REPRINT

CLIMATE RISK

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MINI-ROUNDTABLE

CLIMATE RISK

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Naeem Siddiqi is the author of *Credit Risk Scorecards* and *Intelligent Credit Scoring,* and has advised and trained bankers in over 20 countries on the art and science of credit scoring. He has worked in retail credit risk management since 1992, both as a consultant and as a risk manager at financial institutions. At SAS, Mr Siddiqi played a key role in the development of products relating to credit scoring. He is currently responsible for advising customers on issues pertaining to credit scoring and decisioning, climate change, model governance, AI/ML in credit risk as well as modernising analytics infrastructures.

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Peter Plochan is principal solutions manager at SAS, assisting financial institutions in dealing with their risk management challenges around risk regulations, enterprise risk management (ERM), risk governance, and risk analysis and modelling. He has a finance background and is certified financial risk manager with 10 years of experience in risk management in the financial sector. He has assisted various banking and insurance institutions with large-scale risk management implementations and has worked internally and externally as a risk management adviser.

Adityadeb Mukherjee
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Adityadeb (Adi) Mukherjee is the head of climate risk management at Standard Chartered Bank, responsible for delivering the second line of defence responsibilities around climate risk management. This includes development and implementation of the bank's climate risk framework, covering all elements of risk management – risk identification, assessment, mitigation, monitoring and reporting. Mr Mukherjee joined Standard Chartered in 2012, and his experience covers financial and non-financial risk management, including credit and portfolio model development, model and portfolio risk governance, operational risk, reputational risk and global effectiveness review of the bank's enterprise risk management framework. He is based in London.

R&C: Could you provide an overview of the key climate risks facing businesses?

Plochan: When talking about the impact of climate risk, it is important to make a distinction between corporates and financial institutions (FIs). We also need to make a distinction between the physical impact and the transitional impact of climate change. For corporates, there is a physical risk resulting from climate change that would impact their operations. For example, a farmer who grows cotton is dependent on water supply and is therefore exposed to changing patterns in rainfall that may reduce water supply. That is a physical impact. In terms of transitional impacts, if we continue the example, the farmer is also exposed to any changes in government climate change policy related to the transition to a low carbon economy. Such measures may introduce penalties for water-heavy plant production, such as cotton production, and that would impact the farmer's revenues. As for FIs, a range of corporates that may experience financial instability due to climate change are included in their portfolio playbooks, both current and long, which exposes FIs to the impact of climate change on their borrowers. So climate change risk manifests as increased credit risk in FIs' portfolio books. But there is a separate dimension for FIs: they are also exposed to the physical impact of climate change on their own operations. For example, a facility containing data servers may flood due to heavy rainfall. In terms of transitional impact, FIs may suffer penalties for financing heavily polluting projects. In this sense, operational, strategic and reputational risk for FIs can be a manifestation of climate change risk. There is a taxonomy introduced by the Network for Greening the Financial System (NGFS), an organisation formed in 2019 that contains 60-plus central banks and regulators, which drafted a number of guidelines on how banks and financial institutions should respond to climate change risks.

Mukherjee: Climate risk facing both business, and society at large, can be broken into two key sub-types. First, physical – both acute and chronic impacts through emerging changes in global temperature and weather patterns. Second, transitional – the risks inherent in society's response to climate change, through adjusting to a low or zero carbon economy. Climate-related litigation and liability risk is an emerging theme too, which needs to be closely monitored for banks. These risks often manifest through more established financial and non-financial risk types – such as credit, market and operational – which means these are cross-cutting in nature. Therefore, the treatment and management of these risks should incorporate the far-reaching depth and breadth associated with multiple risk types.

R&C: How would you describe awareness of climate risks among

corporate board members? Does more need to be done to appreciate and understand the issue, and how it may affect business operations?

Mukherjee: In the last 12 months, climate risk will likely have made it onto the agenda for most corporate boardrooms. Our board has strategic oversight on our approach to climate change overall, which includes accelerating sustainable finance, reducing our direct and financed emissions, and managing the risks arising from climate change. The board and relevant sub-committees discharge this responsibility through reviewing periodic written updates, and robust discussions. We have also held specialist training and awareness sessions with board and senior management across these topics. Among other things, these sessions have focused on how climate risks manifest through existing risk types, and consequentially impact our own operation and those of our clients. With significant regulatory developments, such as the NGFS and development of guidelines such as the Task Force on Climate-related Financial Disclosures (TCFD), we believe things are on the right course. Substantial focus remains on building tools and methodologies to identify and manage climate risks akin to other established financial risk type frameworks, and embedding them across the organisation.

Siddiqi: Awareness at board level among FIs is very high. In the current phase, FIs are making a coordinated effort to assess their own operations to identify how they are exposed to climate change and how they need to disclose their findings to the market. Most of the larger banks from North America, Europe and Asia are members of consortiums, such as the TCFD, as well as the NGFS, which comprises mostly central banks from around the world. Banks have formed these consortia to cooperate on issues such as standards for frameworks, disclosure and so on. The TCFD, for example, has issued guidance on what it considers good disclosure packages. The focus at the moment

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is on disclosure and guidance at a very high level. Although awareness is high, more needs to be done.

R&C: Could you provide an insight into current political, legal and regulatory trends on climate change, and how these trends are affecting companies?

Plochan: No doubt, climate change has received increasing attention over the last decade, from a public, political and legal stance. We have the Paris Agreement and various carbon tax rules introduced in certain jurisdictions already. We are also seeing political pushback in some countries. What has been particularly interesting in recent years is the attention given to climate change by financial regulators and central banks. This is a big step. The formation of the NGFS, for example, was a bit of a surprise. It is certainly an organisation worth following and observing. It has been a year since these 60 central banks and regulators came together, and already the NGFS has produced some interesting guidelines, recommendations and calls to action. These regulators have made a clear statement to FIs around the world that they believe climate change is a source of financial risk, and they intend to ensure FIs keep those financial risks in order. It means that banks need to pay a lot of attention to climate change because regulators consider it a vital source of financial risk. The NGFS has big plans and appears to be working on a climate change risk framework and also on introducing stress testing for climate change risks. Sustainability and corporate social responsibility (CSR) have been around for 20 years and are 'nice to have', but recent developments are about managing risk – and because the message is coming from global regulators and central banks, it is a very powerful statement.

Mukherjee: We are seeing a significant push in many markets for net zero by 2050, with regulatory interest within the financial sector on improved and consistent assessment and disclosure of climate risks. Many of our host regulators are already members of the NGFS, which indicates strong regulatory interest on climate risk. We welcome the current trends, but also note that these trends need to continually increase to deliver positively on the planet's climate goals. Risk of fragmentation should be closely watched as the thinking evolves on climate risk. If multiple markets move in different directions on how they believe banks should manage climate risk and opportunity, there will be huge challenges in consistency and alignment globally.

Siddiqi: It is important to note that the impact of climate change goes beyond just political, legal and regulatory challenges. There are also consumer preferences that drive business trends. For example, consumers want to deal with companies that are 'green', that are dealing with climate change and taking it seriously. Companies, including FIs, need to be sustainable. They need to be seen to be doing the right thing in order to attract the right type of customer. In addition, the new wave of job seekers are responsible people who want to work for companies that are not harming the environment and can demonstrate good ethical practices. So not taking action on climate change may actually make it harder to hire good people and build market share. Such reputational aspects represent a transitional impact of climate change.

R&C: How important is it for companies to prepare for and adapt to climate change? In your experience, does more need to be done on this front?

Mukherjee: It enormously important for companies to prepare for and adapt to climate change. We know disclosure is not where it needs to be, particularly in emerging markets, and although some companies may be having conversations on preparation and adaption, for banks to allocate capital appropriately, this needs to happen much faster. Banks can play a pivotal role in helping their clients understand the climate risks facing their business, and help them develop appropriate mitigation or adaptation plans.

Siddiqi: Adapting to climate change is very important. The effects of climate change are going to be pervasive. We have only touched on some of

the effects from a risk management perspective, but in general, for any business, it will have an impact on costs, for example due to aspects such as carbon taxes or more frequent disruptive events like cyclones, hurricanes and floods which drive up the cost of goods. It will impact loans, the repayment on loans, property values, collateral for loans, insurance risk, insurance premiums, equity markets and bond markets – which are already being affected by climate change. The first step for companies is to figure out their exposures to climate change risk – in terms of both physical and transitional risks – then come up with frameworks and strategies to mitigate them.

R&C: What proactive steps can companies take to adapt to climate change? What should a climate risk assessment entail, for example?

Plochan: Companies must consider their exposures to climate change, which will be different depending on their sector. In terms of physical risk, they will need to assess how the environment is changing around them – such as an average temperature increase of 2 degrees, for example – and how this impacts their business. In terms of transitional risk, companies that have a heavy carbon footprint can expect to face some unfavourable climate policies and regulations. If the European Union (EU) introduces a carbon tax, how might that impact a product portfolio? What if there is an agreement to ban all single-use plastics within five years and that is the company's only product? Based on their exposure, companies will need to take some preventative action. There are also reputational aspects to consider. Ultimately, companies need to think about the future: how might certain climate changes or shifts in public opinion in five or 10 years force a change in business strategy? Such forecasting often benefits from an analysis of public surveys. Banks, which have to assess climate change exposure within their long portfolios, can link global temperature rises to macroeconomic factors, such as the impact on GDP across different segments, for example, and then translate these into direct impacts on credit risks within their portfolios. In this way, it becomes essentially scenario-based risk analysis or stress testing.

Mukherjee: Understanding of exposure to physical climate risk, alignment with disclosure expectations, a view of scope 1, 2 and 3 emissions profile, including supply chain, and providing a clear transition trajectory are all required to fully understand exposure. For banks, it is primarily about understanding the physical and transitional risks faced by their clients, and helping the clients along their transition journey. There is also an element of managing the operational risks arising from physical risks to a bank's own operations. Specific elements of risk assessments would depend on the client's business model, or nature of the product or relationship. For example, for collateralised lending, assessing physical risks on the location of the collateral is hugely important at a transaction level, along with assessing mitigation plans and risk concentration at a portfolio level, ideally under baseline and stress scenarios.

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> *Peter Plochan, SAS*

R&C: What cost-effective strategic options are available to assist this process?

Mukherjee: As noted in our White Paper published in May 2019, in the absence of consistent disclosure across the high carbon emitting sectors, we are actively partnering with innovative FinTechs and think tanks to get access to insights based on analysis and other sources of information. There are various external solution providers that banks could explore and evaluate to bridge the internal knowledge gaps, including working with academic institutes. Further guidance is expected to be provided by the handbook being worked on by the various Working Groups under the Prudential Regulation Authority (PRA) and Financial Conduct Authority (FCA)'s joint Climate Financial Risk Forum.

Siddiqi: Right now, the cost of doing nothing is probably cheaper than doing something – and this is the political view that some people are taking. However, not doing anything today is going to cost a lot more in the long term. With climate change, we are looking at a time frame of 50 to 80 years for the impact to materialise. Companies need to ask themselves: what can I do to be better in 10 or 20 years' time? Essentially, that means adapting best practices in terms of sustainable behaviour. It means taking more individual responsibility for their actions. First, companies need to plan to be green, to reduce their own carbon footprint. Second, they need to identify and calculate the risks they will face as a result of climate change.

R&C: Looking ahead, do you expect this issue to continue to climb the boardroom agenda? What essential advice would you offer to companies on improving their ability to manage climate risk?

Plochan: We will see more discussion around climate change, and more debate within society and the political arena, which will drive the transitional impact of climate change. Policies, regulations and behaviours will have a real impact on firms based on how 'clean' they are. In parallel with growing losses caused by extreme events, physical risks for businesses will also grow. A number of global initiatives are already in place to push companies to provide more climate change risk-related disclosures. There is now also pressure on

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corporates to devote resources to managing climate change risk. For banks, as they start to think about climate change risk within their own portfolios, they will begin asking prospective borrowers to explain their exposures to climate change. All in all, it will be very difficult for boards to ignore the topic. Our simple advice would be that it is never too early to start thinking about climate risk. Companies can begin by collecting data. A bank can investigate how many defaults might be associated with climate change. A farmer can evaluate the connection between recent annual yields and changing weather conditions. What companies need to do is take a long-term perspective and develop a strategy based on their exposure. Can they continue as they are now, or do they need to take action? In terms of exposures, companies need to closely monitor the situation and pay attention to what is happening, especially for transitional risks, because they have indirect impacts that are not always immediately visible. Lastly, there is no point reinventing the wheel; everybody has an opinion on this topic, so there are plenty of resources available to help companies along the path.

Mukherjee: I think the strategic conversations around climate risk will continue to rise, even more so with better tools and mainstream assessment and quantification of the risks. Collaboration is also critical for developing effective adaptation and mitigation, with governments and FIs working together with industry, academia and wider civil society. I would recommend starting off with understanding the distinction between a bank's contribution to climate change, and exposure to the risks arising from climate change. The first step to managing climate risks better is to understand the linkages it has with existing risk types, which are usually managed with dedicated frameworks, policies, processes and controls. Once the linkages are understood, the next step would be to update the relevant frameworks as necessary with reference to climate risk and risk-assessment tools, which could even be qualitative assessments to begin with. Delivering training and awareness sessions would also be key to building organisation-wide capabilities for managing climate risks. It is also worth keeping in mind that managing climate risks well can unlock significant opportunities for banks, so it is fundamental to a bank's financial strategy.

Siddiqi: The topic of climate risk will undoubtedly climb the boardroom agenda. So what can companies do? First, we need to realise this is a global event, with a severe impact around the world, so it requires a proportionate response. Second, companies also need to self-study. They must look at what they are doing, how they can reduce their carbon footprint, assess their own exposures to these risks and disclose them to increase understanding globally. Third, once we have an idea of what the risks exposures are, there must be a comprehensive, global effort to create a level playing field so that everybody can respond in a similar way. Cooperation will be key. Joining organisations such as the TCFD, and adapting and adhering to the guidelines, makes it easier to formulate a global response than if everybody hides their cards. This way, we all have a better chance to deal with the climate crisis. R&C