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TERMS OF REFERENCE

Climate Stress Testing Specialist: Eastern Caribbean

1. BACKGROUND

The COVID-19 pandemic has brought to light the economic and social vulnerabilities of the region that have resulted in a major economic downturn for countries in the Eastern Caribbean Currency Union (ECCU) due to direct or indirect impacts of the pandemic. Countries in the ECCU are now gearing up their efforts toward a resilient recovery adopting an economy-wide approach. With Government's fiscal space even more constrained, the financial sector can bring the much-needed innovation to leverage scarce public finance and spur green transformation of the economies. The Eastern Caribbean Central Bank (ECCB) is uniquely positioned for this role, given its mandate for foreign reserves management (and reliance of the region on imported fossil fuel), its strong convening role, experience with innovative financial solutions across sectors and ability to tap into alternative sources of financing.

The ECCB is receiving support from NDC Partnership and the World Bank to enhance its planning and recovery efforts in the face of climate change and most recently its response to the COVID-19 pandemic. This will include assessing exposure to climate-related risks and identify approaches to address/manage those risks through green business models for financial institutions. This assistance will strengthen the ECCB's capacity to enhance financial stability in the region by addressing physical and transitions risks of climate change.

Climate change (increasingly becoming unpredictable) affects the stability of the financial institutions and financial system of a country, especially as countries' transition to low-carbon/net-zero economies. Climate risks are unique compared to the typical risks considered by financial institutions in that they have a long time horizon with high uncertainty of physical impacts, policy and socio-economic factors; they are global and economy-wide; and they are complex, varying from region to region and sector to sector.

These distinct characteristics are not captured by risk assessment approaches that rely on top-down modelling and historical trends, are narrowly focused, and assume the structure of the economy and financial system remain unchanged. Thus, making it imperative for financial institutions to adopt climate risk assessment approach through tools/methods such as climate stress testing (to provide a 'what-if' analysis reflecting



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potential future conditions) enabling them to tap into opportunities from transition. Stress tests have been used by financial regulators in the past to gauge the resilience levels of banks to economic shocks.

Countries have increasingly started to invest in developing future oriented climate-related risk assessment models to aid in decision making with an objective to decrease the associated levels of uncertainty and measure the resilience of the economy, both at regional and country levels.

Building on existing systems such as the NGFS Climate Scenarios for Central Banks and Supervisors, this assignment will focus on designing context-specific climate change stress tests for ECCB (micro/macro prudential requirements) and participating financial institutions as a part of their risk management and for mitigating physical and transition risks. This engagement will start with a few institutions as pilot and then further scale up with other financial institutions.

1.1. About the NDC Partnership

The NDC Partnership is a global coalition of countries and institutions working to mobilise support and achieve ambitious climate goals while enhancing sustainable development. Through the Partnership, members leverage their resources and expertise to provide countries with the tools they need to implement their Nationally Determined Contributions (NDCs) and combat climate change to build a better future.

1.2. About the NDC Partnership's Readiness Support for Greening Central Banks

The NDC Partnership Support Unit is calling for international experts to support climate resilient recovery planning in response to the COVID-19 global pandemic. This support comes at a critical time when many countries are revising their commitments to the Paris Agreement in 2020, through the enhancement of their NDCs. The Central Banks have a major role to play in maintaining financial stability in face of various risks (including climate risks) by reducing exposure and mobilising capital from markets and private sector for sustainable investments.

2. OBJECTIVE

The objective is for the expert advisor to work with the ECCB in the development of climate risk stress test to assess exposure to both physical and transition risks, its implementation within the ECCB and participating financial institutions and identifying options for adjusting business models/tools/products to manage climate-related financial risks.



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3. TASKS

- a. Conduct a policy and regulatory analysis for implementation of climate stress testing regime followed by recommendations for facilitative policy and regulatory regime and governance structure taking into consideration international best practices.
- b. Develop a plan to collect quantitative and qualitative data on physical and transitions risks.
- c. Collect quantitative data on regional and sectoral exposures.
- d. Collect qualitative data (e.g., interviews) on scenarios, transmission channels, financial institutions' exposures, and current risk management practices.
- e. Assess quantitative and qualitative information and map relevant climate and environmental risks transmission channels.
- f. Determine the climate-related and other environmental exposures in the financial sector in terms of financial risks (including credit risk, operational risk, market risk).
- g. Determine the most appropriate databases for facilitating the development of the climate risk assumptions.
- h. Determine which climate-related and environmental risks are most material in the ECCU.
- i. Develop a few extreme but plausible scenarios or set up vulnerability assessments of exposures to the risks.
- j. This could include the identification and further development of disaster risk models, macroeconomic models, and transition risk models.
- k. Conduct a stress test or a sensitivity test to estimate the potential magnitude of the risks and determine losses and impact on prudential ratios and/or other risk indicators. For example, economic and financial impact assessment for basis variables such as GDP, inflation, equity and bond prices, loan valuations, etc. Existing models can be enhanced.
- l. Execute climate stress testing and scenario analysis to generate strategic insights that will support the institutions' decision making with respect to strategic planning and risk management.
- m. Determine a supervisory response to the findings of the assessment, including recommendations for public authorities and financial institutions
- n. Develop a summary (main findings and conclusions), supported by quantitative and qualitative data and visualization
- o. Develop monitoring framework - continuously working with the financial sector and other stakeholders to improve the understanding, pricing, and management of climate-related risks
- p. Set the key risk indicators that will help monitor the climate-related and environmental risks
- q. Communicating the results of the stress tests to the financial sector and the general public.



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- r. Build internal ECCB capacity to conduct and periodically review the identified main climate risks and their mitigation

4. DELIVERABLES

- a. Mapping of relevant stakeholders for data collection and data collection plan.
- b. Mapping of relevant climate and environmental risks transmission channels.
- c. Methodological framework for climate risk stress testing, including data and tools needed.
- d. Summary report (main findings and conclusions) of stress testing for select financial institutions, supported by quantitative and qualitative data.
- e. Summary report on recommendations/supervisory response to findings of the stress testing.
- f. Monitoring framework including key risk indicators to be monitored.
- g. Develop guidance materials for implementation of climate risk stress testing analysis and supervisory response.
- h. Impart capacity building – training workshops for ECCB team and participating financial institutions.
- i. Develop templates and framework for the ECCB and financial institutions to adopt and apply.

5. QUALIFICATIONS OF THE EXPERT

The specialist will have:

- a. master's degree in finance, or economics;
- b. at least 15 years of relevant professional experience in the relevant field – climate change, financial and economic modelling;
- c. experience in stress testing more specifically climate stress testing and scenario analysis and climate risk management;
- d. advanced knowledge of climate change risk issues and climate change policy;
- e. strong quantitative and econometric skills;
- f. proven international and national experience of working in similar geographies, preferably in Caribbean countries;
- g. strong English writing and speaking skills.

The specialist will report to the ECCB and the World Bank.

6. DURATION

The work of the expert advisor is expected to last for 3 years and will set out as a one-year contract that will be renewable. The contract can be extended to increase the scope, level of effort and/or duration, as determined by ECCB and WB. The



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consultant's performance will be assessed regularly, based on progress made toward achieving the project development objective as measured by development of climate risk stress test, implementation in participating financial institutions to assess exposure to both physical and transition risks, and options for adjusting business models to become more resilient.

7. PROPOSAL SUBMISSION

Interested candidates should submit a proposal including:

- A statement of interest, summarizing how the proposed applicant meets each of the qualification and experience requirements of this ToR, including references with contacts (name, organization and, email) of similar previous work;
- Detailed CV;

Please use the following format for the email subject line: **Climate Stress Testing Specialist Eastern Caribbean**. Emails sent with other subject lines may not be reviewed or considered.

All proposals must be submitted by **25 October 2021** to asignorini@worldbank.org and nmukhi@worldbank.org. All proposals must be submitted in electronic format. Please note that only short-listed candidates will be contacted.