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Transition to a Low Carbon Economy: A Case of Commercial Banks of Sri Lanka

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Abstract: Banks have understood that, for their own reasons and from the standpoint of their stakeholders, they cannot afford to continue along the usual road of fostering green economic development initiatives at this point in the cycle. Therefore, the banks have put ecological and digital objectives on the same level of importance as policies on environmental management systems in their strategic planning. To be more specific, achieving the low-carbon economy target would require not only limiting transition and practices to allow them to peak and carbon emissions reductions to peak, but also putting in place a number of activities and initiatives, as well as regulations, to achieve the desired results. After describing how banks are moving toward low-carbon executions, the study explains how they are putting their ideas into practice in order to reach their goals.

Keywords: Low carbon, Green financing, Carbon footprint, commercial banking industry.

INTRODUCTION

Sri Lanka understands that it has a duty as a global citizen to preserve the Paris Agreement's goal of limiting global warming. It will try to drive growth, particularly post-Covid economic expansion and livelihood requirements, along a low-emission pathway that supports both climate change mitigation and adaptation, with a significant emphasis on achieving large income and social evolution in the next generation (Nuwan. *et al*., 2019; Selvakkumaran and Limmeechokchai, 2015). As a result, Sri Lanka appeals to the international community for assistance in meeting the technical, financial, and additional capacity requirements identified for impactful implementation and for maintaining the country's low-carbon trajectory while striving to improve the economic well- being of its citizens (Siriwardena. *et al*., 2007). The preliminary data of the panel on climate change has revealed that the preliminary data of the panel on climate change has been affectedby the need to lower the production of greenhouse gases on the globe, particularly carbondioxide (CO2), has been widely recognized. Researchers believe that the consumption of CO2is related to progression or development in a nation. This is up for debate (Jiang. *et al*., 2018; Nuwan. *et al*., 2019). Would a nation such as the United States be ready to reduce its CO2 emissions in order to benefit the environment if this rationale were to be followed or according to the acts of the nation's, the country is plainly sending signals that it has no intention of reducing its CO2 emissions in the near future (Nianthi and Shaw, 2015). Climate change is a significant source of worry in Sri Lanka right now. Although the impact of climate change is becoming a threat to the health, economy, and ecology of the nation, economists are beginning to see that there are financial benefits to limiting climate change and establishing a low-carbon economy (Siriwardena. *et al*., 2007, Nianthi and Shaw, 2015). Financial products and services and investment policies, as well as business process design and management, will be transformed as a result of the economic transformation that will be required for the creation of a strong and successful low carbon economy. Banks can play an important role in providing important authority for the necessary economic reform, which provides new possibilities for financing and investment policies, as well as portfolio management, for the formation of a good and successful low carbon economy (Monnin, 2018). Firms have begun to see and feel the manifestations of global warming, which include major changes in weather patterns and our natural environment, and environmental consciousness has spread like wildfire as a result of this (Lugo-Morin, 2021). So, each of us must be aware of climate change and what it will do, and we must all do our part to improve the environment.

Accordingly, the primary goal of this paper is to examine how Sri Lankan banks are reacting to environmental turbulence and present an overview of their activity in terms of green bankingadoption, awareness, and motivations as well as their problems and gaps in achieving these goals to transition practices to a low-carbon economy. Section I, which includes this section, provides an overview of green banking, climate change, worldwide activities on low carbon practices, and

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how they embrace the banking sector in Sri Lanka. Section II, which follows the data and methods utilized to meet the study's goals, Finally, in section III, the author has summarized all of the case insights.

Overview of Selected Players in the Category of Commercial Banks Sampath Bank PLC (SB)

Sampath Bank, The Public Limited Liability Company was established in Sri Lanka on March 10, 1986, under Companies Act No. 17 of 1982, and is publicly traded on the Colombo Stock Exchange (CSE). A commercial bank that has been licensed under the Banking Act No. 30 of 1988. The company was re-registered on April 28, 2008, in accordance with Companies Act No. 7 of 2007. In its history, Sampath Bank has established itself as one of the most dependable and reliable financial organizations not only in Sri Lanka, but also throughout the larger South Asian area. At present, Sampath Bank is one of the country's major private sector banks, with an asset base in excess of Rs 1 trillion and a strong National Long-Term Rating of 'AA- (lka) with a stable outlook' granted by Fitch Ratings.

Hatton National Bank PLC (HNB)

Hatton National Bank is a leading private sector commercial bank in Sri Lanka, with 251 branches island wide. It is a member of the Asian Development Bank Group. When the hill station of Hatton was founded in 1888, it was the first bank of its sort in the booming tea estates of then-Ceylon. The bank was known as the Hatton Bank. Hatton Bank, as the name suggested, was a financial institution that provided a breath of fresh air to thousands of agricultural workers. In addition to retail banking, HNB is also actively engaged in corporate banking, international banking, treasury, and project finance. HNB maintains its position as the best digital financial services adapted banking institution in Sri Lanka, with an asset base exceeding Rs 1.29 trillion and a solid National Long Term Rating of "AA-(lka) with Stable outlook" assigned by Fitch Ratings.

Other Commercial Banks

Other key players in the market are Commercial Bank, DFCC, NTB, and NDB. Commercial banks have very good digital power in the Sri Lankan banking industry. When considering NTB and NDB, at the moment, they are the fastest growing digital financial service providers in the market. In the digital banking sector, these major banks are posing a significant market competition to the aforementioned two banks.

Key Objective of the Study

The main objective of this study is to investigate the transition of selected commercial banks in Sri Lanka in to the low carbon economy. It is important to figure out the level of adaptation to less carbon consuming banks in their business model.

METHODS

This study adheres to the subjectivism paradigm as the research philosophy in this paper. Theinductive approach is used to illustrate the empirical links and propose future research ideas. The research technique was based on a review of the literature, and linked journal articles, book chapters, annual reports, company publications, and industry publications together to assess the theoretical and empirical justifications while also disclosing industry-related justifications for the findings. Another way to frame the study was to do a simple content analysis of information about the industry and the companies in it. This led to case studies on low carbon transition strategies in the industry being found.

Theoretical Foundation for Case Study

The author has constructed theoretical reviews for the important topics that are connected to the content of the case study, which may be found here. The objective of establishing theoretical connections for the key sections of this research is to link how selected commercialbanks in Sri Lanka transition to a low carbon economy in relation to recognized theories and how banks practice less carbon consumption in banking operations in relation to accepted theories. The case study material adds to the practices, and the literature review demonstrates how the relevant theories are presented and are functional. The author may make a connection between these two points to learn more about how ideas and practices interact in the current world, with particular reference to the Sri Lankan banking industry. Selected commercial banks are using ongoing methods for adaptation to low carbon banking, with a particular emphasis on carbon generation through business operations. While the Theory of Planning Behavior (TPB) has been shown to be generally useful, several researchers have attempted to enhance its explanatory power and practical usage by including additional constructs into the TPB theory (Borthakur and Govind, 2018; Ye. *et al*., 2017). A fresh way to analyze low-carbon consumer behavior as well as low-carbon business operations has been developed in this work, which builds on

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the TPB by including the core concepts (Lei. *et al*., 2017). In accordance with TPB, individual attitudes about the importance of environmentally friendly decision-making might influence and promote the behavior of the other competitors who share those ideas (Groening. *et al*., 2018; Joshi and Rahman, 2017). The idea that one's actions in the market mayaffect the actions of other customers is based on this concept.

METHODOLOGY

In preparing the case, the researcher used a deductive technique to evaluate ideas, theories, and earlier literature, which he found useful. This research has been designed as part of a mix approach. The author has chosen Sampath Bank and Hatton National Bank for this study despite the fact that there are many banks in the commercial banking industry, including government banks, that have different approaches to the study area. This is due to the fact that both banks are considered to be the most innovative commercial banks in Sri Lanka owing to the size of their portfolios in terms of assets and liabilities, profitability, contribution, and customer base. Furthermore, as compared to other banks in the nation, they have carried out the greatest number of CSR operations. A summary structure of a literature review as well as a template of case review were used in this research to assess theoretical material, which was supplemented by case relevant examples from both Sampath Bank and Hatton National Bank. In addition, secondary data acquired from annual reports, web sites, and other secondary sources has been used to further enhance the case study.

Empirical Review of Sri Lanka for Low Carbon Economy

Sri Lanka's policies and strategies in the six sectors were reviewed along with the National Environment Policy, the National Climate Change Policy, the National Policy for Sustainable Development, and the National Policy for Sustainable Consumption & Production in order to create these policies. (Ye. *et al*., 2017) explain that circular economy principles and enhancing GHG sinks by increasing forest or tree cover are all supported in general by the aforementioned policy objectives. Proactive initiatives, regulatory tools, and financial incentives have been implemented in Sri Lanka during the last five years in an effort to establish a low-carbon path.Sri Lanka, even though it has a low carbon footprint and is very vulnerable, has agreed to increase 32 percent forest cover by 2030 and cut greenhouse gas emissions by 14.5 percent from energy, transportation, industry, waste, forestry, and agriculture between 2021 and 2030 (Institute of Policy Studies of Sri Lanka, 2018). This is despite Sri Lanka's low carbon footprint and high vulnerability. Sri Lanka wants to use 70 percent renewable energy to make electricity, be carbon neutral, and not build any new coal power plants in the country by 2060 in order to meet its ambitious goal. (Siriwardena. *et al*., 2007) say that Sri Lanka wants to be carbon neutral by 2060.According to a recent report, Sri Lanka has taken a number of key steps towards reducing its nitrogen waste, including the adoption of the Colombo Commitment on Sustainable Nitrogen Management, which sets a 2030 goal of halving the amount of nitrogen waste in Sri Lanka's environment. Sri Lanka's total GHG emissions reduction goal is achieved by the implementation of about 40 mitigation efforts, which are classified into the six areas listed above. However, further GHG emissions reduction will result from unquantified mitigation activities that cannot be quantified at this time owing to a lack of benchmark and emissions decrease potential information. Following the collection of baseline data and the establishment of relevant sectorial processes, as well as the provision of appropriate internal and external assistance, these GHG emission reduction potentials and actual accomplishmentswill be reported and disseminated in the future (Selvakkumaran and Limmeechokchai, 2015). Furthermore, some adaptation efforts, may help to reduce greenhouse gas emissions and the emissions reductions resulting from climate adaptation activities in sectors such as cattle, tourism, and urban settlements have not been taken into account in the total GHG emission estimations reported in the preceding section (Ministry of Environment, 2021). In order to achieve the objective of the overall emissions reduction in Sri Lanka, these offset benefits will be added on top of it. At the moment, there is no worldwide consistent sustainable finance taxonomy that has been adopted. Thus, (Nuwan. *et al*., 2019) explain that the ESG variables used in the evaluation of sustainable finance are inconsistent and incomparable, as a result of this situation. All parties, including regulators, will experience difficulties due to a lack of knowledge and capability. In particular, new green products and technologies will emerge in a dynamic manner, necessitating the use of skills and experience to determine their feasibility (Selvakkumaran and

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Limmeechokchai, 2015). As a result, capacity-building initiatives and technical advice are critical for the effective implementation of low carbon economy in Sri Lanka.

Role of Central Bank of Sri Lanka (CBSL) Towards Low Carbon Economy

According to the (Dharmadasa, 2021, Central Bank of Sri Lanka, (CBSL) 2019) in 2017, CBSL began the process of constructing a road map for sustainable finance and moving towards lowcarbon initiatives throughout Sri Lanka, in collaboration with stakeholders such as government entities, the banking industry, and a broad variety of financial sector stakeholders, with the aimof facilitating and promoting sustainable financing practices in the country. An integrated multi-stakeholder process on producing a sustainable finance pathway for the financial industry in Sri Lanka has also been initiated, with the appointment of a steering committee to support the process by the CBSL. As outlined in the Roadmap, the CBSL is now engaging in the process of putting in place the action plan in order to accomplish the targeted measures with the assistance of all relevant stakeholders and partners. Plenty of green and sustainable finance efforts have highlighted the need to define common definitions, a taxonomy of what comprises sustainable finance, comparable indicators, and a methodology for monitoring the effect of sustainable finance as a critical problem. Moving ahead, policy measures that are coordinated across regions and nations will be required to increase preparedness for sustainable finance programs across the board. Sustainable finance will thus become a crucial lever for attaining social, economic, and environmental objectives in an economy in the new age of post-pandemicbanking.

Sri Lankan Banks Moving to Green Banking Practices

Various organizations take a different approach to environmentally friendly banking, or sustainable banking, as it is often called. "Green banking" is a broad term that encompasses a variety of different topics, but in general it relates to how ecologically responsible the bank is, as well as how devoted these institutions are to green policies (Perlman, 2018). As green projects proliferate throughout the world, many financial institutions are taking notice and acting accordingly (Dharmadasa, 2021). Jayarathne, (2020) explain that green banking is similar to traditional banking in that it takes into account all social, environmental, and ecological concerns with the goal of protecting and conserving the ecological resources available. In certain low-carbon circles (S. Shaumya and Arulrajah, 2017), it is referred to as a "green bank" or "a responsible bank. Shaumya and Arulrajah, 2017). They are under the jurisdiction of the same authorities as before, but with an extra and expanded agenda geared towards the preservation of the ecosystem, habitats, and resources (Lebbe, Shameem, and Haleem, 2021). Aruna Shantha, (2019) argues that following the financial crisis, the emergence of a new sort of bank is being seen as banks that are guided by social ideals. Banks are referred to as "responsible banks" when they apply moral sustainability principles and responsibility to their business corporate strategy, products, and operations. Banks, as socially responsible corporateentities, play a significant role and bear a significant duty in the strengthening of government efforts to achieve a significant reduction in greenhouse gas emissions through green banking practices (S. Shaumya and Arulrajah, 2017, David and Shameem, 2017).

CASE REVIEWS

The role of the bank in sustainable development is shown in the form of "Green Banking." Green banking refers to the low carbon transition practice of a bank in its commercial activities,mainly in the supply of credit, by applying the concepts of long-term sustainability to its operations (K. Shaumya and Arulrajah, 2017) (Silva, 2019). Less carbon initiatives have evolved and are beginning to take on the characteristics of a genuine movement. Sri Lankan banks are actively advancing low carbon banking mobility across borders by changing their products, platforms, policies, practices, and commitment to sustainability (David and Shameem, 2017).

Digital Banking

This is due to the fact that, in addition to improving the overall quality of life for all people in the world, digitization also contributes to ecological sustainability, as Dharmadasa, (2021) explains: Tools such as artificial intelligence and machine learning, as well as the usage of block chain technologies, are critical in advancing the development of sustainable financial institutions. Emerging innovations can have a significant impact on the environment. For example, artificial intelligence could streamline the process of recycling by classifying items; 3D printing could result in material savings; and robots could be designed to redevelop zones that are difficult to reach (Monnin, 2018). Banks have always relied

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on paper to conduct their business. Because of internet banking, paperless statements, and other comparable transactions, technology has largely replaced paper with digital transactions. Banks consume a lot of energy, whether it's for lighting, ATMs, computers, or other purposes. A growing number of green banks are getting on board with the alternative energy trend, installing solar panels orpurchasing wind power to power their operations (Aruna Shantha, 2019). In the case of a greenbank, any technological solution that eliminates the need for paperboard, speeds up the transaction process, and reduces energy use is a huge bonus (Lebbe, Shameem, and Haleem, 2021). Ka Shaumya and Arulrajah, (2016) explain that the nature conservancy, among other scientific organizations, is an example of a green bank, as is a bank that promotes environmental causes. Banks can make regular contributions to these organizations. Additionally, a green bank can develop products that are centered on an environmentally goodcause, and customers who opt for paperless billing may be eligible for additional benefits (Nuwan. *et al*., 2019). A bank may also provide beneficial vehicle financing for hybrid and electric vehicles, as well as a favorable home loan for homes that include environmentally friendly elements such as solar panels.

Considering the case of HNB, its' innovation on critical products was hastened, allowing entrepreneurs to continue to conduct their business and customers to gain access to products and services that were required to maintain their livelihoods and lives, respectively. A transition to digital solutions, which enabled a smarter and low carbon economy and were backed by elevated amounts of smart computer and mobile penetration, has increased, as work and education migrated online for many people, marked the year 2020. The digital strategy of HNBcaptures the value given to customers by the important innovations such as the improved SOLO and the Digital Banking app, which helped to establish the new standard. The significant proportion of people who utilize these innovative products demonstrates the value added to them. Upgrading core banking systems to include a separate banking module as well as banking tools such as API banking to enhance real-time money transfers in collaboration with exchangehouses and the expansion of Fintecs, along with other service providers that leverage APIs as well as other digital banking implementations are all priorities. Additionally, HNB formed a Board Digital Banking Subcommittee to assess the bank's digital banking and information technology strategies, as well as to expedite the deployment of such a digital transformation journey. HNB integrates digital rights management with end point detection and response to improve the security of data, aberrant digital traffic, and anomalous behavior in the bank's information technology infrastructure. According to the bank's governance structure, it set up a board digital banking committee to look over the bank's digital banking and IT plans and speed up the implementation of the digital strategy.

Exhibit 1: Hatton National Bank ecofriendly initiatives
Source: Annual report Hatton National Bank, 2020

Digitalization will continue to be an important factor in our strategic mission, and the Sampath Bank online banking systems, Vishwa Retail and Vishwa Corporate, as well as the Sampath Bank mobile app and WePay app, will see significant improvements. SB has long advocated for the concept of banking at the customer's fingertips, with online banking modernization driving their direction in the future. A greater emphasis on digital financial services will resultin a reduction in the usage of paper and, as a result, a reduction in the environmental impact ofthe bank. SB was able to convert more than 96 percent of normal transactions to digital channels during the initial shutdown period (the COVID pandemic). Create a fully-fledged digital environment to meet the banking demands of all consumers in a comprehensive manner. The number of hybrid

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branches has been increased by the creation of new digital hubs at the Panadura Wekada, Makola, and Oddamavadi branches, which will allow these to be transformed into hybrid branches. In addition to expanding the digital loan plan to include additional loan types, such as the Samachara lending for retirees and the microfinance loan, "Evolve" is a new e-commerce platform designed specifically for small and medium-sized businesses. To make sure the digital transformation goes well, it's important to improve cyber security management. This is because more people are using digital platforms as a result of the COVID-19 crisis and beyond.

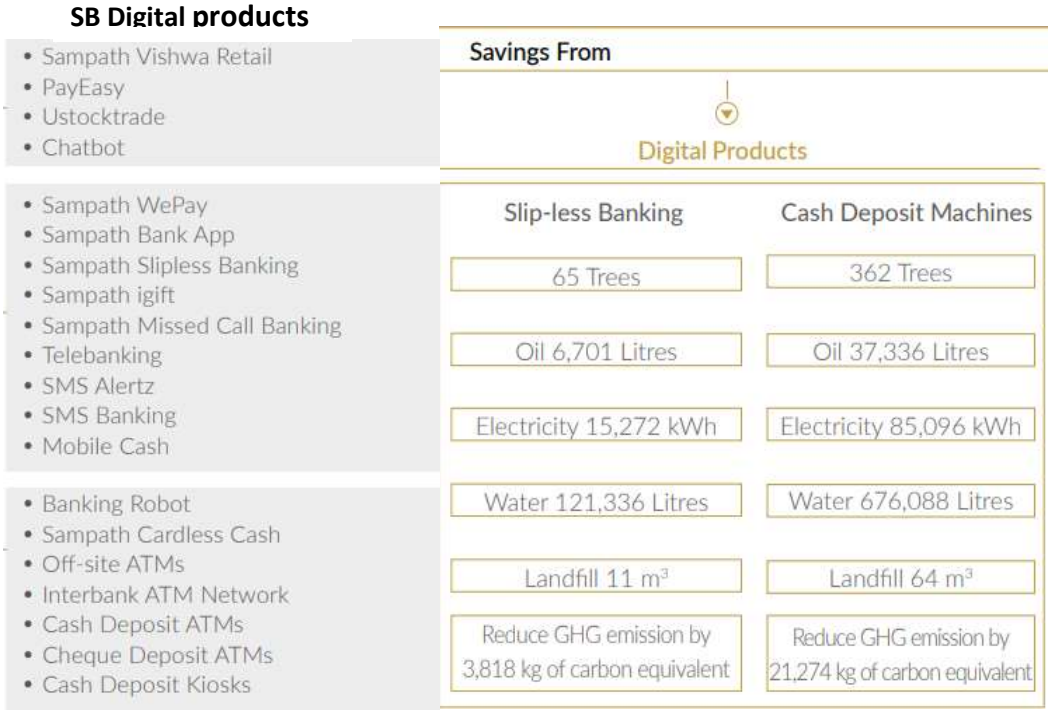

Exhibit 2: Sampath Bank ecofriendly initiatives
Source: Annual report Hatton National Bank, 2020

If banks believe that low- and middle-income customers cannot afford the associated fees with digitalized services, they can use a more effective marketing tactic to persuade them to include a new or improved innovative financing platform or infrastructure, while using a less aggressive marketing tactic to persuade them to use a current or future digital finance platform or facilities if they believe that high- and middle-income customers cannot afford the associated fees (Rathnaweera and Karunasena, 2020). This results in lower financial intermediation for poor and low-income customers. As a result of their own internal risk assessment, which may change over time, digital finance providers can choose whether to remove or discontinue the requirement for specific digital banking services in elevated rural areas and regions that do not have the necessary infrastructure to support specific digital banking solutions, thereby resulting in lower financial inclusion for these areas and communities.

Green Financing

Green finance, which includes green loans and project financing, is one of the many environmentally beneficial methods that have made their way onto the road of sustainable development (Ng, 2018). Semenova, Eremina, and Skvortsova, (2020) refer to providing credit/financing by banks to firms that have satisfied the requirements of environmental legislation, as well as the provision of money for renewable energy projects. The preservation of the environment and the maintenance of a sustainable ecological system have emerged as important concerns of the twenty-first century, as an increasing number of "green" technologies are finding their way into a wide range of functional sectors, including banking (Sinha. *et al.*, 2021) (David and Shameem, 2017). In an economy defined by increasing globalization, industries and businesses are more likely than ever to be adversely impacted by stringent environmental regulations (Semenova, Eremina, and Skvortsova, 2020). According to Aruna Shantha, (2019)

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environmental policy consequences have an influence on the quality of assets held by banks as well as their profitability.

In most cases, green financing by the SB and HNB is preceded by the selection of Sri Lankan enterprises to participate as project partners and participants in the country's non-conventional renewable energy (NCRE) sector. Internal processes and funding criteria at the banks are very ambiguous and non-transparent, and this contributes to their poor reputation. SB Working in close collaboration with key players in the NCRE sector, the Projects Financial Department sponsored nine hydropower projects in 2016, with a combined capacity of 17.73 megawatts (MW) to produce and deliver energy to the national grid. With the help of an ADB-funded clean energy credit line, the Division has disbursed Rs 45.7 million for eight projects in 2016 and Rs 1,358 million for thirteen projects in 2020 as part of the Solar Roof - mounted Power Generation Pilot Project, which is being carried out in partnership with the Sri Lanka Sustainable Energy Authority (SLSEA). Although the division focused on solidifying its dominance in the NCRE industry, it used its expertise to expand its reach into other growing areas of the low-carbon economy, which are outlined in the following section.

Table 01: Sampath Bank green financing initiatives

Project	Measurement	2017	2018	2019
Hydro Power	Projects	10	04	01
	Investment (Rs. Bn)	4.95	0.78	2.03
Solar Power	Projects	01	02	07
	Investment (Rs. Bn)	2.5	0.22	0.63
Bio Mass	Projects	01	-	-
	Investment (Rs. Bn)	0.79	-	-
Waste to energy	Projects	01	-	-
	Investment (Rs. Bn)	10.00	-	-
Wind	Projects	-	01	-
	Investment (Rs. Bn)	-	0.60	-

Source: Annual report Sampath Bank, 2020

HNB invested in two new hydroelectric power projects in the region in 2016, which, combined with the solar power project, brought an additional 34 Gwh to the national grid. A total of Rs 1.8 billion was committed to 3 new green energy projects in the areas of solar and hydropower in 2017. In addition, a composer of a syndicated loan of Rs 9 billion committed to the development of a 10 megawatt waste-to-energy power plant, which will contribute to the general grid by converting between 500 and 700 metric tons of garbage into energy. The following projects are being supported by HNB over the next five years: 2017–2020.

Table 2: Hatton National Bank green financing initiatives

Project	Location	Contribution
Waste to energy project	Kerawalapitiya.	-
Solar power project	Vavuniya and Hambantota	10 MW
Biomass project	Dehiattakandiya	3 MW
Hydro power project	Panwila, Kandy	2.8 MW
Solar and hydro power project	Uganda	10 MW 7.8 MW

Source: Annual report Hatton National Bank, 2020

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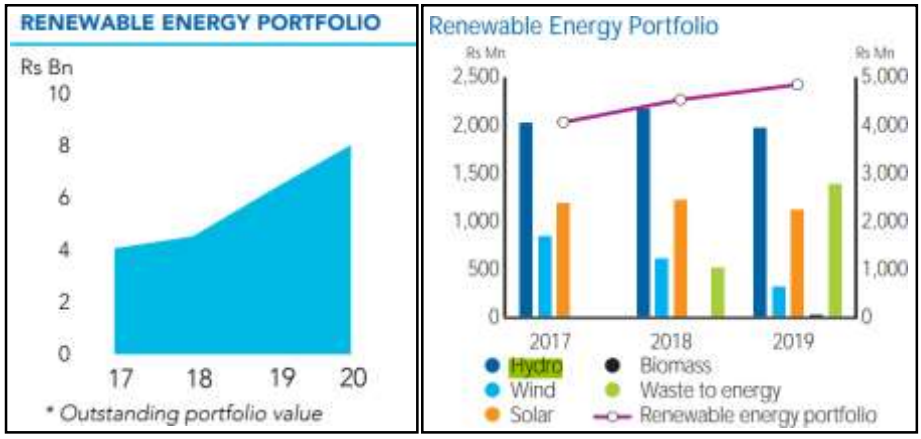

Exhibit 3: Hatton National Bank project financing for renewable energy generation
Source: Annual report Hatton National Bank, 2020

Environmental Management Systems (EMS)

Investors must be aware of a bank's overarching environmental objective as well as the strategy for putting that ambition into action. Banks must move away from providing anecdotal evidence regarding specific projects and instead give comprehensive analyses of their exposure to and control of climate change concerns across their whole organizations (Silva, 2019). Banks are developed to evaluate and reveal the climate change risk level of their resources, along with the carbon footprint of their financial intermediation, in order to achieve low carbon economic status. They should put in place procedures for policy execution, monitoring devices, suitable leadership structures, and staff education and training programs, among other things (Kumar and Prakash, 2020; Hasan. *et al.*, 2021). Throughout and beyond this, the selected banks use a broader contextual perspective to deal with climate-related difficulties and vulnerabilities over short, medium, and long time periods, with the ultimate goal of aiding them in their adaptability and transition to a low-carbon economy. Both SB and HNB have implemented a comprehensive Environmental Management System to ensure that the ideals of sustainable development are included at every level of the organization, as well as to efficiently control climate risk and reduce the direct environmental impact of operations (EMS). The environmental management system (EMS) and green pledge of both banks provide a set of voluntary rules and processes that are supported by particular environmental targets and planning processes for achieving those objectives.

Total energy consumption for the year (2020) was 3,170,946 kWh in SB and 14,949,271 kWh in HNB, with total energy expenditures accounting for nearly 1.3 percent of total operating costs in HNB.However, SB was able to reduce 98, 529 kWh energy consumption in 2020. Two major banks have remained committed to improving energy efficiency by progressively shifting away from fossil fuels and toward renewable sources such as solar energy and by investing wherever possible in energy-efficient equipment. To date, the total number of solarized branches in HNB and SB has reached 95 and 8, respectively, with solar generation capacity increasing to 2,945,624 kWh and 251,908 kWh, respectively, by the end of 2020.

The calculation of the carbon footprint is the most important factor in determining the company's overall emissions impact. SB committed to calculating its carbon footprint in accordance with the GHG protocol, which included direct emissions resulting from business activities, as well as Scope 2 and Scope 3 emissions, which were caused by electricity purchased in the course of business and by employees commuting to and from work, respectively. But in the HNB case, they do not follow the international standard and they follow the Kg /Sqft intensity measurements. Since then, SB has been reporting its greenhouse gas emissions on a yearly basis against three WBCSD/WRI scopes, which is further confirmed by the ISO 14064-1:2006 standards. Their evaluations for the year under specific objectives of the study showed that neither bank's operations resulted in considerable air emissions or emissions of ozone depleting chemicals, pollutants, or other hazardous compounds into the atmosphere. In other words, neither bank had a precise measurement of emissions, except for what was calculated as part of the carbon footprint calculation process for each bank in question, whichwas not done.

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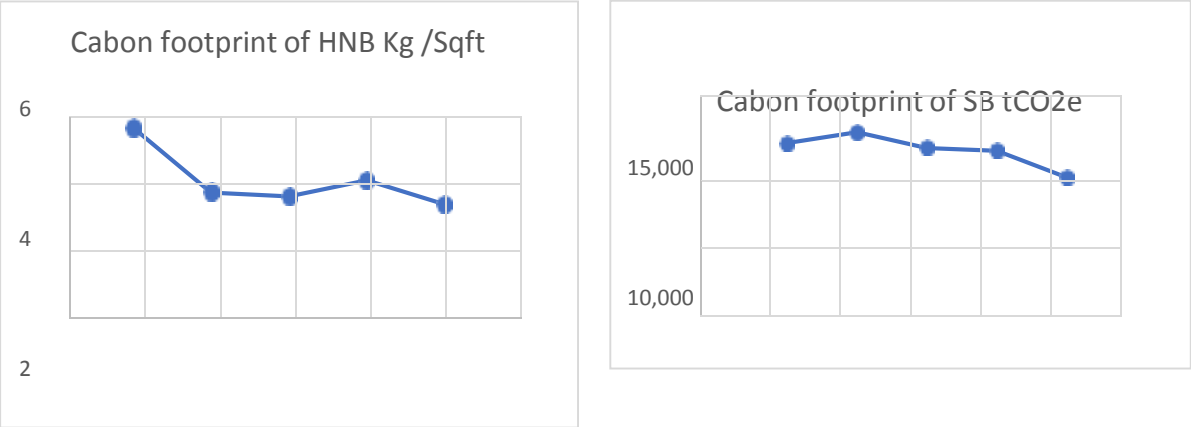

Graph 1: Hatton National Bank and Sampath Bank carbon footprint calculations
Source: Annual report Hatton National Bank and Sampath Bank, 2020

SB installed movement sensor systems in the restrooms and corridors to reduce carbon footprint, and HNB's efforts to implement greener technology also contributed to the carbon footprint decreasing by 13.9 percent, to 3.7 kg/sqft in 2020, from 5.1 kg/sqft in 2010.Meanwhile, the total amount of money they will save on energy costs as a result of working from home (WFH) and other energy-saving activities will be Rs 39 million by the year 2020. The use of natural light, the installation of LED lighting, the use of building systems, the use of energy-efficient lifts, and the use of invertor air-conditioning have all contributed to increased energy efficiency for both businesses. According to the graphic above, both banks were able to minimize their energy consumption as a result of their procedures, which resulted in considerable reductions in energy consumption during lockdowns and other health and safety measures. According to the analysis made, some key actions are not taken by both companies to reduce energy and emission reduction. The following table illustrates the initiatives that were adapted and some that were not adapted by the two banks.

Table 03: Comparison of initiatives taken to low carbon economy - Author developed

Action	SB	HNB
Use of high-tech, lighting energy efficient tools	F	F
Conducting energy audits	N	N
Fixing of solar water heating systems to save electricity	M	M
Energy effective lighting for symbol boards at branches	M	M
Encourage usage of day light	F	F
Install and display of energy reduction and saving tips in the office	N	N
E-mail and internal awareness campaign on the benefits of energy saving	M	M
Control the functioning time of equipment	F	F
Encourage the use of shared transport such as transport sharing	N	N
Educate customers and the general public	M	M
Carbon footprint neutrality	N	N
F- Fully M- Moderate N- Never		

Source: Annual report Hatton National Bank and Sampath Bank, 2020

CONCLUSION AND RECOMMENDATION

Low carbon economy is an important assessment for the sustainability of businesses, innovative work organizers, financial experts, organizations, and people to provide economic solutions (Selvakkumaran and Limmeechokchai 2015; Jiang. *et al.*, 2018, and Nuwan. *et al.*, 2019).It accommodates comprehensive approaches at the banks that we selected; to refine innovations and existing practices that are not exactly in the business sector phase, and speculations to goad advances that are prepared for business arrangement. This move to a low carbon economy obliges us to understand the conduct that prompts

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open acknowledgement of innovations. Digital and environmentally friendly business practices make an explanation of behavioral actions into realistic actions and suggestions. In order to spread the concept of a low carbon economy, banks must work together to eliminate negative impacts and provide the best solutions. As the author understands the transition of low carbon economy activities in these selected banks, they are on the path of success. As it is known, the banks are responsible for greenhouse gas emissions, green products, green banking platforms, and EMS, so the banks stress the action base entity to cut down and take action to reduce the concentration of negative impact. Idealistic economic expansion estimates and increased business confidence will boost development in the correct direction, which will be backed by a more accessible and sustainable digital economy, but potential risks will continue to be high for the foreseeable future. On the other hand, because the institutions aren't yet ready to figure out what a low-carbon economy would look like, new and untested ideas will be used to get there.

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