like regulatory sandboxes for DFS, crowdfunding platforms and the development of a collaborative ecosystem that supports innovation, can also lead to regulations being adapted.

While some of these provision policies were implemented fairly recently, others came into force more than a decade ago.

³ The objective of the survey was two-fold: (i) to collect updated IGF policies, follow up on the ongoing policy implementation and look at how the AFI Management Unit could support such initiatives; and (ii) to gather information that will be used in developing upcoming knowledge products from the Promotion and Provision Subgroups). This exercise targeted all member institutions of the IGFWG, and the survey was completed by 27 member institutions. All of the following figures are based on the answers of the 27 participating members.

FIGURE 2. GREENING TYPICAL CENTRAL BANK INSTRUMENTS AND FOSTERING INNOVATION

Central banks and regulators have several possibilities to develop and support an inclusive and green national agenda, starting with greening their traditional monetary and regulatory roles, ensuring that appropriate resources are directed toward IGF targets.



Source: AFI, based on interviews with IGFWG members on provision policies.

MONETARY POLICIES: A CATALYST FOR INCLUSIVE GREEN FINANCE

REFINANCING MECHANISMS FOR POST-DISASTER RECOVERY

Refinancing mechanisms offer preferential rates for participating institutions to build up credit portfolios dedicated to inclusive green sectors, as stipulated by an agreement with the central bank.

Refinancing mechanisms are a powerful tool for financial institutions to engage in climate change adaptation and mitigation challenges.

Some AFI members already enforce, or are actively considering, refinancing lines for rehabilitation loans to ensure the financial sector remains stable after an extreme climate event. The mechanism allows financial institutions, including microfinance institutions (MFIs), to offer easily accessible loans at low interest rates to cover damage caused by cyclones, droughts, floods, landslides or other extreme climate events.

These refinancing lines are often released alongside emergency initiatives from the government. One of the synergies observed is that public subsidies to assist affected populations after a catastrophic event can be used as the minimum capital amount to obtain the loan. This is particularly beneficial for women who are less able to access credit and less likely to have the traditional types of collateral required.

To cope with frequent disasters and the heavy economic losses they incur, the Reserve Bank of Fiji introduced the Flood Rehabilitation Facility in 2009. The mechanism was later extended to cover damages from tropical cyclones and, recently, for COVID-19. The Bank's Disaster Rehabilitation and Containment Facility (DRCF)⁴ has been extended from FJD 100 million to FJD 300 million (about USD 147 million⁵) and has been designed to address repeated damage caused by cyclones to individuals and businesses. Commercial banks can access a preferential rate from the central bank (one percent) in exchange for providing loans capped at a maximum five percent interest rate. Limits have been set at a maximum of FJD 0.5 million per business (about USD 245,000) with an initial six-month term. These loans can be rolled over for up to five years.

⁴ See the DRCF Guidelines: <https://www.rbf.gov.fj/Left-Menu/Financial-Market-Operations>.

⁵ Exchange rate as of 17 February 2022. FJD/USD on RBF's website: 0.4913



Fijian woman boarding up her house during a Tropical Cyclone. (Photo by chameleonseye/iStock)

**BOX 1: GREENING THE COVID-19 RESPONSE
THROUGH REFINANCING MECHANISMS**

For several AFI members, having refinancing mechanisms already in place helped significantly in responding quickly to alleviate economic losses from the COVID-19 pandemic.

As part of Bangladesh's COVID-19 economic stimulus package, the Green Transformation Fund (GTF) added in April 2020 a line of EUR 200 million to specifically support the acquisition of green equipment from the European Union to maintain trade flows.⁶ Originally a USD 200 million refinancing facility, the GTF supported the greening of processes and equipment for the country's leather and textile industry, which is dominated by Micro, Medium and Small Enterprises (MSMEs). The addition of the stimulus package more than doubled the GTF and extended coverage to all export-oriented manufacturing companies.

Another example is Reserve Bank of Fiji, which expanded coverage of its Natural Disaster and Rehabilitation Facility in May 2020 to include businesses affected by health epidemics or pandemics such as COVID-19, stipulating that businesses may apply to cover not only financial and economic losses, but also working capital.⁷

Despite COVID-19, several members have accelerated their efforts to green their economies and are showing strong interest in opportunities to integrate green elements in post-COVID-19 responses.

6 15/04/20 FEPD Circular No. 20: Introduction of Euro in Green Transformation Fund (English)

7 <https://www.rbf.gov.fj/press-release-no-11-rbf-maintains-overnight-policy-rate-and-recalibrates-facility-to-assist-businesses-affected-by-covid-19/>

Through the DRCF, borrowers can apply to replace damaged inventory, business vehicles or lost sales; repair or replace damaged plants, equipment and machinery; or restore damaged buildings.

The Reserve Bank of Vanuatu provides another example of a refinancing program that can be reactivated. The Natural Disaster Reconstruction Credit Facility has made a significant contribution to rapid disaster recovery in the country and helped to maintain economic stability (Government of Vanuatu 2015). As highlighted in a high-level panel discussion at the 2019 UN Climate Change Conference (COP25), such climate adaptation policies appear to be particularly relevant for small island developing states (SIDS) (UNFCCC 2019).

Policymakers and regulators should ensure that the most affected groups, such as women, youth and forcibly displaced persons, are at the center of post-disaster recovery planning, including refinancing mechanisms and other interventions to strengthen their capacity to cope with financial shocks.

REFINANCING MECHANISMS FOR GREENER AGRICULTURE

Refinancing mechanisms are not only for recovery. They are also a tool for driving the transition to a greener economy. The enforcement of provision policies to promote autonomous and resilient agriculture is increasingly recognized as an important way to achieve climate mitigation goals.

6.2BN

The importance of greening agriculture has been highlighted in the context of the Green Climate Fund (GCF), one of the largest funds in the world for climate finance with a USD 6.2 billion investment commitment.

The GCF states that low-emission and climate-resilient agriculture has “high potential at a relatively low cost” to limit or reduce greenhouse gas (GHG) emissions in developing countries.⁸

In this challenging context, Banco Nacional de Angola (BNA) has introduced a sustainable finance program for the agriculture, fisheries, mineral resources, textiles/clothing, footwear and tourism sectors. This initiative provides a refinancing mechanism to support the development of a greener economy in combination with two other IGF policies: the adaptation of lending targets and reserve requirements. The BNA offers

preferential refinancing rates to participating banks for credit portfolios with a maximum of 7.5 percent capped loans for eligible projects to replace imports.

Participating banks benefit from a total exemption of the minimum reserve requirement. In addition, the BNA has set a lending target of 2.5 percent of banks’ total loan portfolio that banks must comply with or risk being excluded from the other program incentives. According to the BNA, this program has had a direct impact on investments in modern sustainable farming technologies while also reducing the carbon footprint of food supply chains in the country.

However, both regulators and banks report that refinancing mechanisms for greener agriculture face obstacles. Financial institutions find it difficult to identify and understand the needs of new customer segments, often considered fragile, and do not have the tools or knowledge they need to adapt lending requirements. External factors, such as price fluctuations or international trade prices for commodities, can also influence the macroeconomic environment and the outcomes of these schemes. To mitigate these risks, the BNA’s refinancing mechanism has been embedded in a larger program⁹ to support production, diversification and import substitutions. This program includes upstream capacity building and project evaluation for farmers provided by a national academic institute, and a downstream market stability buffer made possible by a platform operated by another public institution, the Development Bank of Angola (DBA). The DBA is in charge of intermediating the trade of the entire production chain, from eligible farmers to major distribution partners in the country.

In Nigeria, another country with a large oil market, the Central Bank of Nigeria (CBN) launched the Anchor Borrower’s Program,¹⁰ a similar refinancing mechanism with a central bank rate of one percent for refinancing credit portfolio of loans to farmers capped at a maximum interest rate of nine percent.

8 <https://www.greenclimate.fund/results> and <https://www.greenclimate.fund/project/fp048>

9 <https://prodesi.ao/sobre>

10 CBN Anchor Borrower’s Program guidelines are available at: <https://www.cbn.gov.ng/>

The program includes additional requirements for participating banks. The most interesting is the creation of a project management team at each participating bank responsible for ensuring appropriate coordination between all stakeholders. Each project management team oversees the elaboration of a tripartite agreement that defines in advance the crops to be delivered by farmers, the off-take prices to be guaranteed by retailers and the lending conditions of the bank. These agreements are then reviewed and accredited by the CBN. The success of the program has attracted over 218,000 farmers who produce nine commodities across 30 states.

REFINANCING MECHANISMS TO GREEN THE ECONOMY

Some central banks have opted to issue dedicated refinancing mechanisms for climate change mitigation and the transition to a green economy. Such policies aim to support the financing of renewable energy production systems, equipment to produce recyclable materials or energy-efficient machinery.

Bangladesh Bank's (BB) refinancing mechanism for Environment Friendly Products and Initiatives¹¹ is an excellent example of a program dedicated to supporting the greening of the economy. Bangladesh is one of the world's most vulnerable countries to climate change. Two of its regions are particularly affected by flooding and the erosion of the country's largest river,¹² and cyclones and tsunamis are regular threats. Therefore, BB has engaged with "key areas of environmental degradation covering air pollution, water pollution and scarcity, encroachment of rivers, improper disposal of industrial, medical and household waste, deforestation, loss of open space and loss of biodiversity".¹³

When this refinancing program was launched in 2009 (at the same time BB launched its first five-year strategic plan for 2010-2014), the banking system was identified as having "a unique position in an economic system that can affect production, business and other economic activities through their financing activities and thus may contribute to pollute environment" and "should play important roles as one of the key stakeholders in line with global development and response to the environmental degradation."¹⁴ It was one of the first initiatives taken by BB to expand financing for green products, and is now one of three green refinancing programs currently available.¹⁵

Under this refinancing mechanism, financial institutions benefit from a preferential refinancing rate of three to five percent conditional on lending to finance-eligible

projects at no more than six percent interest. Initially the list of eligible green projects had just six main categories, but gradually evolved to eight categories in 2020 with 55 green products, projects or initiatives.¹⁶ The Bangladesh taxonomy includes:

- > Renewable energy;
- > Energy and resource efficiency;
- > Alternative energy;
- > Solid waste management;
- > Recycling and manufacturing of recyclable goods;
- > Environmentally friendly brick production;
- > Green environmentally friendly establishments; and
- > Miscellaneous.

Every applicant must submit a form to BB detailing the project type, list of beneficiaries and amounts and interest of credits. BB can inspect the use of refinanced loan at its own discretion or at any time as necessary. If funds are misused, financial institutions might be compelled to repay the refinanced amount along with an interest penalty (bank rate + five percent). These conditions are included in the terms of the Partnership Agreement between BB and financial institutions.¹⁷

From the beginning, the program included projects aimed at low-income populations, such as solar home systems and small-scale solar irrigation pumping systems. As the range of eligible products expanded over time, this list became a reference for determining what is officially classified as "green", and is therefore considered the local green finance taxonomy (see Box 3).

Pakistan is also taking steps to transform the economy, which faces a dual challenge of climate change and energy shortages. The effects of climate change have been observed as devastating floods, droughts, heatwaves and changing weather patterns that threaten the lives of the country's most vulnerable populations.

11 <https://www.bb.org.bd/mediaroom/circulars/gbcrd/apr302020sfd02.pdf>

12 The Padma River

13 BRPD Circular No. 02. Available at: <https://www.bb.org.bd/mediaroom/circulars/brpd/feb272011brpd02e.pdf>

14 Ibid.

15 The two other programs are the refinancing scheme for Islamic Banks and Financial Institutions in 2014 and the Green Transformation Fund initiated in 2016.

16 <https://www.bb.org.bd/mediaroom/circulars/gbcrd/apr302020sfd02.pdf>

17 Article VII of the participation agreement between Bangladesh Bank and financial institutions.

The energy crisis in Pakistan is a major barrier to economic growth and improving the well-being of lower income groups. This situation called for policies that target both industries and end users.

The State Bank of Pakistan (SBP) has addressed the national energy challenge with a dedicated financing mechanism for renewable energy.¹⁸ The SBP's Infrastructure, Housing and SME Finance department released its refinancing mechanism for renewable energy in June 2016. It was updated in July 2019 to incorporate a new Category III for facilitating financing to vendors and suppliers to install wind and solar systems up to one megawatt.¹⁹ The mechanism was designed explicitly to support the government's objective to increase renewable power generation from five percent (2020) to 25 percent by 2025 and 30 percent by 2030. To benefit from this program, financial institutions must apply and be approved for a lending limit from the SBP for each fiscal year. The application must include project details, such as the size of the project in megawatts, the type of technology to be used, the expected disbursement and requested limits, as well as the split of shares of the total loan if there are several borrowers. The preferential refinancing rates are either two percent or three percent based on the size of the project. Banks must respect a maximum loan rate of six percent. Given that the risk of default is high, the SBP has found it more efficient to back the disbursement directly for manufacturers, suppliers and

contractors in line with contracts and construction milestones, rather than lending directly to the project owners.

BRIDGING GAPS IN INCLUSIVE GREEN FINANCING WITH LENDING TARGETS

Lending targets are a minimum percentage of total lending that commercial banks are required to meet. Once set, there is usually a transition period before they are fully enforced. Sometimes called "credit guidance policies",²⁰ lending targets or quotas can have a positive influence on the allocation of credit to qualified beneficiaries. Banks must meet compliance objectives for loans to targeted sectors, which are usually a percentage of their total loan portfolio.

These kinds of policies, which played a significant role in the rapid economic growth of OECD countries (Bezemer 2013), began attracting more and more attention in the wake of the 2008 global financial crisis. Nine AFI members now enforce lending targets to support specific sectors, including Bangladesh Bank.

18 <http://www.sbp.org.pk/smeffd/circulars/2019/C10.htm>

19 "SBP doubles financing limit for renewable energy projects": <https://www.thenews.com.pk/>

20 https://www.boj.or.jp/en/research/wps_rev/rev_2010/data/rev10e04.pdf



Brick field workers, rebuilding. Bangladesh. (Photo by Fabeha Monir/iStock)

Reserve Bank of Fiji set up a lending targets scheme in 2012: the Agriculture and Renewable Energy Loans Ratio. According to the scheme, loans to renewable energy sectors must represent at least two percent of total deposits, and loans to the agriculture sector, including fisheries and forestry, must account for four percent.

The policy was released in accordance with the government's medium-term fiscal strategy, which channelled resources to priority sectors to support growth and investment. However, identifying viable projects to be financed in these sectors is still an issue (RBF 2012). A similar lending target program for renewable energy was issued by Nepal Rastra Bank to take advantage of the country's potential for hydropower, with 10 percent of total bank loans to be dedicated to renewable energy projects.

In 2018, Royal Monetary Authority of Bhutan (RMA) released a lending targets scheme to support agriculture, cottage and small industries. Each must represent at least one percent of the total loan portfolio of all banks. These measures are part of a priority sector lending program for which guidelines were first published in December 2016. Policies such as these can be particularly beneficial for women, especially those in cottage industries.

Bangladesh Bank also defined lending targets in 2014 to support its refinancing line for Environment Friendly Products and Initiatives (see Box 2).

LOWERING OF RESERVE REQUIREMENTS

In addition to channelling funding through monetary policies, central banks and regulators can leverage IGF-oriented regulatory provision policies. Such policies fall under the purview of the regulatory authority for the financial sector, which can adapt regulation to encourage financial stakeholders to offer "greener" loans. Lowering of reserve requirements is related to the mandate of central banks to ensure the soundness of the financial system through capital and reserve requirements (capital, reserve and liquidity ratios).

6

Six AFI members have used the temporary lowering of reserve requirements to address liquidity shortages, usually to support recovery after an extreme climate event.

Reserve Bank of Vanuatu (RBV)²¹ has used this policy to support economic recovery after tropical cyclones, lowering reserve requirements from seven to five

percent for the recovery period. Bangko Sentral ng Pilipinas (BSP) has reported using a similar policy in post-disaster situations.

Others use it in less urgent contexts to address converging inclusion concerns and green targets within the framework of their NFIS. Central Bank of Sri Lanka (CBSL) is currently exploring the possibility of setting lower minimum reserve requirements for banks that achieve green targets.

OTHER MONETARY PROVISION POLICIES FOR INCLUSIVE GREEN FINANCE

AFI members have implemented other green-oriented monetary policy, including the adjustment of base rates, collateral lists and the incorporation of green assets in central bank portfolio management. The survey showed that four AFI members have adjusted their collateral requirement policy to improve access to finance for vulnerable populations in response to climate disasters or their effects.

The impacts of climate change have already jeopardised the economic stability of several countries. In response, central banks and regulators have begun to consider taking specific measures to support climate adaptation, even if their mandate does not explicitly reference sustainability. Tuning the base rate is a typical measure that has been used to compensate for economic losses after disasters. For example, after Category 5 Cyclone Pam in 2015, one of the worst natural disasters in Vanuatu's history, the RBV reduced the interest rate from 5.5 to 2.9 percent, fixing the base rate at one percent above its 91-day rate.²²

During the COVID-19 pandemic, Bangladesh Bank used this mechanism to adjust its rates in line with the

21 https://www.rbv.gov.vu/images/Press_Releases/2015/Press_Statement_Reserve_Bank_of_Vanuatu_Policy_Initiatives_Following_Cycpdf.pdf

22 100 basis point



BOX 2. COMBINING POLICIES FOR GREATER EFFICIENCY

Standalone provision policies can take a long time to have an impact, if any. Combining policies, however, allows financial regulatory institutions to have visible, short-term impacts while advancing the long-term transformation of the banking sector. Bangladesh Bank is one example of a central bank that has progressively combined multiple provision policies.

In 2009, BB proposed a refinancing line for Environment Friendly Products and Initiatives.²³ By 2011, its Green Banking and Corporate Social Responsibility Department, later renamed the Sustainable Finance Department, released corporate social responsibility (CSR) guidelines that stated the direct budgetary CSR expenditure allocations of banks should be used in areas such as emergency disaster relief, and to promote the adoption of environmentally sustainable output practices and lifestyles. The total amount of lending to green finance was included under the reporting requirements for CSR expenditure in the category “Priority Sector”.

In 2012, a uniform reporting format for green activities was released for banks to use. It was an important milestone because it allowed BB’s Sustainable Finance Department to collect valuable data. This data was used to establish green

targets that better reflected the maturity of the banking system and national sustainable objectives.

In 2014, BB began to consider how the financial sector could offer more green finance opportunities. It set a minimum lending target of five percent of banks’ total loan portfolios, which all banks in Bangladesh have been asked to meet since January 2016.

BB has also included green targets as part of the CAMELS prudential rating system for financial institutions, which provides an incentive for them to comply. In fact, the CAMELS rating has affected the banks’ relations with regulators and can limit their ability to open new branches or offer new services.

The lending targets scheme issued five years after the first refinancing mechanism for Environment Friendly Products and Initiatives has been a major contributor to the success of the entire program, including free investment in green activities. The articulation and consistency of BB’s policy mix have improved over time, notably through the bank’s general publication policy. In its recent quarterly review report on green banking, the Sustainable Finance Department published a ranking of green financial leaders based on the share of green loans in their portfolio.

23 <https://www.bb.org.bd/mediaroom/circulars/circulars.php>

degree of priority by economic sector, to four percent for its post-COVID-19 facilities program, which can be lowered to three percent for refinancing lending in rural areas and even to one percent for lending to the agriculture sector.

Expansion of collateral requirements is another measure AFI members have adapted to compensate for economic losses after disasters. As part of its climate change resilience program, RBV has expanded the collateral list under the Secured Advance Facility.²⁴ By diversifying the list of eligible assets under their standing facilities, RBV not only facilitated access to liquidity for the banking system, but also increased the visibility of new investments. Allowing for expanded and alternative forms of collateral can particularly benefit women who are often structurally excluded from owning traditional forms of capital.

This type of green-oriented provision policy was used by the European Central Bank during the COVID-19 crisis to maintain lending capacities to corporates and households, and for banks to “support innovation in the area of sustainable finance”.²⁵ As of September 2020, the European System of Central Banks is accepting as collateral loans to MSMEs that benefited from government guarantee schemes without any minimum threshold, as well as bonds with coupons linked to sustainability performance targets. This is paving the way for commercial banks to increase lending to inclusive and green market segments.

Another conventional provision policy is to incorporate the green assets of banks and related pension fund portfolios, most often to support the issuance of sovereign green bonds.²⁶ The allocation must be limited since central banks can support the green bond issuance, but should not be the leading investor.

Mobile payment systems appear to be very helpful in disseminating funding in post-disaster contexts, but more efforts are needed from a range of stakeholders to allow people to receive government payments and loans from financial institutions on the same digital account or electronic card.

Gender issues also need to be considered since women’s mobile usage lags significantly behind men in many jurisdictions.

With climate change mitigation, it appears that it is important to have promotion policies in place, such as data collection (disaggregated by age, gender and other context-specific variables) and analysis, before

provision monetary policies are issued. This is because promotion policies can enable relevant market assessments, especially of the current state of green investments in a local financial sector.

Refinancing schemes for eco-friendly initiatives and renewable energy are relevant first steps for financial regulatory institutions that have already issued green guidelines and want to develop a new dedicated green policy under their broad monetary framework.

Refinancing policy for green initiatives should be designed to evolve and adapt to emerging green markets and include innovative new solutions. Categorizing projects by size and potential sustainable outcomes could help regulators propose tailored refinancing parameters and deploy programs progressively.

24 https://www.rbv.gov.vu/images/Press_Releases/2015/Press_Statement_Reserve_Bank_of_Vanuatu_Policy_Initiatives_Following_Cycpdf.pdf

25 <https://www.banque-france.fr/sites/default/files/medias/documents/press-release-ecb-2020-09-08-to-accept-sustainability-linked-bonds-as-collateral.pdf>

26 National bank of Cambodia and Bangko Sentral ng Pilipinas have reported to AFI’s IGF team that they include green bonds in their central bank portfolio management, and Banco de Moçambique reported that they are being implemented.

REGULATORY POLICIES THAT ENABLE INCLUSIVE GREEN FINANCE TO TAKE FLIGHT

RELAXATION OF ACCOUNT MANAGEMENT PRINCIPLES

The second type of regulatory policy that can be adapted for climate change is the relaxation of account management principles. These policies are related to consumer protection concerns, including retail and corporate banking regulations. Several AFI members have implemented regulatory adjustments to facilitate access to credit for vulnerable populations and achieve their NFIS objectives.

It is widely accepted that low-income populations are the most affected by climate change since as they are often unbanked and living in a fragile situation with no access to credit or insurance. In terms of provision policies, extensive research has demonstrated that higher savings rates can help the poor cope with unexpected climatic shocks and withstand the strain of gradual cost increases as weather patterns change.

Given these challenges, countries have begun providing preferential treatment to vulnerable populations by adapting retail banking regulations. According to the IGFWG survey, AFI members have relaxed a variety of account management principles, including:

- > No-frills account distribution;
- > Compliance and KYC requirements;
- > Minimum account opening balances;
- > Automatic increase of withdrawal limits;
- > Non-performing loans classifications; and
- > Automatic loan rescheduling in certain contexts.

While some of these policies have been implemented to address sustainable financial inclusion challenges, some have been triggered as emergency measures in post-disaster contexts. For example, Banco Central del Paraguay (BCP)'s relaxation policy on credit default classification, which gives banks flexibility to extend repayment periods in the event of floods and drought,²⁷ has not only had a significant impact on farmers, but also on financial system stability in a country where agriculture accounts for 33 percent of bank loan portfolios. Similarly, Superintendencia de Banca, Seguros y AFP (SBS) Peru has allowed automatic rescheduling of retail loan payments in case of natural disaster. This measure was triggered in 2017 and 2019 when the country was hit by severe weather events due to El Niño.

²⁷ In the event of drought, or even major drops in market prices, repayments can be delayed by one year.



Renewable energy. Titicaca lake in Puno, Peru. (Photo by Olga Gavrilova/Shutterstock)

These relaxations have a decisive impact on the survival of businesses and people in tense contexts. Alleviating these rules following a sudden or structural crisis could have a major positive socio-economic impact, but this must be kept under control to avoid adverse effects or becoming irrelevant.

DEVELOPMENT OF GREEN FINANCE TAXONOMIES

Green finance taxonomies are becoming a cornerstone of many sustainable development strategies. There are four main reasons behind this trend: (i) central banks and regulators use them to support their green refinancing and lending programs; (ii) governments refer to them to design national sustainable development strategies and support green fiscal policy; (iii) private banks align their activity reports with them to communicate with investors about their green engagement; and (iv) having a green taxonomy is a prerequisite for financial authorities that want to develop their green bond market. Thus, a green taxonomy facilitates the identification of sustainable assets and the integration of sustainability considerations in investment decisions. Without a common reference, it is also difficult to compare investment products in relation to their environmental or social impacts.

Creating a green taxonomy is therefore important and can underpin other market developments in green and sustainable finance that require extensive consultation and expertise. This is highlighted in a recent World Bank procedural guide for regulators (World Bank 2020), which highlights three essential principles:

- > Balancing simplicity without sacrificing granularity;
- > Ensuring the participation of technical experts; and
- > Ensuring a consistent approach with international best practices.

A national green finance taxonomy helps create a common understanding of local climate change challenges by defining businesses, technologies, products and services identified as local change makers.

In developing economies, where inclusion is a key challenge for policymakers, a green finance taxonomy can balance banking sector priorities with supporting the green activities of MSMEs and orienting investment banking toward projects and companies that clearly consider climate change and employment issues.



Luxury Ger camp, ecotourism. Gobi Desert, Mongolia. (Photo by Halstenbach/iStock)

The World Bank has proposed a pathway to a national green finance taxonomy that consists of four phases:

1. **Set up a steering committee with technical experts to design the taxonomy.** They should have knowledge of both the local context and a broad overview of climate change-related business and innovation.
2. **Organize consultations with all stakeholders,** including the financial sector and other policymakers, to test the consistency and relevance of the taxonomy.
3. **Implement the green finance taxonomy** with, and within, the financial sector.
4. **Review feedback regularly** to ensure the taxonomy is adapted and improved to reflect exposure to climate change and new adaptation and mitigation solutions.

The Mongolia Taxonomy is a good example of a national green taxonomy that addresses a wide range of activities financed either through capital markets or commercial banks. Approved in 2019 by the Financial Stability Council,²⁸ the Mongolia Taxonomy is extremely detailed and covers nearly all the country's activities and sectors. It includes eight categories of eligible projects:

- 1) renewable energy;
- 2) energy efficiency;
- 3) pollution prevention and control;
- 4) sustainable agriculture (land use, forestry, biodiversity conservation and ecotourism);
- 5) low-pollution energy;
- 6) green buildings;
- 7) sustainable water and waste use; and 8) clean transport.

To support the taxonomy, the banking sector became involved in the greening of the economy with the launch of the Mongolian Sustainable Finance initiative in 2013. Filled with detail, the taxonomy is not only a powerful tool to drive investment from the financial sector, but also to inspire green entrepreneurship.

THE DEVELOPMENT OF GREEN BOND MARKETS

As AFI members become involved in designing green finance taxonomies, most address the subject through the lens of the green bond market and make a significant effort to adapt international green bond classifications to their own markets. This is particularly the case for countries that have issued sovereign bonds.

The Fiji Sovereign Green Bond has reached FJD 100 million (USD 49 million) and supports inclusive and green programs administered by the government. To monitor the implementation and allocation of the Green Bond, a steering committee was created that brought together the Reserve Bank of Fiji, the Ministry of Economy, the Office of the Attorney General and relevant environmental experts.

The steering committee initially worked to link potential local projects with important climate resilience and adaptation impacts using the public Green Bonds taxonomy of the International Capital Market Association (ICMA). This ambitious and locally based selection of projects make the Sovereign Green Bonds issuance an excellent example of provision policy that achieves both inclusive and green objectives. Local projects include rebuilding more than 1,000 schools with sustainable materials and improving access to clean water.

At least three other AFI members were incited to consider the green bond market when private investors became interested in issuing green bonds for projects in their countries.²⁹ The development of green bond markets is on track with more countries considering it. Recently, the Bank of Thailand (BOT) began collaborating with the Ministry of Finance, insurance regulators and the Securities and Commissions Office to set up a working committee on green finance. Other countries are likely to follow this path, such as Côte d'Ivoire, which intends to raise over USD 200 billion in 2020 for priority development projects through the issuance of green bonds issuance (UNDP 2020).

28 Green Taxonomy of Mongolia approved by the Financial Regulatory Commission of Mongolia: <http://toc.mn/ufiles/uploaded/files/1584076042163.pdf>.

29 These countries include Thailand (six private issuers), the Philippines, and Ecuador.

**BOX 3: BOTTOM-UP VERSUS TOP-DOWN APPROACHES
TO GREEN FINANCE TAXONOMIES**

When it comes to developing green standards, national authorities and central banks may find it a tedious process to find definitions that readily apply to their local context. The most referenced international taxonomies, the International Capital Market Association (ICMA) Green Bond Principles (GBP) and the Climate Bonds Initiative (CBI) taxonomy, have broad, generic lists of sectors that can be considered “greenable”.

Such a categorization of green and non-green assets allows investors in sustainable finance to make quick decisions and communicate about the environmental sustainability of their financial portfolio management. Green finance labels managed by governments,³⁰ or sometimes by private actors, also use these classifications. However, these definitions do not provide exhaustive descriptions of the green opportunities that exist locally.

To bridge this information gap and create a detailed green finance taxonomy, emerging and developing countries can consider taking a bottom-up approach. This involves starting with the types of projects to be financed locally rather than focusing on broad categories. The national authority begins by estimating financing gaps. Then, a list is created of the most deprived green sectors and the related national loan target. Financing gaps can be estimated with the assistance of other institutions, such as a national climate agency. The central bank can then make this the official reference list for its green policies. Technical criteria would also be included in the taxonomy to identify the types of green products and initiatives that are eligible.

This bottom-up approach has the advantage of focusing on well-identified needs, for example, eco-friendly machinery to reduce the footprint of a major national industry. This list can later be expanded to capture the progress the country has made in implementing its sustainable development strategy. This approach was adopted by Bangladesh Bank following its first green refinancing program in 2009.

The top-down approach, often favoured by higher-income countries, refines international definitions by developing more detailed criteria to identify eligible projects with progressively greater precision. This approach may be used by countries issuing a sovereign bond with green objectives.³¹ Since the issuance of sovereign bonds is often a large-scale operation involving different sectors, it is an opportunity to develop a clear official classification of green targets that can later be expanded and finalized.

The European Union has taken this approach. A technical expert group elaborated a green finance taxonomy and published it in March 2020. Its final report on EU taxonomy³² led to the Taxonomy Regulation being enforced in July 2020. The European Green Finance Taxonomy draws on resources from the CBI and ICMA, European Investment Bank (EIB), Nordic Investment Bank (NIB) and other financial institutions, as well as the Natural Capital Protocol.³³ This taxonomy intends to support the implementation of the Paris Agreement and the United Nations Sustainable Development Goals (SDGs).

30 As an example, the Greenfin label managed by the French Environment Ministry was developed in part using the CBI taxonomy.

31 Most green bond issuers refer to the international definitions of the ICMA or CBI.

32 https://ec.europa.eu/info/sites/info/files/business_economy_euro_banking_and_finance/documents/200309-sustainable-finance-technical-report-taxonomy_en.pdf

33 <https://naturalcapitalcoalition.org/natural-capital-protocol/>



INNOVATIVE POLICIES AND TECHNOLOGIES TO ACCELERATE A GREEN TRANSITION

A NEW GENERATION OF PROVISION POLICIES

Beyond adapting traditional monetary and regulatory policies for green purposes, there are also innovative tools that could be used to green the financial system in certain contexts.

Some emerged after the 2008 global financial crisis and interest has grown since then. For example, “de-browning” asset purchase programs whereby central banks purchase securities flagged as “green.” This green policy could be made even more inclusive by targeting securities backed by loans to MSMEs involved in green activities and climate change adaptation and mitigation. Policymakers that consider this tool would need to adapt several regulatory frameworks and overcome certain challenges, such as the performance monitoring of MSMEs.

Another decisive trend is emerging from various research and ongoing talks between financial stakeholders in the European Union: greening of the capital adequacy framework by introducing a new green supporting factor to the Basel formula for capital requirements. This innovative idea was addressed by the European Union Working Group on Sustainable Finance during the development of the European Sustainable Finance Action Plan.³⁴ EU stakeholders, including the European Banking Federation, had already agreed to introduce a green supporting factor for MSMEs in the Basel II international capital and reserve requirements for the European market. An additional factor in this reference formula marks a significant step toward mainstreaming inclusive green finance.

ACTIVATING INNOVATIVE DIGITAL FINANCIAL SERVICES FOR INCLUSIVE GREEN FINANCE

Technology and financial services have always been tightly linked, with the former accelerating the transformation of the latter. In the last decade, the commercial success of mobile money and its global impact on the financial inclusion of the unbanked has ushered in a new era. In the AFI network, at least 16 members have already enacted regulations for mobile

money and digital financial services.

By using mobile network infrastructure and leveraging other emerging technology trends, such as the Internet of Things (IoT), big data machine learning and, eventually, blockchain technology, mobile money has become the ideal payment system to tie sustainable financial inclusion to the development of green activities in developing countries.

DFS and climate change have two clear links: (i) mobile money services can support financial resilience in the event of climatic shocks, while (ii) improving the access, affordability and use of cleaner technology that, in turn, helps mitigate climate change.

Current challenges for regulators include balancing traditional financial regulation with sound mechanisms that include and protect vulnerable populations, while also orienting innovative DFS toward green activities. The Central Bank of Kenya (CBK) has been paving the way, combining a regulatory sandbox for mobile money services and a public-private partnership (PPP) to develop sector expertise. Its first step in this journey was to issue a letter of no-objection to mobile network operators (MNOs) providing mobile money services. Based on stakeholder feedback, the CBK embedded the mobile money regulation as part of the retail payment system in the National Payment Systems Act in 2011. It was later enforced with additional obligations required by the prudential banking framework, together with the telecommunications authority.

This pioneering payment system regulation attracted investment in local start-ups and helped develop a supportive ecosystem (e.g. capacity building programs, innovation incubators and hubs, tech events). In 2018, 30 percent of all ventures operating in Kenya were addressing clean technology, renewable energy and agribusiness (VC4A 2018).

³⁴ https://ec.europa.eu/info/publications/sustainable-finance-renewed-strategy_en

BOX 4: WHEN CAPITAL REQUIREMENTS SUPPORT CLIMATE RISK

Introducing a green supporting factor to prudential rules for lower capital requirements and to facilitate lending to the green sector is one of the options addressed by the European Commission High-Level Expert Group (HLEG) in its final report on sustainable finance, which was issued on 31 January 2018. European officials still refer to this concept frequently.³⁵

However, before this measure can be enforced, the preliminary work needs to meet milestones set by the HLEG.³⁶ First, evidence of significantly lower risk at the micro level should be quantified through a risk assessment; second, a sustainable finance taxonomy needs to be established, including well-identified “green”, and potentially “brown”, asset classes.³⁷

Different simulations are currently being conducted by the Central Bank of Hungary and the central risk direction of a

private French bank³⁸ on a voluntary basis, without prejudice to the observance of their regulatory requirements.

Assuming green housing loans have lower credit risks than non-energy-efficient housing loans, due to the greater cost savings for borrowers from lower utility costs, the Central Bank of Hungary is testing a preferential capital requirement program that will last until 2023. Through this program, the capital requirements for each operation is adjusted based on its degree of “greenness” or “brownness”, which could help to align capital requirement calculations with environmental objectives.

35 Keynote speech of Vice-President of the European commission Valdis Dombrovskis on the challenges and impacts of implementing Basel III, 12 November 2019.

36 Final Report by the High-Level Expert Group on Sustainable Finance, 2018.

37 As stated by Christine Lagarde at her first public hearing nomination for the Head of the European Central Bank (4 September 2019).

38 <https://pressroom-en.natixis.com/assets/190923-green-weighting-factor-rollout-natixis-pr-pdf-aa8e-8e037.html?lang=en>

The development of these innovative tools depends heavily on having regulation that permits mobile money and other electronic payment systems to be deployed by non-banking actors, as well as complementary promotion policies to address behavioural changes required to build a greener economy.

Despite official user numbers, the actual daily usage of the full range of electronic money transactions is often much more limited. Therefore, regulators should not only create an environment that supports supply, but also promote demand for DFS, especially for uses that support climate change resilience and mitigation. For example, pay-as-you-go (PAYG) services have unleashed the potential of off-grid collective or individual solar systems, providing electricity on demand with payments made through mobile money. A recent survey revealed that the promotion of PAYG services for solar energy has led to significant growth in global mobile money use, sustaining formal financial inclusion and facilitating the deployment of renewable energy production systems in a virtuous circle. This trend will undoubtedly arrive in other countries in the future and create new opportunities to support green activities that serve those at the bottom of the pyramid.

Sandboxes and capacity development are effective ways to develop DFS offerings, but they are not sufficient to realize the full potential of DFS to increase financial inclusion and green the economy. Regulators must also consider developing rules, guidance and incentives to boost demand for digital finance with climate resilience and mitigation services. Country authorities will need to come together to design a national strategy, including monetary and regulatory policies, with clear, tailored goals to promote the use of mobile money for IGF. Central banks, policymakers, the telecom authority and other regulators, can develop a DFS framework to drive innovation in addressing the social and environmental challenges of each country.

EMPOWERING COMMUNITIES TO GREEN THE ECONOMY THROUGH CROWDFUNDING

Digital finance has introduced new models of financing entrepreneurship in developing countries, often imported and adapted from developed countries to meet local needs. For example, the crowdfunding model is being used with different financing schemes, from simple donations to peer-to-peer lending and equity fundraising.

More and more policymakers are recognizing the value of channelling private investment from individuals, especially from the diaspora, to MSMEs and sustainable

development projects. However, since crowdfunding operates on internet platforms that can be based in foreign countries, it is challenging for regulators.

Morocco provides an example of a pragmatic regulatory response. In 2014, some crowdfunding platforms were operating in the country, influenced by its proximity to Europe where this type of DFS was booming, despite adverse local regulation. Bank Al-Maghrib and other financial authorities quickly began discussions with key players, such as innovation lab Happy Smala,³⁹ on a regulatory update that was eventually adopted at the end of 2019.⁴⁰ Since then, more platforms have begun setting up local offices in the countries where they operate, and connecting with local payment systems, especially mobile money infrastructure, to deliver funding to local entrepreneurs and mobilize funds from local investors.

One of the major characteristics of platform-based digital crowdfunding services is that they usually emerge without any regulatory framework.

For example, in 2016, Nigerian startup Farmcrowdy launched a platform that allows users to fund an African farmer's input purchases and get a share of the returns at the end of the farming season. The scheme has had a significant impact on the quality and performance of supported agriculture projects.⁴¹ This model has also evolved and matured to include several other platforms that support investment in green activities, such as renewable energy and resilient housing. Nigerian startups are now experimenting with a crowdfunding regulatory sandbox,⁴² and will need to develop rules that ensure the sound development of crowdfunding without interfering with its ability to support IGF.

39 <https://www.happysmala.com/crowdfunding>

40 <https://fr.le360.ma/economie/la-loi-sur-le-crowdfunding-enfin-adoptee-par-le-gouvernement-196835>

41 <https://disrupt-africa.com/2020/03/crowd-farming-startups-address-vicious-cycle-and-eye-wider-impact/>

42 <https://techpoint.africa/2020/03/31/sec-regulations-crowdfunding-nigeria/>

DEPLOYING COLLABORATIVE ECOSYSTEMS FOR INNOVATION

Mobile-based services and platform models, data harvesting of user behaviour, social media and machine-learning technologies are all making financial services more efficient and relevant. The potential of these innovations to support IGF is enormous and the market is evolving rapidly.

Fintech startups are playing a major role in IGF, and regulators cannot afford a wait-and-see approach as they risk losing valuable capacities and opportunities.

In the AFI network, institutions are embracing innovation. Central Bank of Egypt (CBE) has recently launched a FinTech Hub as “a unified platform driven by innovation and technology to foster and connect all Fintech eco-system stakeholders, including fintech start-ups, financial institutions, regulators, service providers, mentors and investors”.⁴³ This initiative supports financing of startups by connecting them with investors and fintech funds.⁴⁴ The sandbox includes untraditional actors, such as post offices, MFI branches or non-governmental organisations (NGOs), to reach out to as many citizens as possible, especially in rural areas. As economic activities become more connected and data oriented, these collaborative spaces will undoubtedly become a cradle of innovation for IGF.

Other countries are also innovating in digital finance, such as Bangladesh Bank with the creation of an Innovation Hub, and Banco Nacional de Angola with its Fintech Laboratory.⁴⁵ In both countries, these mechanisms have on-boarded with the central bank’s payment system departments.

New collaborative paradigms for regulators have also emerged in the Pacific region. Since 2008, the United Nations Capital Development Fund (UNCDF) and United Nations Development Programme (UNDP) have led the Pacific Financial Inclusion Programme (PFIP), an initiative originally established to support financial inclusion through DFS.⁴⁶ In parallel, policymakers recognized AFI’s Pacific Islands Regional Initiative (PIRI)⁴⁷ as a platform that could engage all key stakeholders. Arising from this collective regional effort was the Impact Pathways project, which aimed to understand the connections between the SDGs and DFS, and mapped the correlated impact to drive financial and technological stakeholders towards IGF.⁴⁸ At the end of this project, PIRI members issued the landmark Pacific Regional Regulatory Sandbox Guidelines⁴⁹ to stimulate fintech development that bridges financial inclusion and a sustainable response to climate change.

A UNEP report on fintech and sustainable development⁵⁰ has shed light on two main challenges facing central banks and financial regulatory institutions when creating a regulatory sandbox for digital financial innovations. The first is mainstreaming sustainability with market integrity that supports dedicated risk management and reporting. The second is mobilizing finance through provision policies to support IGF.

43 <https://fintech.cbe.org.eg/home/hub?en>

44 Fintech sandbox guidelines were released in May 2019.

45 <https://lispa.ao/>

46 <http://www.pfip.org/>

47 <https://www.afi-global.org/initiatives/pacific-islands-regional-initiative-piri>

48 <https://www.uncdf.org/impact-pathways/home>

49 <https://www.afi-global.org/news/2020/03/piri-publishes-pacific-regional-regulatory-sandbox-guidelines>

50 <https://www.unep.org/resources/report/fintech-and-sustainable-development-assessing-implications-summary>



POS terminal. Middle East. (Photo by AegeanBlue/iStock)

KEY LESSONS AND TAKEAWAYS TO LEVERAGE IGF PROVISION POLICIES

REORIENT EXISTING MECHANISMS TO GREEN THE ECONOMY



Most IGF provision policies have evolved from existing monetary mechanisms reoriented for green purposes. Some classic tools, such as base rate adjustments, can be adapted to help vulnerable populations engage with emerging green sectors. Some indirect benefits can also be derived from expanding eligible collateral, which can attract the attention of the typically conservative banking sector for new types of assets and activities.

CREATE A CONSISTENT MIX OF COMPLEMENTARY MECHANISMS



One of the keys to success is having the right mix of monetary and regulatory provision policies combined with other 4P policies, and the support of responsive and progressive payment systems that can address local challenges and strategic objectives. Consistent lending targets backed with refinancing lines also give clear strategic direction to the banking sector, and including green targets in a bank's prudential rating creates additional incentive for the sector to engage in climate change mitigation.

This measure is particularly effective if it is accompanied by other IGF prevention policies, such as the development of environmental and social risk guidelines and standards. Given the uncertainty of climate change, having monitoring mechanisms in place before provision monetary policies are issued seems important. For example, data collection and sector analysis to conduct needs assessments, set priorities and, especially, to define appropriate parameters for the local financial sector.

BALANCE CONSTRAINING POLICIES WITH INCENTIVES



The experience of members in the AFI network shows that adjusting reserve ratios is a relatively straightforward incentive that can have a big impact. It not only facilitates engagement with banks to meet common goals, but also helps banks maintain their commitments to support specific segments or sectors, even when refinancing mechanisms are no longer available. As challenges and priorities change, this tool could be a powerful way to channel money to green activities. Preferential ratios could be applied to

priority green sectors while higher ratios could be used to prevent inflation. It is not uncommon for a two-digit reserve ratio to curb inflation or even to discourage fossil fuels or carbon-intensive industries. Steering reserve requirements can also compensate for the side effects of more constraining provision policies by offering incentives to lenders.

DESIGN MECHANISMS FOR RAPID ACTIVATION AND ADAPTATION



To support climate change adaptation and resilience, having operational mechanisms ready to be activated greatly facilitates efficient and timely responses to support the economy. By simply reactivating existing policies, regulators can support a rapid response to the immediate needs of the population. However, regular updates on the parameters of these refinancing mechanisms are mandatory to ensure they remain efficient in a changing context.

START WITH THE OBVIOUS AND BE AGILE WHEN DEVELOPING A GREEN TAXONOMY



When embarking on climate change mitigation, establishing a common definition of eligible projects and identifying sectoral priorities are important, but can be a long and complex process. However, IGF provision policies can be released without a comprehensive green taxonomy. Although IGF provision policies are based on a comprehensive green taxonomy, a short list of well-defined projects with precise technical and financial requirements (e.g. grace periods, duration) that is updated regularly is sufficient. This list can contribute to the development of a full national green finance taxonomy, which can be readily enforced for green project financing and the issuance of green bonds.

Refinancing schemes for green initiatives and renewable energy are relevant first steps for financial regulatory institutions that have already issued green guidelines and would like to develop a new dedicated green policy under their broad monetary framework. Refinancing policy for green initiatives should be designed to evolve and adapt to emerging green markets, and to include innovative new solutions. Dividing projects into categories by size and potential sustainable outcomes can help to propose tailored refinancing parameters and deploy the program progressively. In Egypt, where banks had a probation period to comply, helped give them more ownership of the program.



IDENTIFY UPSTREAM AND DOWNSTREAM CHALLENGES

When greening existing sectors, financial regulatory institutions must consider upstream challenges that could threaten the efficiency of refinancing mechanisms, such as limited local skills to use new green equipment, or even the availability and affordability of this equipment. Downstream issues, meanwhile, can arise from inappropriate supply chain and exogenous international trade variations.

Therefore, provision policy in general, and refinancing mechanisms in particular, should be embedded in a broader national initiative in coordination with other relevant authorities, address connected risks and collect data to assess and monitor needs. By involving all key economic players in initial discussions of the mutual gains and benefits of a global program to green the economy, policymakers can make global endorsement of related policies easier and reduce the risks of negative outcomes.



USE ONLY FOCUSED AND TIME-BOUND REGULATORY RELAXATION

Relaxation of account management principles should be applied with great care. They should be monitored, implemented progressively to promote buy-in and avoid both short-term risks of fraud and medium to long-term concentration and liability risks. On the demand side, relaxation of account principle management, especially when backed with mobile money, is a powerful tool to initiate basic banking services for vulnerable populations. Affordable payments, transfers and saving services, and high mobile penetration can reach those in rural and isolated areas. It appears that no-frills accounts, even when they are digital, are only sustainable when combined with affordable basic banking and transfer services. These accounts can then be used to support transactions for emergency grants and dedicated lending based on climate change adaptation and mitigation priorities.

This also applies when credit default classifications are relaxed or loan payments are automatically rescheduled in response to a crisis. Central banks and regulators should create infrastructure for dynamic data collection and analysis in advance, both on the economic situation and weather conditions. Testimony from AFI members



Young asian man planting seedling to stop climate change. (Photo by Piyaset/Shutterstock)

shows that such mechanisms must be activated under strict conditions, tightly monitored and managed in a timely way to ensure the financial sector remains stable.



ENGAGE EVERYONE IN THE TRANSITION

Some incentives can be triggered to create a virtuous circle of borrowers providing affordable credit. This can be made possible by protection policies, such as a vehicle for credit risk guarantees, a base rate adjustment or other existing monetary policies used to engage the banking sector. The challenge is to have coordinated engagement in greening the economy, both from the banking sector and customers.

This is also a relevant when considering the development of the underlying payment system. To engage the vast majority of people in the behavioral and economic transition to green activities, the experiences of AFI members show that policymakers should not only consider developing the supply of DFS, but also support demand with oriented policies. PAYG and the rise of micro transactions based on basic mobile money services are a great opportunity because they unleash investment for projects that open access to essential utility services to unbanked and vulnerable populations, such as electricity and water.



EMBED DIGITAL FINANCIAL SERVICES TO IMPROVE RESULTS AND DIRECTION

In the era of the internet and widespread mobile phone penetration in emerging and developing countries, DFS and FinTech have the potential to accelerate sustainable financial inclusion for the poor through a transition to green activities. Although mobile payments can be a powerful tool for disseminating funding in post-disaster contexts, additional efforts are needed by a range of stakeholders to allow people to receive government social payments and loans from financial institutions on the same digital account or electronic card.

The reach of DFS across populations and territories is extensive and provides an unprecedented opportunity for IGF provision policies to have greater impact. Therefore, regulators must focus on creating a regulatory framework for DFS that meets global objectives and supports the development of IGF at the same time. This framework should not ignore mobile money, which is a powerful tool to support climate change resilience. Mobile money provides the infrastructure to collect the data needed to channel

investment, and to deliver cash quickly and efficiently to recipients, even in remote areas.



CREATE A SPACE FOR NEW INNOVATIVE AND DECENTRALIZED MODELS

DFS helps mobilize private investment from new sources. Innovative business models, such as crowdfunding platform models, are being adopted to help bridge the gap between traditional financing from the banking sector and the unaddressed needs of entrepreneurs in green activities. Crowdfunding has the double advantage of being able to mobilize global financial flows, especially from the diaspora, to support productive green projects and leverage private funds to support training and capacity building in financial and technical education. Feedback from frontrunners in the AFI network indicates that the first step is to engage in a discussion with key players that are considering, or are already operating, crowdfunding platforms in your country, even from abroad.



ENGAGE WITH THE INNOVATIVE DIGITAL ECOSYSTEM

With the tremendous twenty-first century challenges for sustainable development, financial regulators must engage with the innovative digital ecosystem to develop DFS for inclusive green finance in a sound and efficient process. Pioneers in the AFI network are leading the way, using existing or in-house creative spaces to explore innovative pathways for DFS, to track and envision how it is already developing and where to steer it to serve climate change adaptation and mitigation.



USE THE INVESTMENT CAPACITY OF THE INSTITUTION

Central banks and financial authorities should use their own investment capacities to green their portfolios. This can be achieved by adding “sustainability of the asset” to the usual triad of “liquidity, safety and return” governing investment practices. Green portfolios are relevant for financial regulatory institutions that have sustainability as a clear objective in their mandate, and are often combined with the issuance of green bonds.

CONCLUSION

In the emerging area of inclusive green finance, it can be difficult to get a clear picture of the types of policies that have been adapted in different contexts, the impact they might have on climate resilience and poverty alleviation and, most importantly, the best ways to develop them and how they relate to other financial policies. This report has provided insights into these questions and aims to inspire policymakers in their journeys to IGF. The monetary and regulatory provision policies, as well as the innovative tools featured here, are drawn from the practical knowledge and experience in the AFI network and can serve as a valuable resource for other members.

In the context of major global challenges like climate change, the vulnerability of the poor and the urgency of building climate-resilient economies have come into sharp focus. This review of inclusive and green provision policies has shown there is immense potential to draw on experience and share best practices. The number and variety of provision policies that have been tried and tested on the ground across the AFI network highlight the active role central banks can play in developing inclusive and resilient financial systems.



Most importantly, this study has shown the significant potential of adapting existing monetary and regulatory tools to support green and inclusive development. Provision policies implemented in the AFI network have effectively adapted and leveraged traditional central bank practices to channel funds toward more inclusive and green economies. Monetary tools, in the form of refinancing mechanisms, lending target schemes or other green-oriented monetary mechanisms, appear to be very efficient, especially when combined with adapted regulations and innovative payment systems. When implemented early, promotion policies can also lay the groundwork for enforcing these binding measures.

In difficult contexts, such as the aftermath of a disaster, experience has shown that it is useful to adapt and reactivate existing mechanisms to respond to new situations.

To green the economy and build resilience to climate change, either by transitioning to renewable energy or other green and sustainable activities, it has proven useful to combine refinancing support to MSMEs with additional support to improve the entire supply chain, including upstream knowledge and capacity building, and downstream distribution and access to market, together with other promotion policies.

The enforcement of lending targets is another promising provision policy that is often seen in successful policy packages. To lay the groundwork for implementing these schemes, concerted action is needed by the banking sector to agree on common definitions of “green” and “inclusive”, as well as market surveys to assess progress. These will help establish realistic lending targets in line with sustainable strategic roadmaps.

Experience has also shown that implementing refinancing schemes to support lending targets, together with reserve requirement exemptions, frees up capital that could be granted to inclusive and green market segments. To support credit for projects in rural areas or for emerging inclusive sectors, central banks can discourage dissuasive collateral requirements to make refinancing mechanisms more efficient. This can be done through sound management of credit risk by basing the risk calculation solely on cash flow or transferring the risk to a higher-level credit guarantee entity in charge of collecting and sharing data between banks. Regulatory relaxation tools have appeared to be very efficient, especially in

post-disaster situations or to support local productions and low-income populations on a long-term basis.

Central banks can engage in IGF even without an exhaustive national green taxonomy. Developing a short list of projects or products with financial and technical requirements has proven to be an efficient place to start, and can be completed later as national strategies and priorities evolve. Several AFI members have experimented with issuing sovereign bonds (some are pioneers on their continent), indicating that this has become a trend in the network and often related to green investments. Consolidation of a pragmatic taxonomy that can be adapted, together with reporting standards, will comfort and build the trust of investors and financial systems in IGF. It should also drive new resources for sustainable development in the AFI network.

Beyond adapting traditional monetary and regulatory policies to foster green and inclusive development, the report has also highlighted member experiences with innovative policymaking. Within the AFI network, some innovative fintech provision tools have been effective in the pursuit of sustainable development. To address vulnerable populations, digital no-frill accounts have shown that a combination of technology and specific emergency relief policies can make post-disaster programs more efficient. More market development will be necessary to expand DFS for inclusive green services, such as payments for grid-based solar energy. This could be accelerated after the COVID-19 pandemic since it has been shown that having targeted policies at the central bank level can facilitate a quick response from the entire financial sector to maintain sustainable national economies.

This report has highlighted case studies and lessons learned, and aimed to facilitate peer learning about how to adapt and implement existing provision policies to support climate change adaptation and mitigation. Many of the programs presented here likely deserve more in-depth analysis and impact monitoring. However, this report is intended to be a stepping stone for greater knowledge sharing and peer-to-peer learning.

As IGF policies develop over time, AFI will ensure that the knowledge base expands and deepens alongside them. This will not only encourage greater understanding of provision policy, but also opportunities to develop more standardised practices and policy guidance.

ACRONYMS

4P	Promotion, Prevention, Provision and Protection	SBN	Sustainable Banking Network
AFI	Alliance for Financial Inclusion	SDG	Sustainable Development Goal
APP	Asset Purchase Program	SME	Small and Medium Enterprise
BIS	Bank for International Settlements	SIDS	Small Island Developing States
BMU	German Federal Ministry of the Environment, Nature Conservation and Nuclear Safety	UNCDF	United Nations Capital Development Fund
CAMELS	Capital Adequacy, Assets, Management Capability, Earnings, Liquidity and Sensitivity	UNDP	United Nations Development Programme
CBI	Climate Bonds Initiative	UNEP	United Nations Environment Programme
COP25	2019 United Nations Climate Change Conference		
COVID-19	Coronavirus Disease 2019		
CSR	Corporate Social Responsibility		
DFS	Digital Financial Services		
DRCF	Disaster Rehabilitation and Containment Facility (Reserve Bank of Fiji)		
EIB	European Investment Bank		
EU	European Union		
GBP	Green Bond Principles		
GHG	Greenhouse Gas		
GCF	Green Climate Fund		
GTF	Green Transformation Fund (Bangladesh Bank)		
HLEG	High-Level Expert Group of the European Commission		
ICMA	International Capital Market Association		
IGF	Inclusive Green Finance		
IGFWG	Inclusive Green Finance Working Group		
IoT	Internet of Things		
KYC	Know Your Customer		
MFI	Microfinance Institution		
MSME	Micro, Small and Medium Enterprise		
NDC	Nationally Determined Contribution		
NFIS	National Financial Inclusion Strategy		
NGFS	Network for Greening the Financial System		
NGO	Non-Governmental Organization		
NIB	Nordic Investment Bank		
OECD	Organisation for Economic Co-operation and Development		
PFIP	Pacific Financial Inclusion Programme		
PIRI	Pacific Islands Regional Initiative		
PAYG	Pay As You Go		
RE	Renewable Energy		
RRR	Reserve Requirement Ration		

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BCP	Banco Central del Paraguay
BNA	Banco Nacional de Angola
BSP	Bangko Sentral ng Pilipinas
BB	Bangladesh Bank
BAM	Bank Al-Maghrib
BOM	Banco de Moçambique
BOT	Bank of Thailand
BCEAO	Banque Centrale des Etats de l’Afrique de l’Ouest
CBE	Central Bank of Egypt
CBJ	Central Bank of Jordan
CBK	Central Bank of Kenya
CBN	Central Bank of Nigeria
CBSL	Central Bank of Sri Lanka
DAB	Da Afghanistan Bank
FRCM	Financial Regulatory Commission of Mongolia
MEF	Ministère de l’Economie et des Finances de Côte d’Ivoire
NBC	National Bank of Cambodia
NRB	Nepal Rastra Bank
RBF	Reserve Bank of Fiji
RBI	Reserve Bank of India
RBV	Reserve Bank of Vanuatu
RMA	Royal Monetary Authority of Bhutan
SBP	State Bank of Pakistan
SBS	Superintendencia de Banca, Seguros y AFP del Peru

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e ISBN 978-967-19723-0-4



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