Addressing climate-related financial risks and overcoming barriers to scaling-up sustainable investment

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Climate change represents a material risk for individual financial institutions and systemic financial stability. Moreover, there is increasing awareness that finance plays a crucial role in achieving the global climate targets. However, to date, climate risks are not sufficiently accounted for, hindering sustainable investments. To align finance with sustainability and safeguard macro-financial stability, it is crucial to adequately assess forward-looking climate risks for lending and investment decisions. The Group of Twenty should support efforts by central banks, financial supervisors, international financial organizations, and the financial sector to integrate climate and sustainability factors into risk management and advance the mainstreaming of sustainable finance.

Challenge

Climate change represents a material risk for individual financial institutions and systemic financial stability (Carney 2015). Nevertheless, financial actors have not yet priced climate risks (and opportunities) into financial contracts (e.g., loans, bonds, and equity holdings; see e.g., Monasterolo and de Angelis 2020). This is despite the increasing availability of consolidated approaches to embed forward-looking climate risks into financial risk valuation, such as climate stress tests (Battiston et al. 2017). The mispricing of climate-related financial risks delays the scaling-up of investments in the low-carbon activities needed to achieve climate targets. In addition, it leaves investors exposed to assets of carbon-intensive businesses, which could lose value and become stranded in a disorderly transition to a low-carbon economy (Battiston et al. 2017).

The finance sector should play a crucial role in achieving the global climate targets. However, currently, sustainable investments are hindered for several reasons. These include the lack of an operative sustainable taxonomy and the lack of mainstreaming climate-financial risk assessment in investors’ portfolios (Berensmann et al. 2017; Monasterolo 2020). To align finance with sustainability and safeguard macro-financial stability, it is crucial to adequately assess forward-looking climate risks for lending and investment decisions.

Sustainable finance has developed from a niche market that attracted a small number of ethical lenders and investors to an area that generates considerable interest across the financial system. The growing interest in sustainable finance can be attributed to the rising awareness of climate-related financial risks. These include physical risks related to more frequent extreme weather events and chronic climate impacts, as well as transition risks, which originate from sudden changes in climate policy and regulation or technological changes (Carney 2015; NGFS 2019; Semieniuk et al., forthcoming). Sustainable financing instruments—such as Environmental, Social, and Governance (ESG) products and green bonds—have developed rapidly in the last decade. However, they still represent a small share of the global securities market (IB 2019; Climate Bonds Initiative 2019). Such instruments target investments aligned with climate and other sustainability targets, and provide an opportunity to finance sustainable, low-carbon transition.

The main barriers to align portfolios with sustainability goals include the lack of (i) a consistent, operative taxonomy to classify investments according to their shades of “green” and “dirty,” (ii) disclosure of climate-related financial risks, (iii) mainstreaming of climate-risk assessment in financial contracts and portfolios, and (iv) stable and coherent policy measures to foster low-carbon transition.

Financial data firms do not provide consistent ESG ratings (Busts, Johnson, and Ploch 2018; Berg, Köbbel, and Rigobon 2019). The European Commission (EC) has introduced a sustainability taxonomy; however, this has not yet been implemented. The lack of standardized classification prevents investors from disclosing environmental and climate risks and from pricing the risks and opportunities stemming from alternative portfolios’ allocations. In addition, it prevents financial supervisors from quantitatively assessing financial institutions’ exposure to climate-related financial risks and from identifying prudential measures—such as a revision in capital requirements for banks that are highly exposed to carbon-intensive firms—to mitigate such risks. Moreover, current monetary and fiscal policy approaches do not differentiate between sustainable and conventional financial instruments.

Proposal

Mainstreaming climate-financial risk assessment in financial contracts is crucial for developing financial instruments that bridge the sustainable investment gap (Saiba Senate 2019) and promote financial stability (Battiston, Mande, and Monasterolo 2019). This is an essential step to achieve the Paris Agreement climate and energy targets, although meeting climate change goals requires greater actions, including carbon pricing. Financing the global energy transition and sustainable development requires a fundamental change in the current local and global financial architecture. It needs to be facilitated by sustainable financial governance (e.g., UNEP Inquiry 2016; Volz 2017; Dika and Volz 2020), while the Group of Twenty (G20) members will need to support. This is particularly relevant amid the COVID-19 crisis where the pandemic’s risks can interact with climate and financial risks. This amplifies losses and decreases countries’ ability to build resilience to risks. The G20 should build on the important work of the Green Finance Study Group and the Sustainable Finance Study Group (G20 2016). It should support efforts by central banks, financial supervisors, international financial organizations—including the International Monetary Fund (IMF) and multilateral development banks (MDBs)—and the financial sector to integrate sustainable factors into risk management and mainstream sustainable finance. Importantly, the G20 should stimulate a larger discussion among the policy and academic community. It should support the work of the Central Banks and Supervisors Network for Greening the Financial System (NGFS) to help mitigate climate-related financial risks and overcome bottlenecks to scaling-up sustainable finance.

Below, we propose nine actions that the G20 should take to align financial systems with the UN’s climate and sustainability targets.

1. Support the development and implementation of a standardized taxonomy for investments based on their climate and sustainability impact.

This would reduce market uncertainty regarding the climate-alignment of individual investments; thus, informing investors’ strategies in the low-carbon transition and contributing to scaling-up low-carbon investments. Despite its shortcomings, the EC’s Sustainable Finance Taxonomy is an ambitious undertaking to support investors, companies, issuers, and project promoters in navigating the transition to a low-carbon, resilient, and resource-efficient economy (EC 2020). It can also serve as an example for other jurisdictions. However, it will be important to develop and implement criteria for not only green investments but also “dirty” investments.

2. Promote standards for the disclosure of climate and other sustainability risks across the financial sector.

This is necessary to enable the development of reliable approaches to analyze forward-looking climate and other sustainability risks. Establishing transparent ESG and climate reporting standards that are aligned with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) would facilitate the development and issuance of sustainable financial products and provide important signals to financial investors. International cooperation among supervisors is desirable to ensure basic common standards and facilitate sustainable finance and investment, globally. International cooperation among financial supervisors should be fostered to ensure basic common standards for implementing disclosure in investors’ portfolios and facilitate sustainable finance and investment globally.
Scientific research on climate stress testing considers multiple scenarios associated with different low-carbon transition pathways (including a disorderly transition) and assesses the largest losses for financial institutions condition on to such parameters (NGFS 2020; Ma, Caldecott, and Volz 2020). Integrating climate risk into financial risk metrics (e.g., value at risk) and assessing the largest losses that an investor could face—conditioned to different climate transition scenarios via climate stress testing—is fundamental to inform their risk management strategies (Battiston et al. 2017). This would allow banks and other financial actors to integrate climate risk into their financial risk valuation, thus informing portfolio risk management strategies in the low-carbon transition (Bolton et al. 2020). It would also allow financial supervisors to assess investors’ exposure to losses driven by potential carbon stranded assets, conditioned to several climate transition scenarios (including those characterized by a disorderly transition). They can design tailored prudential measures to mitigate such risks at the level of individual financial firms and the financial sector at large (NGFS 2020). Overall, climate-financial risk assessment would provide a signal to the market and promote the stable development of sustainable finance instruments.

4. Integrate sustainability risks into the Basel IV framework.
The current Basel supervision standards do not require financial institutions to assess and report climate- and other sustainability-related risks. Hence, they do not mandate financial institutions to take necessary prudent actions. For example, building up additional capital buffers to mitigate such risks. More importantly, neither banks’ internal nor third-party rating methodologies have adequately incorporated climate-related and other sustainability risks.

5. Decarbonize portfolios of central banks and public financial institutions.
Central banks and public financial institutions may also be heavily exposed to transition risks through their exposure to carbon-intensive assets on their balance sheets. Following the 2018 financial crisis, major central banks, including the Fed, European Central Bank (ECB), Bank of England, and Bank of Japan, more than doubled the size of their balance sheets with asset purchase programs. This was without having a clear objective on climate change risks (Battiston and Montaner 2019b). A thorough assessment of the climate transition risk exposure of the ECB’s Quantitative Easing program and of the carbon risk of central banks’ portfolios—along with the greening of their collateral policies and appropriate deleveraging measures—needs to be implemented.

6. Integrate science-based climate-financial risk assessments into the operational frameworks of international financial institutions.
Several international financial institutions, including the IMF and the World Bank, have already started examining many of the aforementioned issues. However, they still need to comprehensively integrate climate- and other sustainability-related risks in their country and project risk assessments. As announced by the IMF’s managing director, the IMF should incorporate climate-risk analysis and climate stress testing in its Article IV consultations with member countries. It should also incorporate such analyses in its annual Global Financial Stability Reports. The IMF and the World Bank should also include climate stress tests in their joint financial Sector Assessment Programs (Montaner and Volz 2020). All MDBs and development finance institutions (DFIs) should assess climate-related financial risks and opportunities in their financial operations, price climate risks into financial contracts, and conduct regular climate stress tests. This will help them realize their financial stability and sustainable development mandates and foster climate-aligned investments (Montaner and Volz 2020). Leading by example, international financial organizations could set new standards for best practices for financial management and raise awareness of the importance of addressing climate risks across financial markets.

7. Scale-up sustainable finance for developing countries through MDBs and DFIs.
While domestic resource mobilization is key to financing sustainable development, MDBs and DFIs can provide important support in financing sustainable and climate-resilient infrastructure. Moreover, they can support the development of local currency bond markets that should be aligned with sustainable finance principles. They can encourage the adoption of sustainable finance practice in local financial markets, as a tool for financial market deepening. Against the backdrop of deteriorating public finances due to the COVID-19 crisis, the G20 should enhance the lending capacity of MDBs and DFIs by raising capital. The scaling-up of sustainable finance in developing countries by MDBs and DFIs should be consistent with the United Nations’ Sustainable Development Goals. This approach would align financial proceeds with the sustainability and climate pledges of developing countries and assure coherence between investments and sustainability targets.

8. Develop sustainable insurance solutions and boost resilience investment to support countries that are particularly vulnerable to climate change.
Climate-vulnerable developing countries are particularly exposed to climate-related financial risks. Thus, both governments and corporates face a climate-risk premium on the cost of capital (Buhn et al. 2018; Kling et al., forthcoming, Berne et al. 2020). Simultaneously, these countries face a large insurance gap. Many financial instruments and physical assets are either not insured or under-insured against climate- and other sustainability-related risks. The G20 should continue to support climate-vulnerable developing countries through initiatives to develop insurance solutions and climate-risk models that can guide national adaptation strategies. For example, the InsurResilience Global Partnership for Climate and Disaster Risk Finance and Insurance (Jarzabkowski et al. 2019). Moreover, MDBs and DFIs should increase their support for climate-vulnerable countries through investments in climate adaptation and resilience to help them reduce disaster risk and yield dividends from resilience (Tanner et al. 2015). GCA 2019).

9. Foster cooperation between financial supervisory authorities, scientific research, and civil society.
Central banks and financial supervisors have recognized the need to price climate risks into financial contracts and run climate stress tests to assess the largest climaterelated losses for investors’ portfolios (NGFS 2019). Several central banks and financial supervisors have started to collaborate with climate and financial academics to apply science-based methods to assess investors’ exposure to climate transition risks via their bonds’ portfolios. This collaboration aims to analyze exposure to climate transition risks—including those stemming from a disorderly transition to a low-carbon economy—and the implications on individual and systemic financial risks. Examples of such collaboration include the European Insurance and Occupational Pension Fund Authority (Battiston et al. 2019), the Austrian National Bank (Battiston and Monasterolo 2019a), and Banco de Mexico (Ronconori et al. 2019). In addition, think-tanks have supported financial supervisors in assessing the degree of alignment of investments with the climate targets, partnering with, for example, the Bank.

England and the California Insurance Commissioner (2019). The G20 should make a concerted effort to advance policy-relevant research nationally and internationally. It should encourage research-policy cooperation to advance methods and improve prudential frameworks to mitigate climate- and other sustainability-related risks.

Key Recommendations
The G20 should support efforts by central banks, financial supervisors, international financial organizations, and the financial sector to integrate climate and sustainability factors into risk management and advance the mainstreaming of sustainable finance. We propose nine action points:

1. Operationalize a standardized taxonomy for investments based on their climate and sustainability impact by building on science-based research
2. Promote standards for the disclosure of climate and sustainability risks across the financial sector
4. Integrate sustainability risks into the Basel IV framework
5. Decarbonize portfolios of central banks and public financial institutions
6. Integrate science-based climate-financial risk assessment into the operational frameworks of international financial institutions
7. Scale-up sustainable finance for developing countries through MDBs and DFIs
8. Develop sustainable insurance solutions and boost resilience investment to support countries that are particularly vulnerable to climate change
9. Foster cooperation between financial supervisory authorities, scientific research, and civil society
Existing Initiatives & Analysis