

Executive Summary

The objective of the G20 Green Finance Study Group (GFSG) is to “identify institutional and market barriers to green finance, and based on country experiences, develop options on how to enhance the ability of the financial system to mobilize private capital for green investment”. With the objective of supporting the G20 goal of strong, sustainable and balanced growth, the G20 Heads of State, at the 2016 Hangzhou Summit, recognized the need to “scale up green finance” and identified seven broad options, for voluntary implementation by countries in light of national circumstances, in addressing this goal.

During 2017, the GFSG has focused on two themes: first, the application of environmental risk analysis (ERA) in the financial industry; and second, the use of publicly available environmental data (PAED) for financial risk analysis and informing decision-making. In addition, the GFSG has taken stock of developments across G20 members and internationally against the seven options set out in the 2016 G20 Green Finance Synthesis Report.

ERA is an important cross-cutting theme that supports the GFSG’s objective. The identification, pricing and management of material risks are key features of an efficient and resilient financial system. When it comes to environmental risks, private sector feedback received by the GFSG suggests many financial institutions face challenges in identifying, quantifying and applying analytical tools to assess the financial impact of these risks. Considerable differences can exist in terms of the capacity of financial institutions to apply ERA, notably between different countries and between different types of financial institutions such as banks, insurance companies and other institutional investors; thus, the application of ERA can be limited in terms of the implications for financial institutions themselves, their clients and the financial system as a whole. A number of case studies suggest if financial firms do not effectively take material environmental factors into account, they may misappreciate short- and long-term environment-related financial risks.

Financial institutions could combine two elements to assess environmental risks: 1) understanding and identifying the environmental sources of financial risks; and 2) translating these factors into quantitative and qualitative information to understand the potential magnitude of financial risk to investments and to aid investment decisions. The appropriateness of risk analysis tools and associated metrics may depend upon, among others: first, risk types (e.g., market, credit, business); second, the risk factors financial institutions are exposed to (e.g. physical or transition risks); third, the size of direct and indirect exposure to the specific environmental risks; and fourth, key country/sector-specific factors.

Based on a review of current practice, it is clear there is considerable scope for more dialogue, awareness and knowledge sharing on ERA. A stock take of practice by both financial institutions and financial authorities identified a diverse portfolio of ERA tools, methodologies and case studies that can help financial decision-makers to understand and integrate environmental risk into risk management and asset allocation decision-making. Case studies suggest that the application of these tools can result in improved credit and investment policies; reduced portfolio and firm-level risk; product innovation; reallocation of capital and enhanced stakeholder engagement.

The effective use of ERA faces a range of challenges. Research by GFSG knowledge partners and consultation with the private sector suggest barriers to wider adoption of ERA practices can include: a lack of clear and consistent policy signals; limited methodologies and relevant data;

capacity limitations within financial institutions; time horizons; terms of investment; and performance incentives.

Options for encouraging voluntary adoption of ERA include: ensure the consistency of policy signals; raise awareness of the importance of ERA for financial institutions that have significant environmental exposures; encourage better quality and more effective use of environmental data; encourage public institutions to assess environmental risks and their financial implications in different country settings; review and, if appropriate, clarify financial institutions responsibilities to consider environmental factors; and enhance capacity building on financial sector ERA.

PAED are important sources of information for ERA and broader financial analysis. PAED, as used in this report, refers to environmental data that are provided and reported by non-corporate entities and can be useful for financial analysis. The lack of, and difficult access to, relevant environmental data limits the ability of financial firms and other market participants to analyze and manage environmental risk exposures. It also hinders the reallocation of resources to financing green investment opportunities.

ERA can be supported by not only environmental data disclosed by corporates for assessing their “current exposures” but also economy-wide environmental information, implications (e.g., externalities) of environmental changes, possible future changes in climate and other environmental risk factors, as well as potential policy and market responses to environmental changes. Such information, some of which is forward-looking in nature, comes largely from public sources including governments, international organizations (IOs), science institutes or non-governmental organizations (NGOs). Such information can help financial and non-financial firms to assess the probabilities and impacts of both physical and transition risks as well as green investment opportunities. At the same time, it is important to note that forward-looking analysis always involves uncertainties around the precision of projections and country relevance, and therefore the selection of assumptions and scenarios used for generating projections should stay with data users.

Current PAED reviewed by GFSG knowledge partners can be broadly grouped into: (i) historical physical trends, (ii) forecasts and forward-looking scenarios, and (iii) costs of pollution and benefits of remediation. The nature of the data varies, with some reflecting current status, whereas others providing more forward-looking information. Some PAED examples include: physical asset (facility) level environmental data; water stress and other ecosystem pressures; natural disaster probabilities; scenarios of climate change, energy demand shift, changes in technology, production and consumption patterns; data on solar and wind resources; databases on green technologies; costs of air, water and land pollutions; and the benefits of environmental remediation.

Obstacles constraining the effective usage of PAED in financial analysis as identified by GFSG knowledge partners include: the nascent state of ERA methodology usage and green investment assessment; the lack of comparable future scenarios and uncertainties of future policy responses to environmental and climate challenges; PAED formatting that is unfriendly to financial sector users; high search costs (monetary and non-monetary); and uncertainty over the business models for PAED provision. The GFSG agreed that it would be useful to prepare a Catalogue that would describe and contain links to existing PAED databases.

Options for improving, on a voluntary basis, the availability, accessibility and relevance of PAED include: G20 members can work with other partners to share publicly available

methodologies for ERA and for quantification of environmental costs and benefits; governments could also support private sector efforts to improve the quality and user friendliness of PAED; the GFSG could support the further development of the Catalogue of PAED, prepared to date by UN Environment and the OECD; and country authorities could promote domestic sharing of PAED with a focus on its use for financial analysis.

An interim progress report has mapped developments against the seven 2016 GFSG options since the Xiamen GFSG meeting in June 2016. Considerable progress has been made in many G20 countries in a number of areas. Examples are national sustainable and green finance roadmaps, capacity building and knowledge sharing by financial institutions, and the development of local green bond markets and cross-border green bond flows. International cooperation in green finance has been evident across the G20 and between G20 countries, both through intergovernmental platforms and across diverse public-private initiatives.

In addition to the examples provided above, a number of other areas of inquiry are emerging and require further research. Examples of these areas include, among others: integration of green investment opportunities framework; more integrated national approaches to green finance; development of local currency green bond markets in emerging market economies; the role of public finance and development banks in supporting green investment, and the application of financial technology ('FinTech') in green finance.