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Carbon Footprint as Climate Change Disclosure: A Step towards Regulating Climate Changes

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ABSTRACT: Carbon Footprint refers to the potential climate impact (Global Warming) due to Greenhouse Gases (GHG) emitted directly or indirectly owing to an organization's activities. A climate change disclosure must be studied so that its key emission sources can be identified and necessary mitigation measures be adopted for carbon reduction. An assessment based on the same showed emissions which were reported from college-owned facilities, indirect energy emissions from electricity, travel and solid waste generation. Consequently, some measures for efficient power consumption and management of waste were suggested to set a target for carbon reduction in the upcoming years. The benefits of the project will manifest in substantial utility cost reduction in the coming years, and will lead to both financial as well as environmental sustainability.

KEYWORDS: carbon, footprint, assessment, electricity, environmental, sustainability, project

I. INTRODUCTION

The Securities and Exchange Commission (SEC or Commission) has periodically evaluated its regulation of climate change disclosures within the context of its integrated disclosure system. In 2010, the Commission issued an interpretive release that provided guidance to issuers as to how existing disclosure requirements apply to climate change matters. The 2010 Climate Change Guidance noted that, depending on the circumstances, information about climate change-related risks and opportunities might be required in a registrant's disclosures related to its description of business, legal proceedings, risk factors, and management's discussion and analysis of financial condition and results of operations. The release outlined certain ways in which climate change may trigger disclosure obligations under the SEC's rules. It noted legislation and regulations governing climate change, international accords, changes in market demand for goods or services, and physical risks associated with climate change.[1,2]

Since 2010, investor demand for, and company disclosure of information about, climate change risks, impacts, and opportunities has grown dramatically. Consequently, questions arise about whether climate change disclosures adequately inform investors about known material risks, uncertainties, impacts, and opportunities, and whether greater consistency could be achieved. In May 2020, the SEC Investor Advisory Committee approved recommendations urging the Commission to begin an effort to update reporting requirements for issuers to include material, decision-useful environmental, social, and governance, or ESG factors. In December 2020, the ESG Subcommittee of the SEC Asset Management Advisory Committee issued a preliminary recommendation that the Commission require the adoption of standards by which corporate issuers disclose material ESG risks.

Scientists have known for centuries that gases in Earth's atmosphere like carbon dioxide and methane act as a greenhouse, preventing a certain amount of heat radiation from escaping back to space. The more carbon dioxide in the atmosphere, the warmer it gets.

Over Earth's history, carbon dioxide levels fluctuate due to volcanic activity or the carbon cycle (animals and bacteria breathe in oxygen and breathe out carbon dioxide while plants do the opposite).



However, the rises in temperature and carbon dioxide levels we've seen in the past century are extreme and are accelerating. The rate of carbon emissions are the highest they've been in 66 million years and the amount of warming in the coming decades is expected to be 250 times greater than the average warming during the past century.[3,4]

No country today is immune from the impacts of climate change. Unchecked, climate change will push 132 million people into poverty over the next 10 years, undoing hard-won development gains.

- Natural disasters cost about \$18 billion a year in low- and middle-income countries through damage to power generation and transport infrastructure alone. They also trigger wider disruptions for households and firms costing at least \$390 billion a year.
- According to our most recent research, climate change could drive 216 million people to migrate within their own countries by 2050, with hotspots of internal migration emerging as soon as 2030, spreading and intensifying thereafter.

Reducing emissions and becoming more resilient are possible, but require major social, economic and technological changes.

Priorities for climate action also differ significantly across countries and across sectors.

The urgency and scale of the challenge requires countries to learn quickly from each other, adapt to their own special circumstances, and be bold in implementing policies that bend the emissions curve and improve livelihoods.

- The challenge for developing countries is they no longer have an opportunity to develop first in a high carbon-intensive way and then clean up and decarbonize later. They need support *today* to make investments now to slow a changing climate and enable billions to live safer, more prosperous, inclusive and sustainable lives.[5,6]
- If they are well designed and implemented, the policies countries put in place for low-carbon, resilient growth could also help them address poverty and inequality.

II. DISCUSSION

As an innovative way to value our client's sustainability performance, Societe Generale has developed an Impact Loan offer, linking the financing structure to the client's achievements in terms of corporate and social responsibility (CSR) targets. According to a recent RBC research paper, Societe Generale ranked 3rd in sustainabilitylinked loans deal value in the EMEA region. Defined on a case by case basis, the targets are discussed with our clients and supported by an incentivised mechanism. With this tailor-made structured offer, Societe Generale joins forces with our clients to help them achieve their sustainability ambition and reach their CSR goals. Sustainability mechanisms offer multiple structuring opportunities and can also be used in the structuring of bonds. €1.4bn loans with positive impact features have been granted by Societe Generale to our clients. With a top-ranked ESG Research team, performing index solutions and a broad socially responsible product offer - ranging from the most vanilla to the most customized proposal - the aim is to deliver sustainable investment solutions that fit the diverse ESG & SRI strategies of Societe Generale's clients. Societe Generale's equity research systematically includes an ESG analysis as well as the financial analysis.³⁸ Socially Responsible and Impact investing (SRI) issues, as well as Environmental, Social & Governance (ESG) factors, have become important performance drivers. Sitting alongside financial and macroeconomic considerations, ESG factors have become easier to quantify and are now considered when assessing any company. Since 2016, Societe Generale's dedicated ESG research team has helped investors and asset managers to integrate these criteria into investment decisions. From 2020 all Societe Generale equity research integrates ESG analysis. Lyxor also puts SRI at the heart of its investment strategy by creating concrete solutions that take into account environmental, social and governance factors to meet the challenges of the future, including climate transition and growing demand for responsible investment. In 2017, LYXOR launched the world's first Green Bond ETF (this fund is representative of the performance of green bonds issued by Investment Grade entities). More recently, LYXOR is the first provider to launch an ecosystem of ETFs designed to counter climate change. It specifically completed its ETF offer related to the fight



against climate change and reinforced its shareholder engagement policy to push climatefriendly policies in the companies invested.[7,8]

Societe Generale aims to meet its clients' ESG priorities by offering a wide range of sustainable investment solutions. Below are some examples of initiatives that address environmental priorities more specifically: Underlyings • Commercialization of structured products on Equity indices that integrate Environmental filters, such as the CO2 emission levels, thus allowing capital flows to be redirected towards firms that are leaders in that space: such as Solactive Environmental Footprint Index or Societe Generale Climate Risk Control Index. • Commercialization of linear products on equity baskets that integrate Environmental filters, such as the CO2 emission levels, thus allowing capital flows to be redirected towards firms that are leaders in that space. Products • Commercialization of Positive Impact notes that allow clients to invest in a structured note whilst promoting Positive Impact Finance; some of the positive impact loans financed by Societe Generale can have an impact towards the fight against global warming (Climate change mitigation represents 39% of the Positive impact financings supported by the PI Notes, as per the 2019 annual report on the Positive Impact Notes). • Commercialization of structured notes that allow investors to contribute to reforestation projects, that foster the capture of CO2.

Societe Generale Insurance's investment policy includes a number of environmental, social and governance (ESG) criteria. These ESG criteria are officially taken into account alongside credit ratings and rankings when selecting securities and deciding whether or not to keep them in the portfolio. At the end of 2019, Societe Generale Insurance had assessed around EUR 87.7 billion of assets under management according to ESG and carbon criteria. In addition, by the end of the year, it had invested a total of EUR 1.5 billion (up almost 120% on end-2018) in environmental or energy transition projects, particularly via green bonds. Through its life-insurance savings solutions, Societe Generale Insurance offers its customers a range of sustainable financial products enabling them to invest in projects and companies that meet environmental and social needs. At the end of 2019, in accordance with the PACTE law, all of Societe Generale Insurance's French contracts offered at least one vehicle backed by a solidarity fund or an SRI* (Socially Responsible Investment) or Greenfin* (energy and ecological transition financing) certified fund. This equated to a range of 153 sustainable vehicles (i.e. certified vehicles or those offering similar characteristics), totalling EUR 864 million in assets under management (vs. EUR 353 million at end-2018, i.e. an increase of close to 145% over the year).[9,10]

III. RESULTS

Green Yodha is a sustainability initiative by Schneider Electric that aims to build a community of conscious citizens, businesses, and institutions to unite for a collective action towards the adoption of practices in energy efficiency, renewables and solar, automation, digitalization, and a new world of electricity to meet both individual and corporate sustainability goals. To coincide with COP26, the Schneider Electric™ Sustainability Research Institute releases a major new report on how we could achieve net-zero by 2050 and limit global warming to the critical 1.5°C threshold.

Entitled "Back to 2050" and conducted with energy intelligence company Enerdata, it assesses the long-term impact on energy usage and associated CO2 emissions of changing social expectations and up-and-coming, disruptive technologies such as autonomous driving, decentralized clean-energy generation, smart EV charging stations in buildings and the use of more digital tools in infrastructure construction, among others.

There is a growing community of financial institutions taking action and demonstrating leadership on climate change. Some institutions are allocating capital and steering financial flows towards more low carbon, climate resilient activities. Others are taking steps to change corporate behavior, influence policy outcomes and build the data, tools and transparency required to embed climate change into how the market functions. This report details finance sector leadership actions and their contribution to solving the climate change challenge across the following six areas: 1. Low carbon and energy efficiency finance and investing: • Pension fund allocation to low carbon and energy efficiency: Some pension funds are increasing their allocation to low carbon and energy efficiency assets, thereby playing a vital leadership role. • Supporting renewable energy projects: Some institutional investors are investing in renewable projects via private equity and infrastructure opportunities. Some banks are shifting their loan books towards financing renewables projects. These actions are having a direct impact on the availability of capital for renewable energy projects. • Partnerships in developing countries: Unique partnerships are forming between governments, development banks and financial institutions to finance and invest billions of dollars into renewable energy and energy efficiency opportunities in emerging markets. • Growing green bond market: A flourishing green bond market exists and is



growing, which is integral to providing the debt capital needed to finance the low carbon transition. • Reducing real estate emissions and energy use: The industry is utilizing new tools, setting targets and steering portfolios and financing activities towards lower carbon, higher rated energy efficient buildings, a core pillar for achieving the energy efficiency improvements needed to avoid dangerous climate outcomes. 2. Emissions reducing finance and investing: New techniques are being implemented by financial institutions to reduce the carbon emissions of loan books and investment portfolios; an indirect but potentially powerful mechanism for reducing global emissions. In addition, new strategies and approaches are being implemented by institutional investors to manage the risks stemming from exposure to fossil fuel companies. 3. Adaptation finance and investing: Banks and insurance companies are developing financing solutions to support adaptation projects, primarily in developing countries, with significant potential for more financial institution involvement in partnership with governments, development banks and developing country agencies. 4. Measurement and transparency: The industry is collaborating to improve carbon and climate change risk/performance measurement and reporting by companies and by the finance institutions themselves, a crucial building block for managing and reducing carbon emissions.[11,12]

5. Engagement with companies: Growth in proxy voting action related to climate change as well as extensive company engagement is having a direct impact on corporate reporting of carbon emissions and strategies to respond to climate change. 6. Engagement with policy makers: The industry is collaborating to engage with policy makers to influence policy and regulatory outcomes that encourage greater participation from the finance industry in the transition to a low carbon, climate resilient economy. The formulation of international and national policy measures provide the backdrop against which some of these leadership actions have emerged. There is an opportunity to build on these actions and embed climate change into mainstream finance in the following ways. Implementation of government policies that provide the industry with more transparency, longevity and certainty are critical. A supportive policy environment needs to include reliable and economically meaningful carbon pricing to help redirect investment commensurate with the scale of the climate change challenge. Intertwined with this is a need for strong measures to support energy efficiency and renewable energy to facilitate deployment. Removing any direct or indirect subsidies in favor of fossil fuels is of particular urgency. To encourage more private sector involvement in adaptation financing there will need to be public/ private partnership strategies that are designed to deliver solid investment outcomes.[13,14]

IV. CONCLUSION

Finally, a coherent policy framework should also take into account any knock-on effects that changes to financial regulations might have on low carbon transition investments. Develop capacity of the financial industry to assess the risks and opportunities of climate change. Finance institutions are taking action on climate change and allocating capital. For these actions to become more widespread finance institutions need to build an assessment of climate change risk and opportunities into core processes, engage with companies and policy makers, measure and report exposure to carbon emissions and develop strategies to reduce emissions across financing and investment activities. Collaborate to unlock further capital flows. A shared understanding needs to be built between policy makers and the finance sector, based on a mutual recognition of the climate change challenge as well as an understanding of the finance and capital allocation decision-making process. This will help the finance industry and governments to work more closely together to mobilize private sector capital. This report demonstrates examples of successful partnerships between finance institutions, development banks, international financial institutions and governments are useful mechanisms that could be built upon to finance both mitigation and adaptation needs, particularly in developing countries. There is an opportunity for further collaboration of this kind, to build momentum and spur more private sector investment[15,16]

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