Corporate Sustainability and Financial Performance of Bangladeshi Banks

by

Rezaul Karim Chowdhury

A thesis

presented to the University of Waterloo

in fulfillment of the

thesis requirement for the degree of

Master of Environment Studies

in

Sustainability Management

Waterloo, Ontario, Canada, 2018

Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

Purpose- This study analyzes the connection between the sustainability performance and financial performance of Bangladeshi banks to ascertain whether the implementation of sustainability regulations has an impact on financial performance. Furthermore, if an impact is found, whether it increases or decreases the financial performance of these banks.

Design/Methodology/Approach- This study evaluates financial and sustainability related performance indicators taken from published Central Bank reports as well as from respective banks' published annual reports and websites. The indicators have been analyzed using several statistical methods, such as Linear Regression, Panel Regression, and Granger causality tests.

Practical Implications- Porter and Linde (1995) claimed that improving a firm's environmental performance can lead to better financial performance, without an increase to cost. By following this approach, Bangladeshi banks can make more profit on the one hand and save the environment on the other by investing more in green products and projects.

Social Implications- Bangladeshi banks will be able to influence and motivate businesses to become greener, which will reflect on society and on the total economy. As a result, the country will be able to lower the pollution rate and better handle other natural calamities that hinder the everyday life of the people and of society overall.

Research Limitations- Since this is a new concept for Bangladesh, with regulations having been introduced only six years ago, the field is currently going through the early development phase. Hence, very little research has been done on this topic. Moreover, the data related to green performance indicators are not consistent throughout the years of implementation due to limited reporting, which limits the set of available data on hand. More data is needed to analyze the long-term effects of the regulations.

Originality/Value– To the best of the author's knowledge, this is the first study that explores the sustainability performance of Bangladeshi banks, including their product and services. Furthermore, the study adds to the knowledge regarding the impact of financial sector regulations and policies on the environmental and financial performance of banks.

Keywords: Banks; Bangladesh; credit risk; green banking; Environmental & Social Risk Management (ESRM); corporate sustainability; guidelines.

Paper Type– Research paper

Acknowledgement

At first, I thank God Almighty for the successful completion of this thesis. It would not have been possible without His grace, love, mercy and support.

I would like to express my special gratitude to my supervisor - Professor Olaf Weber, who provided immeasurable support for the last 16 months, both academically and mentally. It would not be possible to complete this without his invaluable guidance and support. I am forever grateful to him for being the pilot of this scholarly journey.

Gratitude towards Professor Michael Wood and Jason Thistlethwaite, for agreeing to be the committee member and for taking the time to evaluate my thesis. Thanks to Professor Laszlo Sarkany for educating me through the whole process of thesis development. I got to learn a great deal from him regarding how to write a proper and well-formatted thesis.

Special appreciation goes to Professor Simron Singh, who have been a moral support in the early days of my journey when I was new to the country and needed much support. He inspired me to keep looking when I did not know which path to follow. Also, my gratitude also goes to all faculty members of SEED and Graduate Program Administrator Dragana Kostic, for helping me on the administrative aspects leading up to this. Undeniably, the University of Waterloo can't be left out for supporting me through several bursaries and awards and the opportunity to serve as a teaching assistant. I will forever cherish these memories.

Finally, I would like to thank my parents and loved ones, who have supported me throughout entire process, both by keeping me harmonious and helping me putting pieces together. Without their relentless love and support, I would not have reached to my goal today. I am forever grateful for your love.

Dedication

This study is wholeheartedly dedicated to my beloved parents, who have been my source of inspiration and gave me strength when I thought of giving up, who continually provided their moral, spiritual, emotional, and financial support.

To the love of my life who has been there since before it all begun and has continuously motivated me to gather the courage to finish this paper with dedication.

To my mentor, friends, and classmates who shared their words of advice and encouragement to finish this study.

And lastly, I dedicated this study to the Almighty God. Thank you for the guidance, strength, power of mind, protection and skills while keeping me healthy. All of these, I offer to you.

Table of Contents

List of Tables

Chapter One

1.1   Introduction

The economy of Bangladesh has been experiencing higher than expected growth in recent years (Basu, 2018). Despite inflation, the deficit in the current account, the wider trade deficit, lower remittance (Hossain, 1995), and the recent flooding in 2017 (Asian Development Bank, 2017), exports and imports have increased significantly due to free trade (Manni & Afzal, 2012). Bangladesh's banking industry is actively playing a pivotal role in developing the economy (Sufian & Habibullah, 2009); however, the climate situation in Bangladesh is not good (Brouwer, Akter, Brander, & Haque, 2007). The country falls under the category of one of the world's most vulnerable climate change affected regions (Ahiduzzaman & Islam, 2011). According to (United States Agency for International Development (USAID), 2016), Bangladesh emitted 190 million metric tons of greenhouse gases in 2012, contributing 0.40% of the total world's emissions. Bangladesh's emissions increased 59 percent from 1990 to 2012, with an annual average rate of change of 2% (Cait, 2016).

In identifying the magnitude of the environmental issues (i.e., land degradation, water pollution and scarcity, air pollution, biodiversity losses, impacts from natural disasters, rapid population growth, improper use of land, poor resource management, and uncontrolled discharge of pollutants) (Gain, Moral, Raj, & Sircar, 2002; Hassan, 1991) as major causes, Bangladesh Bank (Central Bank of Bangladesh) realized the significance of these issues (Rahman, 2013). Recognizing the need to protect the banks and financial institutions financing from the risks arising out of the deteriorating environmental scenario and the impacts of climate change, the Environment Risk Management Guidelines (ERM) and Green Banking Guidelines in 2011 (Bangladesh Bank, 2011) were introduced. Since then, the policies have been upgraded over time to attain the 2030 United Nations Sustainable Development Goals (SDGs) (Banking on 2030, 2017) by integrating environment and social risk into the Credit Risk Management (CRM) guidelines (Weber, Hoque, & Islam, 2015). Furthermore, Bangladesh Bank introduced full-fledged Environmental and Social Risk Management (ESRM) guidelines for the banks and financial institutions operating in Bangladesh. An Excel-based Risk Rating Model was also introduced along with those guidelines (Guidelines on Environmental & Social Risk Management, 2017).

The goal of these policies (Sharif, Nasir, Khanum, & Moniruzzaman, 2016) is to reduce the environmental impact caused by poor industrial waste management practices. These misconducts are causing damage to the local biodiversity and increasing vulnerable labor practices, resulting in unsafe working conditions (Bangladesh Bank, 2017). Moreover, these policies will minimize other common concerns related to social issues such as child labor, discrimination, harassment in the workplace and minimum wage (Masukujjaman & Aktar, 2014). Just like other neighboring countries, such as India (Sharma, 2013), Pakistan (Aazim, 2017) and Sri Lanka (Sri Lanka Central Bank to promote 'Green Financing', 2017), Bangladesh is also endeavoring to implement effective environmental and green banking guidelines under the leadership of the Central Bank, with an objective towards achieving sustainable development (Alliance for Financial Inclusion, 2017).

The year 2017 was treated as a 'phase-in' period for the implementation of 'Guidelines on ESRM' (Islam, 2017). Since January 01, 2018, the 'Guidelines on ESRM' has been enforceable under Bank Company Act, 1991 and Financial Institutions Act, 1993 (SFD Circular No.02, 2017. pp.2), replacing all the old guidelines and measurement mechanisms. But since these regulations have been in practice in one form or another among the banks since 2012 (Bangladesh Bank, 2017), the question which prevails is whether the introduction of corporate sustainability has had positive or negative impacts on the financial performance of Bangladeshi banks or whether financial performance of these banks poses an impact on their corporate

sustainability performance. With that in mind, this proposed study aims to ascertain the effects of these policies on the financial performance and environmental performance of the 56 commercial banks that are currently operating in Bangladesh (Banks & FIs, n.d.).

The banking sector of Bangladesh is considered one of the major sources for financing large industrial projects such as steel, paper, cement, chemicals, fertilizers, power and textiles (Adeleke & Naim, 2017). These industries have contributed to generations of highly polluted wastewater (Sharmin, 2016). Factors such as lack of proper metering; non-reuse and recycling of water; sulphur-dioxide emissions from burning low grade coal in outdated brick kilns; contamination of terrestrial and marine environments due to the leaching of toxic chemicals from scrapped ships and the lack of fitting waste management practices by ship breaking units; contaminated effluents and harmful fumes emitting from the steel re-rolling units, are all causing harsh environmental degradation (Faisal, Shammin, & Junaid, 1991; Islam, 2010; Mahfuz et al., 2004). The banking sector can play an intermediary role between economic development and environmental protection while promoting environmentally sustainable and socially responsible investment (Khan & Hasan, 2011).

Weber, Fenchel and Scholz (2008) suggested that if banks possess the required resources and capabilities to appraise environmental and social risks as well as opportunities, only then will they be able to positively impact sustainable development while reducing financial risks by developing innovative sustainable financial products (Chang & Sam, 2015). Therefore, this study proposes to analyze whether the sustainability performance and financial performance of Bangladeshi banks correlate positively or negatively.

Chapter Two

2.1 Literature Review

The proposed research is the first of its kind and attempts to evaluate the correlation between corporate sustainability and financial performance, evaluating the products and services offered by Bangladeshi banks. Few similar studies have been found on other countries' banking sectors (Weber, 2017; Soana, 2011; Maqbool & Zameer, 2018; Simpson & Kohers, 2002; Ofori, S-Darko, & Nyuur, 2014; Gbadamosi, 2016; Oni, 2016). In the context of the Bangladeshi banking sector, only two studies have been found that touch on the corporate sustainability effect on financial performance (Weber, Hoque, & Islam, 2015) (Mohammad, Abedin, & Rahman, 2017). Since the environmental regulations were introduced just six years ago, most of the existing literature revolves around the newly formed regulations and their importance, how they are being implemented and practiced, and how a "green economy" can be achieved by using these regulations.

While explaining the essentiality of sustainable financing, Weber and Feltmate (2016) argued that to fight against climate change, hunger, unemployment, droughts, lower living standards, and little to non-existing healthcare, sustainable finance can play a decisive role. And in this role, banks and other financial institutions are the key players who can promote sustainable financing and meet societal needs by offering innovative financial products and services (Yadav & Pathak, 2014). In a 2015 impact report, Boston Common Asset Management characterized banks as an 'indirect but impactful' player. The report describes that even though banks might not directly be contributing to climate change through massive industrial pollution and high rate of carbon emissions, they are backing up the industries that do cause this damage by financing their projects. As banks are tied to every market sector through their lending practices (Liu & Ryan, 1995), climate events, ranging from drought to increased weather variability to a warmer climate, will all adversely impact banks' business models (Weber & Kholodova, 2017; Flood, 2017; French Treasury," n.d.).This has the potential to harm the future share value of major banks (Clark, 2017).

A Centre for International Governance Innovation (CIGI) paper published by Weber and Oni (2015) investigated the impact of sustainability regulations on three distinct countries' (i.e., China, Nigeria, Bangladesh) financial sector. The paper concluded that mandatory guidelines do pose an impact on the sustainability performance of banks, as evidence was found that in all the cases examined, the sustainability performance increased after implementing the regulations. It was also reported that the chances of success for the sustainability regulations increased as the banking sector was included into the development process of the regulations.

But the most crucial finding of this report was the result which exhibited that these sustainability regulations do have a positive impact on a bank's financial performance as well as on its sustainability performance. A closer look at the Chinese banks in a similar context have been discussed by Weber (2017) where it was found that the Green Credit Guidelines for Chinese banks are having a positive impact on their financial performance. This study discusses the bi-directional causality; corporate sustainability having an impact on the financial performance as well as good financial performance leading up to better corporate sustainability practices. It also explores the relation to this causality with institutional theory.

When it comes to integrating corporate sustainability into banking operations, one question does stand out: Will this incorporation indeed benefit the lenders and minimize the risk factors? While seeking out the answer to this question, Weber, Hoque, and Islam (2015) found that

some analyses have reported that a correlation does exist between commercial borrower's sustainability performance and credit risks. The results concluded that demonstrating sustainability influences the firm's creditworthiness as part of its financial performance. Therefore, implementing sustainability regulations into banking operation(s) and following them while providing innovative green products and services to the clients bears a win-win situation for everyone.

In the case of Bangladesh, forming sustainable regulations for the banking sector was a new challenge for the policy makers, and one which they successfully overcame with time. A study done by Rahman and Kamruzzaman (2014) revealed that the policy makers and strategic thinkers acknowledged the importance of these regulations and had already started to make big changes. Their study revealed that those responsible for strategic thinking had already acknowledged the importance of the issue and had already started making changes in their strategies, modifying their long-term outlooks, organizational structures and business practices to adopt the concept of corporate sustainability.

But there are more challenges that need to be addressed to make this endeavor a success. According to Rahman and Kamruzzaman (2014), Bangladeshi banks are not disclosing their data on the many sustainability projects that they are leading, and as a result renders the banks less transparent and open to criticism by stakeholders. This opaque practice prevents more in-depth socio-environmental performance assessment whereas a higher level of transparency in public documents demonstrates a bank's true commitment towards sustainability and encourages society and industry to follow in its footsteps in promoting a sustainable economy for the country.

Additionally, challenges like the incorporation of environmental parameters, effective policy formulation, and the creation of homogeneous environments need to be addressed, as reported by Islam, Yousuf, Hossain, and Islam (2014). It was reported that with the combination of both imposed regulation and voluntary initiatives, promotion green banking was moving towards success in its early stage. With initiatives like change of existing policies in relation to changes in the environment and economic incentives for financial institutions, there is a good chance in making green banking mainstream. More actions were suggested by the study, such as improvement of online banking, a separate green banking unit, incorporation of environmental risks with core risks, which were later implemented by the policy makers over the course of several years.

Since the outset of the Environment Risk Management (ERM) guidelines, many initiatives to promote sustainability have been undertaken by Bangladesh's banking sector. Lalon (2015) identified such initiatives as policy formulation and governance, incorporation of environmental risk in credit risk management, initiation of in-house environment management, introduction of green finance and green marketing, creation of a climate risk fund, , online banking, supporting employee training, consumer awareness and green event, and the proper disclosure and reporting of green banking activities as key to making big changes in the banking industry. The study stressed the requirement of banks being ethical and environment friendly to promote sustainability in society.

Islam, Hossain, Siddiqui and Yousuf (2014) indicated that for the most part these meticulous activities consist of programs launched by Bangladesh Bank range from refinancing in effluent treatment plants, biogas, solar home systems, solar powered irrigation pumps, and

environment-friendly brick-making projects. Islam (2015), in his paper, also mentioned in-house initiatives like the introduction of online banking, use of paperless statements, automated clearing house, online credit information bureau, e-Banking, e-Commerce, mobile banking, agent banking, e-Tendering, and e-recruitment as other key steps toward creating more environment-friendly banking activities.

Hossain and Kalince (2014), using the 'Granger Causality Test' between six financial variables, demonstrated that pursuing green banking makes for more profit for the banks. They suggested that turning green banking practice into mainstream will be more profitable and will in-turn lead to sustainable growth in the long run. And if all the banks were to start promoting green banking, the country's economy would soon see a rise in sustainable economic growth. However, it is not enough just to promote sustainable banking. For this to work, big budgets are required, a point stressed by Chowdhury and Dey (2016), noting the central bank's budget allocation to commercial banks with respect to green initiatives. However, they also mentioned that the utilization of such budgets by the banks for diverse projects is growing at a slow rate. They recommended that special financial packages for green projects could accelerate current initiatives.

Masukujjaman and Aktar (2014) have pointed out that in the global context of green banking, Bangladeshi banks are still far behind their counterparts from developed countries. They found that banks in Bangladesh have only just started to recognize the usefulness of green banking and opting it into their mainstream operations. However, no bank in Bangladesh has been found in the United Nations Environment Programs' (UNEP) signatories of the Equator Principles. It is concerning because this is regarded as one of the most crucial standards for responsible financing.

When it comes to participation, Ullah (2013) found that Private Commercial Banks (PCB) and Foreign Commercial Banks (FCB) have been adopting the green banking guidelines well and practicing them by offering some sort of green banking products and services. Although on the other hand, State-owned Commercial Banks (SCB) and State-owned Specialized Development Banks (SDB) initiatives are not notable. Which means government owned banks are lagging in promoting green banking. This is concerning when the government and the central bank are pushing sustainable banking strategies to achieve the targets for a greener economy. According to this study, this will create an uneven playing field between the PCBs and SCBs, rendering the transition harder to accomplish. Faruque, Biplob, Al-Amin and Patwary (2016) have emphasized the same issue, stating that the situation is 'terrible'. The people of Bangladesh have very little awareness about climate change issues, and due to this lack of educated knowledge, they do not understand the severe consequences that climate change and environmental degradation can bring in the coming decades.

Another aspect that comes up during the literature review is the 'non-existing' reporting culture and the too few disclosures from Bangladeshi banks on their sustainable projects and activities. Sustainability reporting is an important tool to help the organization to set goals, measure progress, and manage sustainability within the organization (Khan, 2015). It is seen that reporting on the organization's sustainability performance provides stakeholders with a clear idea of what is happening inside the organization and their actions towards saving the environment (Burritt & Schaltegger, 2010).

According to new research published by the European Commission, the GRI Guidelines have been ranked among the most widely recognized instrument in terms of sustainability reporting standards ("GRI among the most popular CSR instruments", 2013). Several studies conducted by Khan, Kayeser, and Ahmed (2011) and Mahmud, Biswas, and Islam (2017) revealed that during the year 2011 to 2015, only eight banks disclosed sustainability information in their annual report, but that even then, most of the reported information did not meet with GRI guideline standards.

This shows how poor the reporting and disclosure culture is in the Bangladeshi banking sector. Sobhani, Amran, and Zainuddin (2012) also confirmed that, adding that neither the reported information in the annual report nor the banks' corporate websites disclosed product responsibility data; the only data found and it is proving insufficient, were their Corporate Social Responsibility (CSR) practices. Another interesting aspect reported in the study is the newer banks outperforming the older banks in terms of their sustainability disclosure.

While there have been studies on how the approach towards sustainable banking should be taken, and how extensively it has been adopted so far, almost none of the research talks or shows the impact of green banking products and services of Bangladeshi banks on their financial performance. This is an academic gap where more studies should be undertaken so that whenever the question of feasibility and profitability arises, the studies can be used to demonstrate that 'going green' makes a bank's performance more strong, economical and sustainable. This is the conceptual framework of this proposed research, which none of the studies have touched yet, even though to move further forward, the industry needs more research on this very issue.

2.2   Connection between CSR and Financial Performance

There is an existing relationship between corporate sustainability and financial indicators which has been discussed by McGuire, Sundgren, and Schneeweis (1988), Pava and Krausz (1996), Simpson and Kohers (2002), Friede, Busch, and Bassen (2015), Griffin and Mahon (1997), Horváthová (2010), Margolis and Walsh (2001), and Orlitzky, Schmidt, and Rynes (2003). Most of the aforementioned studies suggest that there is a positive causality between sustainability performance and financial performance, although there are studies which have also found a negative (Aupperle, Carroll, & Hatfield, 1985; Griffin & Mahon, 1997) as well as a neutral relationship (McWilliams & Siegel, 2000; Galant & Cadez, 2017) between these two factors. Waddock and Graves (1997) found that Corporate Social Performance (CSP) is positively associated with an organization's both present and future financial performance, supporting the theory of good management. Hence, it can be said that management who leads in corporate sustainability performance tends to practice good management theory, which in turn leads them to financial success over their competitors (Lin, Chang, & Dang, 2015; Sharma & Vredenburg, 1998).

2.3   Sustainability in the Banking Sector

Tim Jackson (2009), a top sustainability adviser to the UK government, made a compelling case for how people must be aware of the limitations of what they can get from the planet. In his book, he argues that humankind's ever-increasing consumption habits will impede on existing economies, unless the environmental impact of economic activities can be drastically dropped. This issue concerns not only what people can consume now, but also on their consumption rate in the next 50, 100 years, and so on, provided that the planet and its resources will still be in balance and will be able to regenerate properly. This connects back to the very

popular definition of sustainability (Brundtland et al., 1987, p. 11) where it is defined as "the ability to meet the present needs without compromising the ability to meet needs for the future generations". On the subject of meeting the needs of future generations, current world needs are not even being met adequately (Barnett & Morse, 2013). There is an ever-widening gap of wealth inequality between people, races, and nations as well (Kochhar & Fry, 2014). Looking from a social perspective (Salwasser, 1990), it is evident that the planet has a handful of wealthy people in some of its parts and many impoverished people in other parts, which inadvertently creates imbalances and tension among these two groups. Being an intermediary, sustainable banking can bridge this gap by transforming money in terms of space, term, scale, and risk. This affects the development and direction of the economy and ensures a better distribution of resources (Jeucken, 2010). As Derissen, Quaas, and Baumgärtner (2011) stated, sustainable banking focuses on servicing the real economy with the wide perspective of being sustainable; meaning it focuses on a long-term "resilience ecological-economic system" which can be supported by the planet.

As a core functionality, banks typically invest depositors' money on behalf of them (the depositors) on several projects and businesses (Werner, 2014), and by so doing, the depositors become co-responsible of what is happening to the economy with their money. Sustainable banking is a correspond of action between the depositor and the bank (De Clerck, 2009) where the bank communicates what is going to happen with the money that was entrusted with them. It is also a correspondence between the entrepreneur and the bank where the entrepreneur assures the bank that the money is going to be utilized in a sustainable manner. Transparency becomes the key (Cornée, Kalmi, & Szafarz, 2016) here, and acts as a starting point to sustainable banking. However, sustainable banking is not only about communication and transparency, it also concerns what is done with the actual money and how it is done (De Clerck, 2009).

The next significant phase in sustainable banking is to find out ways to add value to the correspondence between the stakeholders, in addition to making profits (Stankeviciene & Nikonorova, 2014) with the objective of forming new relations between the relevant stakeholders. Hence, sustainable banking starts with transparency and correspondence and leads up to value-based business ethics, answering questions like: What sort of projects and business do depositors want to support (Jagannathan, Ravikumar, & Sammon, 2017), and what sort of future does the entrepreneur envision for the business (Holliday, Schmidheiny, & Watts, 2002)?

In a study by Goddard, Molyneux, and Wilson (2001), the authors stated that the economy is growing but not necessarily creating any value. On the other hand, there is a lot of value creating activity going on which is not being expressed as growth. They see economic growth as a constant driver to increasing productivity. This requires manufacturers to steadily reduce input costs, eventually boiling down more jobs being cut. Also, due to the free market economic model, wealth gained from growth is taken from the poor and given to the rich (Maxton, 2015). Besides, factors like growth in living standards or quality of environment are not being measured as "actual growth" because they do not represent any fiscal value. However, a sustainable banking approach adds value by concerning itself with actions that lead to the betterment of the people and the planet. Actions like the "triple bottom line" (Slaper & Hall, 2011), "shared value creation" (Porter & Kramer, 2011), "resilient banking system" (Malaysia, 2004), and "the business case for sustainability" (Schaltegger & Wagner, 2017) place banks in a better position to create value while contributing to economic growth.

Banks that adopt a sustainable model usually go through three steps (Dragan, 2012). The very first step involves utilizing all available resources to their fullest capacity while minimizing

emissions rate and conserving more energy (Bartlett, 2011). The second step is to convert or integrate existing banking products (Bouma, Jeucken, & Klinkers, 2017) like lending, mutual funds, bonds, asset management, and project management into green products (Caldecott & McDaniels, 2014). Then as a final step, sustainable banks start to develop "eco-friendly" policies and cultures that create a surge of awareness among the industry as well as among its stakeholders (Singh & Singh, 2012).

2.4 Corporate Sustainability and Social Responsibility in Bangladesh

In recent years, there has been much discussion among academics and business communities regarding "corporate sustainability" (Salzmann, Ionescu-Somers, & Steger, 2005). According to Wilson (2003), corporate sustainability is a new and evolving corporate "management paradigm", which is viewed as an alternative to the traditional "growth and profit-maximization" model. Corporate sustainability is reflected more as an integration between the social and environmental aspects of the business strategy process, business operation management, and stakeholder interactions (Kamruzzaman, 2012), though this is what is in practice in the real world.

Corporate social responsibility (CSR) in the banking sector has been a long practice in Bangladesh and is considered an integral part of business (Ullah, 2013). Banks have been using CSR as a tool to elevate their value in the eyes of their customers and society as a whole (Khan, Halabi, & Samy, 2009). Although, according to one study (Roy, Sarker, & Chowdhury, 2017), the state-owned commercial banks in Bangladesh are significantly behind on CSR activities compared to the privately-owned ones. However, this does not automatically mean that privately-owned banks are doing a better job in CSR. In fact, Saha, Dey, and Khan (2013) argued that the amount of contribution by commercial banks to CSR activities is very insignificant in proportion to their profit margin. They suggested that the government should introduce proper guidelines regarding CSR contribution and to mandate CSR disclosures in annual reports. Interesting findings were reported by Ndiweni, Haque, and Hassan (2018) which explain banks' engagement in CSR activities in light of their religious and cultural values that are embedded in the social fabric of Bangladesh and not due to the Global Reporting Initiative (GRI). Supporting this study, Sobhani, Zainuddin, and Amran (2011) also agree that these values have been the main driver for CSR in Bangladeshi banks and continue to be so. Thus, the concept of corporate sustainability was limited to only CSR activities before Bangladesh Bank's guidelines launch in 2011 (Millat, Chowdhury, & Singha, 2013). With the introduction of Environmental Risk Management (ERM) and subsequent guidelines, the banking sector entered a new era. Other imperative aspects, such as economic and social issues, labor practices, human rights, economic performance, community, society, corruption, corporate governance, and responsibility of product and services, became more relevant as well (Sharma, 2002).

2.5 Sustainability in Bangladeshi Banking

According to Weber and Feltmate (2016), with a few exceptions, most of the banks and financial institutions generally do not invest in sustainable development. In fact, they stated that most financial institutions go ahead and deny any responsibility for the indirect impact on the environment and society that may have been caused by their clients' activities.

Bangladesh is one of the world's emerging economies (Khan, Muttakin, & Siddiqui, 2013) and has witnessed rapid industrial growth over the last two decades (Hosen et al., 2016). This has contributed significantly to the rise in the country's Gross Domestic Product (GDP) (Mehmood, 2012). At the same time, Bangladesh is vulnerable to risks related to environmental pollution and climate change impacts (Poncelet, Gemenne, Martiniello, & Bousetta, 2010)

which are intensified by man-made activities. All these issues have significant adverse impacts on the overall environment of the country and pose significant threat to the continuity of business activities (Duru, 2014), which in turn will adversely impact the loan portfolio of the banks (Coulson & Monks, 1999).

With the inception of the Environmental Risk Management (ERM) Guidelines (Bangladesh Bank) in 2011, the banking sector of Bangladesh entered a new era of corporate sustainability. Before this initiative, corporate sustainability was limited to "corporate social responsibility" (Holme & Watts, 1999) which involved helping the people in need in a limited capacity, such as contributing to society by donating to schools and hospitals and disaster relief management (Khan, Halabi, & Samy, 2009). Banks have evolved a lot since then. Nowadays, sustainability is rooted in banks' day-to-day operations and value system. Along with the introduction of "Green Banking Policy Guidelines" (Bangladesh Bank Green Banking Unit, 2013) and the latest "Environmental and Social Risk Management (ESRM) & Excel-based Risk Rating Model" (Bangladesh Bank Sustainable Finance Department) in 2017, the Central Bank has taken the initiative of strongly addressing environmental risk in the process of credit management in banks and financial institutions. These guidelines have broadened the scope of sustainable banking by incorporating the social risks while expanding the risk rating system and introducing requirements for environmental and social management systems.

To comply with the growing demand of responsible, ethical, and sustainable banking, banks in Bangladesh have started to build separate "Sustainable Finance Units" and "Sustainable Finance Committees" as per the guidelines of Bangladesh Bank ("BB directs banks to form sustainable finance units," 2016). Banks have been taking a new strategic approach which incorporates going green in the future of banking (Rahman & Perves, 2016) and promoting financial inclusion (Akter, 2016) while giving back to the community (Saha, Dey, & Khan, 2013).

To promote sustainable banking, Bangladesh Bank has introduced 50 green products to date (Nabi, Khan, Islam, & Uddin, 2016) for financing under the refinancing scheme. These green products consist of renewable energy, energy efficiency, solid waste management, liquid waste management, alternative energy, fire burnt brick, non-fire block brick, recycling and recyclable products, green industry, ensuring safety in the work environment of factories, etc. (Nabi, Khan, Islam, & Uddin, 2016). Banks and other financial institutions in Bangladesh have started to utilize this wide array of products to promote green banking in the country. Alongside that, banks are implementing other integrational strategies such as initiating in-house environmental management, introducing online banking through internet and cell-phones, minimizing paper and ink usage by digitalizing banking operation software, connecting to the automated clearing system, putting more focus on energy savings, reducing carbon footprint by introducing on-line communication systems, etc. (Islam, Hossain, Siddiqui, & Yousuf, 2014; Islam & Das, 2013; Lalon, 2015).

A baseline study conducted by Bangladesh Bank (2011), regarding the exposure to environmental risks in lending, revealed that 98% of the Bank's top management believed that environmental risks are being considered but that consideration was not being reflected in their credit scoring practice. This indicated a wide gap between perception and practice among the banks (Islam, Yousuf, Hossain, & Islam, 2014). Even six years after implementation, there is a lack of interest on the disclosure of sustainable banking information (Khan, Azizul Islam, Kayeser, Fatima, & Ahmed, 2011), despite the study's suggestion that disclosing literature helps banks to construct their "reputational capital" and "gain community trust" (Achua, 2008) (Stefan & Firescu, 2008). Very few banks are generating stand-alone sustainability reports (Sonia, 2018) following GRI Guidelines, including GRI Content Index and page reference

(Willis, 2003). Most of the banks integrate their sustainability activity into their annual report but does not meet the GRI standards (Mahmud, Biswas, & Islam, 2017). There is good news, though. Bangladeshi banks are starting to recognize the benefits of incorporating sustainability for financial success (Adams & Frost, 2008). But there is still a long way to go as most of the banks still see sustainability and profitability as trade-offs (Deutsche Bank Research, 2014) when they should be considering them as a win-win situation (Weber, 2017). Therefore, this study addresses the following research question: Is there a connection between the sustainability performance and the financial performance of Bangladeshi banks?

2.6   Theoretical Background

There is evidence for a relationship that exists between corporate sustainability practice and corporate financial performance (Ameer & Othman, 2012). Earlier in the literature review, this study mentioned that these results are mostly positive, with a mix of some negative as well as neutral results. But what previous studies do not explain is the direction of causality that takes place between sustainability and financial performance. Hence, this study is going to use the theories of Waddock and Graves (1997) to explain the direction of causality between sustainability versus financial performance.

On the one hand, good management theorists argue that since the focus is more on building and maintaining relationships with key stakeholders, this results in a better overall performance (Hackman, 1980). Hence, this theory correlates sustainability performance with corporate sustainability. Good management theory claims that corporate sustainability may have an impact on financial performance (Weber, 2017) since it helps the firm to reduce its costs while increasing its reputation (Deephouse, Newburry, & Soleimani, 2016). Which is why the leaders of corporate sustainability tend to practice good management in their firms. This strategy also allows them to attain a competitive advantage over their competitors (Sharma & Vredenburg, 1998; Lin, Chang, & Dang, 2015).

On the other hand, slack resources theory's representatives argue that better financial performance by a firm automatically leads to an availability of financial and other type of slack resources which provide the opportunity to invest more in corporate sustainability (Waddock & Graves, 1997). The argument articulates that a good financial performance might lead to improved corporate sustainability due to its additional financial resources (Weber, 2017; Melo, 2012). As McGuire, Sundgren, and Schneeweis (1988) described, corporate sustainability is firm specific. Which means firms with higher resources can take part in many more sustainability activities than those who have fewer resources (Seifert, Morris, & Bartkus, 2004). Waddock and Graves (1997) called this a bi-directional causality or "virtuous circle"; namely, that investment in slack resources lead to improved corporate sustainability, which in turn leads to positive financial and reputational performance.

There is another factor that affects both corporate sustainability and financial performance (Ameer & Othman, 2012). As stated above, and in-line with institutional theory (Campbell, 2007), environmental guidelines exercised in the Bangladeshi banking sector may influence both corporate sustainability performance and financial performance by exposing them to coercive and normative pressures (Ameer & Othman, 2012). Thus, on the one hand, banks treat the Bangladeshi Environmental and Social Risk Management guidelines as a sort of formal pressure effected by the Central Bank (Global Climate Partnership Fund, 2018). On the other hand, due to societal pressure which propels them to be more sustainable and to invest more in

the green economy (Ahmed, Alam, & Rahman, 1999), these banks feel an obligational pressure to react to those expectations. Hence, the above discussed studies support the hypothesis that having a good sustainability performance indeed has a positive effect on the financial performance of these banks.

2.7 Research Objective

The aim of this study is to determine how Bangladeshi banks are performing in terms of sustainability and green banking, now that six years have passed since the inception of the Environment Risk Management and Green Banking Guidelines. These six years were divided into phases by Bangladesh Bank (2011). During phase one (June 30, 2014) banks were to develop green banking policies and show general commitment to the environment through in-house performance. In phase two (December 30, 2014), they were instructed to set detailed sector-specific environmental guidelines, bank-specific environmental risk management plans, along with initiating green branches across the country. By the end of phase three (June 30, 2015), all banks were expected to address the eco-system through environment-friendly initiatives and introduce innovative products. Standard environmental reporting with external verification was also a part of this last phase. Therefore, this study was curious to see what the end results, in terms of adaptation, integration and implementation, were; and how these corporate sustainability practices were affecting the environmental as well as the financial results. Therefore, the specific objectives for this study are as follows:

A) To identify the current activity regarding sustainability among the banks in Bangladesh.
B) To determine how the sustainability performance is affecting the financial performance of these banks.
C) To analyze whether the financial performance is having an impact on the sustainability performance.
D) To establish the motivating factor behind the corporate sustainability activity of these banks.

2.8 The Research Questions and Hypotheses

In an endeavor to find the correlation mentioned earlier, this study examines whether there is a connection between the sustainability performance and the financial performance of Bangladeshi banks. Therefore, the research question of this study is as follows:

RQ: Whether sustainability performance and financial performance of Bangladeshi banks correlate.

Furthermore, this study is aiming to find whether better sustainability performance influences financial performance of banks; to determine the cause and effect. If the answer is positive, then which direction this connection may take. Following the research question, the study proposes this hypothesis:

HT: The sustainability performance of Bangladeshi banks has a positive effect on their financial performance.

Chapter Three

3.1 Material and Methods

To investigate the hypothesis in the Bangladeshi context, 56 commercial banks were selected, including state-owned, specialized, private and foreign commercial banks. All these banks report their financial and non-financial data to Bangladesh Bank-Central Bank of Bangladesh (www.bb.org.bd). The data collection focus was on environmental, social and economic sustainability performance. The strategy was to analyze data from annual financial and non-financial reports, and from websites of the respective banks. The study selected Bangladeshi banks because the country initiated sustainable and green baking policy just six years ago (2012) and have been updating their policy in respect to the changing global environment and economy while trying to catch up to the rest of the world on sustainable and greener banking ground. Also, the policies are becoming more rigorous and vigilant every year as Bangladesh Bank is getting stricter on practicing the policies, particularly in credit risk management. These regulations are putting pressure on the banks to conduct their business in a sustainable and ethical manner. Further reasons for the focus on Bangladesh are the fast-growing economy, rapid development in manufacturing and service industries, and significant improvement on corporate social responsibility – a market which has been under-researched compared to Western industrialized countries.

In the form of integrated reporting inside the annual report, 22 out of the 56 commercial banks in Bangladesh have published information related to environmental, social and sustainability aspects outside the financial data. Noticeably, many state-owned as well as foreign commercial banks have not published their sustainability performance data even though the policies have been in effect since 2012. Regarding the financial data, analysis has been done on the banks' total assets (TA), net profit after tax (NPAT), return on assets (ROA), return on equity (ROE), and non-performing loan ratio (NPL) as key financial accounting indicators. Total Asset shows the sum of all current and non-current assets that a company owns. Net Profit After Tax shows what the company earned after all its expenses, charge-offs, depreciation, and taxes have been subtracted. Return on Asset reveals how much profit a company earns for every dollar of its assets and return on equity. Return on Equity shows whether management is growing the company's value at an acceptable rate. Lastly, in banking, loans are considered nonperforming if the debtor has made zero payments, interest, or principal within 90 (business) or 180 (consumer) days. These financial indicators help to draw a clear picture of the financial performance of a company, hence this study uses them for calculation purposes. All these data were gathered from the banks' published annual reports. The data were taken for the years 2012-2016 to assess and conduct a five-year analysis.

The principal strategy for analyzing the sustainability performance was to examine and explore whether and how the banks are handling sustainability issues through their channels such as financial products and services externally, as well as internally through their policies, management, and processes. The categories presented in Table I have been used to assess these products, services, policies, and processes.

Indicator	Examples	2012	2013	2014	2015	2016	Total
Social Social Policy	Policies addressing societal issues, employees, and social finance products and services	46	46	53	53	53	251
Social Management System	Balanced scorecard, six sigma, triple bottom line	22	23	26	28	28	127
Internal Social Management	Compliance management, social procurement, employees, management of benefits and incentives, career management	47	51	56	56	56	266
Social Credit Risk Assessment	Integration of social indicators into credit risk assessment	35	40	47	49	49	220
Social Loans	SME loans, student loans, rural & agro loans-villages, agriculture, farming- SME group lending, sanitary loans, reconstruction loans	31	33	42	44	44	194
Social Mortgages	Reconstruction mortgages, social housing	0	0	0	0	0	0
Social Funds	Funds for developing countries, rural areas, cultural sector, domestic development funds	4	6	10	13	13	46
Social Asset Management Services	Socially responsible investment, impact investing	3	5	7	11	11	37
Social Bonds	Bonds for social projects	0	0	0	0	0	0
Social Microfinance	Start-up microfinance; microfinance for laid-off workers, farmers, and rural women	24	25	30	32	32	143
Social Project Finance Assessment	Assessment of social project risk, application of Equator Principles, project finance for municipal facilities	0	1	1	4	4	10
Social Savings Products	Savings products that are invested in social loans	0	0	0	0	0	0
Social Financial Inclusion	Promoting financial inclusion through agent banking, mobile banking	29	31	37	38	38	173 *(Continued)*

Table I: Categories Used (continued)

Indicator	Examples	2012	2013	2014	2015	2016	Total
Stakeholder Engagement	Stakeholder inclusion and collaboration	43	44	52	52	52	243
Social Community Building	Promoting social development through schools, scholarships, charity	37	29	43	45	45	199
Social Investment Banking	Industrial zone development project	4	5	6	9	9	33
Other Social Products and Services	Other products and services addressing social issues	1	1	2	6	6	16
Environment Environmental Policy	Policies addressing environmental issues, such as green products and services, supporting the development of environment protection	35	38	48	49	49	219
Environmental Management System	ISO 140001	0	0	0	0	0	0
Internal Environmental Management	Green office and green building management, green procurement, green operations, waste management, paperless banking	38	42	50	51	51	232
Environmental Credit Risk Assessment	Integration of environmental credit risk indicators into credit risk assessment	37	42	49	50	50	228
Green Green Loans	Green industry loans	10	11	17	19	19	76
Green Mortgages	Green housing mortgages	0	0	0	0	0	0
Green Funds	Green industry investment funds	2	3	6	8	9	28
Green Indices	Indices using environmental criteria	0	0	0	0	0	0
Green Asset Management Services	Green mutual funds, environmental asset management products and services	0	0	0	0	0	0 *(Continued)*

Table I: Categories Used (continued)

Indicator	Examples	2012	2013	2014	2015	2016	Total
Green Bonds	Green bonds issued	0	0	0	0	0	0
Green Microfinance	Microfinance for environmentally-friendly businesses	2	2	6	9	10	29
Green Project Finance Assessment	Environmental risk assessment, financing of green projects-energy, water, infrastructure, waste management, restoration	24	26	39	39	39	167
Green Savings Products	Savings products that are invested in green loans	0	0	0	0	0	0
Green Investment Banking	Emissions trading, investment in clean development mechanism projects	0	1	6	8	9	24
Green Banking Reporting	Integrated annual sustainability report, separate reporting	10	12	19	21	21	83
Green Branch Initiative	Setup/Progress of green branches	9	9	11	13	13	55
Green Banking Division	Setup of green banking division	34	36	46	47	47	210
Green Office Guidelines	Introduction of green office guidelines	35	38	47	48	48	216
Green Products by Bangladesh Bank	Promoting green products introduced by the sustainable finance department, Bangladesh Bank	29	30	39	41	0	139
Other Green Products and Services	Management of low-carbon fund	0	0	1	3	3	7

Table I: Categories Used

To avoid the risk of greenwashing (Laufer, 2003) (Ramus & Montiel, 2005), common general green policies and norms have been avoided while keeping the focus more in line with various corporate sustainability reporting and rating systems such as the Global Reporting Initiative (Global Reporting Initiative, 2013) and Thomson Reuters' ESG Rating Asset4 (Teofilovski, 2018). As a result, the criteria(s) are more focused on specific policies, strategies and management issues evaluating the present conditions of Bangladeshi banks in this regard. The method also considers the "green section" of the banks' portfolios, which signifies a considerable portion of activities performed by the Bangladeshi banks, compared to other sections. There have been other studies which have taken a similar approach to analyzing the effect of corporate sustainability performance on financial performance (Weber, 2017; Waddock & Graves; 1997; Scholtens, 2009; Weber & Acheta, 2014). Indicators, such as social and environmental policies, social and environmental management systems, and internal environmental and social management processes, have been used to run assessment on various focus points. Banking products and services that can be commonly found, such as various loans, mortgages, funds, asset management, bonds, microfinance, project finance, savings and investment banking, were analyzed. Table I presents examples for products and services as well as for policies and management systems. One key aspect of the analysis was where the assessment was done to determine whether these policies, processes, products, and services essentially addressed the environmental, social, or economic component of the triple-bottom line approach of sustainability (Elkington, 1998), using two categories (yes; no). Even though, in respect to the availability of many green products and services, Bangladesh is still in the early launching phase or these products and services have just been launched (Kidney, 2016).

A value of "1" was assigned if the banks had implemented the respective environmental, social, or green product, service, policy, or management system. If the banks did not implement/use any criteria, they were given a value of "0". For instance, banks got a score of "1" if they reported on their green banking performance or if their environmental policy included issues like development of environment protection (see Table I). After assigning all the values collected from their annual reports, the sum of environmental, social and green indicators was calculated. For the next step, the banks' results have been divided by the maximum achievable points for the social and the environmental indicators to standardize the values for the banks' environmental, social, and green performance. Lastly, total sustainability score was calculated using the average of the environmental, social, and green scores. As a result, the resulted sustainability score is an equally weighted combination of the environmental, social, and green scores.

The reason behind applying the binary (0 and 1) scoring method was to take advantage of the independency from subjective performance scaling, assigning a numeric value to each criterion, thus increasing the reliability of the assessment. The study tried to minimize the risk factor by combining 37 indicators and calculating the total sustainability score. This binary method has been also used by popular Thomson Reuters Asset4 ESG – Rating and ESG rating systems, such as MSCI-KLD Score, which have been used by numerous academic studies in the past (Weber, 2017; Weber, Koellner, Habegger, Steffensen, & Ohnemus, 2008; Scholtens, 2008; Kempf & Osthoff, 2007; Griffin & Mahon, 1997; Whittaker, 2012).

After assigning the values to all 37 indicators, the next logical step was to calculate the average of social, environmental, and green criteria(s) for each year for each of the 56 selected banks. The data were used to calculate linear regression analysis (Seber & Lee, 2012) to predict the

behavior of financial data over sustainability data. The goal was to examine if the sustainability (social, environmental, and green) variables do a better job in predicting an outcome of financial (TA, NPAT, ROA, ROE and NPL) variables, and if so, which variables in particular are significant. Also, in what way do they – indicated by the magnitude and sign of the beta estimates – impact the outcome of those financial variables. The result showed the degree to which social, environmental, and green criteria affected each of the financial indicators. The probability and R-Square values that were used signified the impact level on each of the financial category. After that, another set of regressions was conducted using the panel data for all the financial and sustainability indicators. The aim of conducting the regression analysis was to explain the relationship between the financial and sustainability indicators.

The study then used another form of regression analysis with panel data (Baltagi, 1995). Panel data, also known as longitudinal data or cross-sectional time series data in some special cases, are data that are derived from several observations over time on a number of cross-sectional units (Moffatt, 2018). The reason for choosing panel data with random effects in this study was to observe two things: 1) the variance between the banks; and 2) the variance within the banks over a certain period (Kahane, 2007). This study assessed the financial data and sustainability performance data for the period between 2012 and 2016. Moreover, this gives the study many unique data points, which increase its degree of freedom to explore the variables and their in-between relationships.

In addition to analyzing the regression between financial data and sustainability performance in the same year, this study used a one-year time lag between financial variables and the banks' sustainability performance for a period of five years to analyze Granger causality (Granger, 1969). The impact of the independent variables on the dependent variables was calculated by using data in year x for the independent variable, whereas the data for the dependent variable was taken from year x+1, with x being the period between 2012 and 2013, and so on. This method was used because the expectation was that the effect of the independent variable would appear with a certain delay. After that, the coefficients of determination (r^2) for the regressions with sustainability performance as dependent variable versus those with financial indicators as dependent variables was tested. In the result, a uni-directional causality (Wright, 2008) was found which appears if only one of the two regressions are significant. In this case, it was found that financial indicators as dependent variables were significantly affected by the sustainability indicators as independent variables, whereas the opposite showed no significance in the case of Bangladeshi Banks.

3.2   Sample

The population used in this research consist of 56 scheduled commercial banks that are currently operating in Bangladesh under the guidelines and listed by the Central Bank of Bangladesh. Data for the population size have been collected from all the publicly available reports, such as annual reports, sustainability and CSR reports, disclosed sustainability and financial information on the respective websites, and data published from the Central Bank.

Even though banks in the capital city (Dhaka) and the port city (Chittagong) are the most industrialized regions and have major impacts on the economy (Ullah, 2014; Monir, 2017), this research collected data from the collective annual reports of all branches for each bank as it represents the entire country's economic and financial situation. This data population includes four (04) types of scheduled banks: State-Owned Commercial Banks (SOCBs), Specialized

Development Banks (SDBs), Private Commercial Banks (PCBs), and Foreign Commercial Banks (FCBs) (Financial System, 2017). Table II represents the financial institutions and their types that were included in the data population.

Name	Type
AB Bank Limited	Private Commercial Banks (PCB)
Agrani Bank Limited	State-Owned Commercial Banks (SOCB)
Al-Arafah Islami Bank Limited	Private Commercial Banks (PCB)
Bangladesh Commerce Bank Limited	Private Commercial Banks (PCB)
Bangladesh Development Bank Limited	Specialized Development Banks (SDB)
Bangladesh Krishi Bank	Specialized Development Banks (SDB)
Bank Al-Falah Limited	Private Commercial Banks (PCB)
Bank Asia Limited	Private Commercial Banks (PCB)
BASIC Bank Limited	Specialized Development Banks (SDB)
BRAC Bank Limited	Private Commercial Banks (PCB)
Citibank N.A	Foreign Commercial Banks (FCB)
Commercial Bank of Ceylon Limited	Foreign Commercial Banks (FCB)
Dhaka Bank Limited	Private Commercial Banks (PCB)
Dutch-Bangla Bank Limited	Private Commercial Banks (PCB)
Eastern Bank Limited	Private Commercial Banks (PCB)
EXIM Bank Limited	Private Commercial Banks (PCB)
First Security Islami Bank Limited	Private Commercial Banks (PCB)
Habib Bank Ltd.	Foreign Commercial Banks (FCB)
ICB Islamic Bank Ltd.	Private Commercial Banks (PCB)
IFIC Bank Limited	Private Commercial Banks (PCB)
Islami Bank Bangladesh Ltd	Private Commercial Banks (PCB)
Jamuna Bank Ltd	Private Commercial Banks (PCB)
Janata Bank Limited	State-Owned Commercial Banks (SOCB)
Meghna Bank Limited	Private Commercial Banks (PCB)
Mercantile Bank Limited	Private Commercial Banks (PCB)
Midland Bank Limited	Private Commercial Banks (PCB)
Modhumoti Bank Ltd.	Private Commercial Banks (PCB)
Mutual Trust Bank Limited	Private Commercial Banks (PCB)
National Bank Limited	Private Commercial Banks (PCB)
National Bank of Pakistan	Foreign Commercial Banks (FCB)
National Credit & Commerce Bank Ltd	Private Commercial Banks (PCB)
NRB Bank Limited	Private Commercial Banks (PCB)
NRB Commercial Bank Limited	Private Commercial Banks (PCB)
NRB Global Bank Limited	Private Commercial Banks (PCB)
One Bank Limited	Private Commercial Banks (PCB)
Premier Bank Limited	Private Commercial Banks (PCB)
Prime Bank Ltd	Private Commercial Banks (PCB)
Pubali Bank Limited	State-Owned Commercial Banks (SOCB)
Rajshahi Krishi Unnayan Bank	Specialized Development Banks (SDB)
Rupali Bank Limited	State-Owned Commercial Banks (SOCB)
Shahjalal Islami Bank Limited	Private Commercial Banks (PCB)
Social Islami Bank Ltd.	Private Commercial Banks (PCB)
Sonali Bank Limited	State-Owned Commercial Banks (SOCB)
South Bangla Agriculture & Commerce Bank Limited	Private Commercial Banks (PCB)
Southeast Bank Limited	Private Commercial Banks (PCB)
Standard Bank Limited	Private Commercial Banks (PCB)
Standard Chartered Bank	Foreign Commercial Banks (FCB)
State Bank of India	Foreign Commercial Banks (FCB)
The City Bank Ltd.	Private Commercial Banks (PCB)
The Farmers Bank Ltd	Private Commercial Banks (PCB)
The Hong Kong and Shanghai Banking Corporation. Ltd.	Foreign Commercial Banks (FCB)
Trust Bank Limited	Private Commercial Banks (PCB)
Union Bank Limited	Private Commercial Banks (PCB)
United Commercial Bank Limited	Private Commercial Banks (PCB)
Uttara Bank Limited	Private Commercial Banks (PCB)
Woori Bank	Foreign Commercial Banks (FCB)

Table II: Population of Banks

Chapter Four

4.1 Results

As the first step, this study presents the results of the descriptive statistics for the population. Second, this study presents the results of the regression analyses with both sustainability and financial indicators as dependent variables. Third, the study presents the results of a panel regression analysis. Finally, the study presents the results of panel regression with a one-year time lag.

4.2 Descriptive analyses

This study analyzed four types of banks according to the categories of the Central Bank of Bangladesh. In total, a population size consisting of 56 banks (see Table II) was selected that disclosed any financial and sustainability information, even though all these banks are directly regulated under Bangladesh Bank (Central Bank of Bangladesh). Data were collected for the years 2012-2016. Five are state-owned commercial banks, four are specialized development banks, eight are foreign commercial banks, and 39 are private commercial banks.

Table III presents the descriptive statistics for the financial indicators in total and split by the type of bank. At the time of the study, the dollar value of 1 BDT was $0.12.

Type of Bank	Total Assets in BDT Million	Net Profit in BDT Million	ROA	ROE	Non-Performing Loan Ratio
State-Owned Commercial Banks					
Mean	160986	651	0.55%	5.81%	9.86%
SD	195434	3831	3.50%	20.37%	13.87%
Specialized Development Banks					
Mean	148444	704	0.56%	7.11%	9.17%
SD	158902	3327	3.77%	8.79%	14.54%
Foreign Commercial Banks					
Mean	160149	1368	0.90%	8.48%	7.51%
SD	188353	3114	3.24%	8.25%	16.00%
Private Commercial Banks					
Mean	154136	1026	0.77%	6.93%	9.30%
SD	178197	3674	3.16%	18.46%	16.30%

Table III: Descriptive statistics for the financial indicators

4.3 Regression analysis for sustainability and financial indicators

Table IV presents the regression analysis with social, environmental, and green indicators as the dependent variables, and financial indicators as the independent variables. The goal here is to see how each of the social, environmental, and green variables is affected by the financial indicators. As seen in Table IV, except for total assets, none of the other financial variables have a significant impact on any of the sustainability variables. The regression functions, however, are significant for all three sustainability indicators.

Dependent Variables	Independent Variables	Coefficient	p>t	R²	Significance
Social Indicators				0.1612	<0.00001
	Total Asset	4.18e-07	0.000		
	Net Profit	4.47e-06	0.170		
	ROA	.0097246	0.979		
	ROE	-.0012488	0.984		
	NPL	-.0042557	0.950		
Environmental Indicators				0.0759	0.0006
	Total Asset	3.32e-07	0.000		
	Net Profit	5.99e-06	0.203		
	ROA	.4898368	0.360		
	ROE	.042242	0.642		
	NPL	-.067833	0.491		
Green Indicators				0.1035	<0.00001
	Total Asset	2.81e-07	0.000		
	Net Profit	2.60e-06	0.389		
	ROA	.0899185	0.794		
	ROE	.0676799	0.248		
	NPL	-.0177999	0.779		

Table IV: Results of the regression analysis with the social, environment, and green score as dependent variables and the financial indicators as independent variables.

The following analysis (Table V) explores whether the sustainability performance has an impact on the financial indicators, such as total assets, net profit, ROA, ROE, and non-performing loan ratio. Table V presents the regression with the financial indicators as dependent variables and the sustainability indicators as independent variables. The results show that all regression functions are significant. Furthermore, social indicators have a significant positive effect on total assets, and a significant negative effect on ROE. Finally, green indicators have a significant positive effect on ROE.

Dependent Variables	Independent Variables	Coefficient	p>t	R²	Significance
Total Asset				0.1628	<0.00001
	Social Indicators	538443.1	0.000		
	Environmental Indicators	-47388.02	0.348		
	Green Indicators	-171937.1	0.131		
Net Profit				0.0217	0.1089
	Social Indicators	120.4836	0.963		
	Environmental Indicators	1524.925	0.175		
	Green Indicators	977.7881	0.699		
ROA				0.0180	0.1692
	Social Indicators	-.0334208	0.134		
	Environmental Indicators	.0188939	0.043		
	Green Indicators	.0263156	0.228		
ROE				0.0317	0.0307
	Social Indicators	-.2608478	0.044		
	Environmental Indicators	.0863301	0.125		
	Green Indicators	.3117771	0.014		
NPL Ratio				0.0109	0.3859
	Social Indicators	.1165153	0.312		
	Environmental Indicators	-.0698888	0.164		
	Green Indicators	-.1079341	0.339		

Table V: Results of the regression analysis with financial indicators as dependent variables and social, environment, green score as independent variables.

The regression analysis suggests a connection between the banks' financial indicators and their corporate sustainability performance. The results demonstrate that the sustainability

performance is higher for bigger banks (total assets), and for those with high ROA and ROE. Therefore, sustainability performance has an impact on some financial indicators.

4.4 Panel regression analysis for sustainability and financial indicators

The following analysis (Table VI) investigates the cross-sectional time series data derived from the years 2012 to 2016. The goal of this panel data analysis is to find the connection between the sustainability and financial indicators over the five-year period. The results in table VI show that the total asset affects all three sustainability categories and no other significant relationship between the other independent variables.

Dependent Variables	Independent Variables	Coefficient	p>z	R^2	Significance
Social Indicators				0.1496	<0.00001
	Total Asset	5.22e-07	0.000		
	Net Profit	-1.91e-06	0.380		
	ROA	.1704388	0.424		
	ROE	.0471453	0.228		
	NPL	.0229466	0.691		
Environmental Indicators				0.063	0.0223
	Total Asset	4.48e-07	0.001		
	Net Profit	-7.27e-07	0.854		
	ROA	.4148883	0.294		
	ROE	.0629475	0.382		
	NPL	.0052115	0.959		
Green Indicators				0.0917	<0.00001
	Total Asset	4.64e-07	0.000		
	Net Profit	-3.26e-06	0.097		
	ROA	.100814	0.599		
	ROE	.0995337	0.005		
	NPL	.014346	0.784		

Table VI: Results of the panel regression analysis with social, environment, and green score as dependent variables and financial indicators as independent variables.

In a similar manner, Table VII presents how the sustainability indicators affect the financial indicators over the five-year timeframe. The outcome shows similar results for the linear regressions. Again, this demonstrates that the sustainability performance is higher for larger banks, and for those with a higher ROA and ROE.

Dependent Variables	Independent Variables	Coefficient	p>z	R^2	Significance
Total Asset				0.1136	<0.00001
	Social Indicators	54067.89	0.037		
	Environmental Indicators	-13306.72	0.567		
	Green Indicators	118625.8	0.029		
Net Profit				0.0187	0.5514
	Social Indicators	1601.73	0.609		
	Environmental Indicators	744.55	0.564		
	Green Indicators	-814.85	0.786		
ROA				0.0180	0.1666
	Social Indicators	-0.03342	0.013		
	Environmental Indicators	0.0188	0.041		
	Green Indicators	0.0263	0.227		
ROE				0.0309	0.0257
	Social Indicators	-0.2911	0.049		
	Environmental Indicators	0.0718	0.254		
	Green Indicators	0.3825	0.008		
NPL				0.0028	0.9800
	Social Indicators	0.0570	0.671		
	Environmental Indicators	-0.0100	0.850		
	Green Indicators	-0.0457	0.714		

Table VII: Results of the panel regression analysis with financial indicators as dependent variables and social, environment and green scores as independent variables.

4.5 One-year lagged panel regression analysis for sustainability and financial indicators

Finally, to test cause and effect, this study used the sustainability performance and financial performance as both dependent and independent variables in the lagged panel regression analysis. The goal was to find out whether the sustainability performance of the final year (2016) had an impact on the financial performance of the next year and vice-versa. This study used Granger causation (Granger, 1969) to take cause and effect into account, considering a one-year lag for the years 2012 to 2016.

For the calculation, panel regression functions with sustainability indicators have been selected as dependent variables in year x and financial indicators in year x+1 and vice-versa, respectively. After having calculated the regressions, the study compared r^2 as well as the significance level of the regressions with the sustainability performance as dependent variable versus those with the financial indicators as dependent variables. As a result, if the independent variable was able to predict the time-lagged dependent variable, the study assumed a cause-effect relation (Granger, 1969). Table VIII and Table IX present the results of the time-lagged panel regression analysis.

Dependent Variables	Independent Variables	Coefficient	p>z	R^2	Significance
Sustainability Score (Lagged)				0.0089	0.6666
	Total Asset	-.0008397	0.667		
Sustainability Score (Lagged)				0.0006	0.9854
	Net Profit	.0006518	.035627		
Sustainability Score (Lagged)				0.0002	0.3632
	ROA	5890.637	0.363		
Sustainability Score (Lagged)				0.0001	0.7396
	ROE	211.4935	0.740		
Sustainability Score (Lagged)				0.0060	0.7148
	NPL Ratio	-821.9815	0.715		

Table VIII: Results of the one-year lag panel regression analysis with sustainability performance (lagged) as dependent variable and financial indicators as independent variables.

Dependent Variables	Independent Variables	Coefficient	p>z	R^2	Significance
Total Asset (Lagged)				0.1197	0.0001
	Sustainability Score	86233.05	0.000		
Net Profit (Lagged)				0.0693	0.2390
	Sustainability Score	2555.203	0.521		
ROA (Lagged)				0.0074	0.1973
	Sustainability Score	.0151708	0.019		
ROE (Lagged)				0.1132	0.0001
	Sustainability Score	.103731	0.000		
NPL Ratio (Lagged)				0.0066	0.9582
	Sustainability Score	-.0032699	0.958		

Table IX: Results of the one-year lag panel regression analysis with financial indicators (lagged) as dependent variables and sustainability performance as independent variable.

Table IX shows that sustainability performance has a significant impact on the financial indicators (Total Asset, ROA and ROE), with a similar score in r^2, which means that a high sustainability score has a positive impact on assets and on return of equity on the next year.

The results for Net Profit and NPL are different. The explained variance (r2) for these regressions is much lower than for total assets, net profit and ROE. The results of the regression analysis for total asset, ROA and ROE, suggest a positive impact of the sustainability performance on the selected financial figures.

Furthermore, a comparison between Table VIII and Table IX suggest that sustainability score has a significant impact on Total Asset (Table IX) while the results for Table VIII show a non-significant impact. The regression functions are also showing significance for Total Asset, ROA and ROE (Table IX) while indicating negative significance for all the financial indicators (Table VIII).

Overall, the results of the regression analysis with time lags indicate uni-directional causation between the sustainability score on the one hand, and Total Assets as well as ROA and ROE on the other hand. The correlation between the sustainability score and non-performing loans, however, was rather weak. Finally, the results suggest a uni-directional causation between corporate sustainability performance and financial performance of the banks in the population.

Chapter Five

5.1 Discussion

A study by Sneirson (2008) hypothesizes that the sustainability performance of Bangladeshi banks has a positive effect on their financial performance. Therefore, this study incorporates both financial and sustainability data over the period of five years to determine whether the results support the claim or the hypothesis. And the results indicate that the environmental, social, and green performance (together called sustainability performance) saw an incremental increase from the years 2012 to 2016. Year 2011 was the inception year for all the policies and guidelines, which were modified and updated over the years; and with that update, the sustainability performance of the banks began to rise (Weber & Oni, 2015), especially from 2014, the trend has been upward. This upward trend was expected as the new policies guided the banks to become more active and provided more input to build a better sustainable economy for the country. This is also supported by other studies in that strategies such as incorporating environmental criteria into credit risk management (Weber, Hoque, & Islam, 2015) and increasing green product lines (Economic Dialogue on Green Growth, 2017) has put notable impact on the overall sustainability performance of the banks. Furthermore, the increase may have been prompted by Bangladesh Bank's refinancing programs in diverse green products/sectors (Nabi, Khan, Islam, & Uddin, 2016) which have categorically advanced the performance of sustainability over the years. This initiated a paradigm shift inside the Bangladeshi banks, steering them towards a more sustainable direction (Khan, Mohobbot, & Fatima, 2014).

This study illustrates that the integration of sustainability into the banking sector has a notable impact on total assets, ROA, and ROE, which expounds that being sustainable, banks are not only increasing in size, but also generating sound returns from their shareholders' investments. This has also been supported in other studies (Deloitte 2017; Boitan, 2015) where it has been demonstrated that sustainability focused banking brings more profit and a positive impact on the industry. The results suggest that institutional pressure from Bangladesh Bank in the form of various policy guidelines and a uniform reporting format may have acted as a catalyst in the increase of return on asset and equity as banks are making more profit then before (New Age Business (2018). The results also support the good management theory (Waddock & Graves, 1997) which claims that a firm's financial performance is influenced in a positive manner by its corporate social performance (Friede et al., 2015). The study found a positive correlation between the sustainability performance and financial indicators for total assets, ROA, and ROE assessed at the same year as well as for one-year time lags. Weber (2017) and Weber (2014) found a correlation among the size of financial institutions, which was evaluated on two standards: the size of total assets and the quality of sustainability reporting.

The foundation behind the validation of the hypothesis is quite evident. One study (Ahmed, Zayed, & Harun, 2013) suggests that a combination factors, such as economy, policy guidelines, loan demand, stakeholder pressure, environmental interest, and legal factors, create a variance of 65.25% of the decision regarding the adoption of green banking. A major key player in this was institutional pressure, whereby banks were being required to adopt and assimilate various sustainability approaches into their day-to-day banking as well as long-term strategy planning (Nabi et al.2015). During the initiation phases of these guidelines, banks were given several timelines (Chowdhury & Dey, 2016) to adopt and integrate these strategies into their operation, which most of the banks followed within the stipulated timeframe (Ahsan & Uddin, 2015). Economic incentives were also introduced to motivate banks to more swiftly

adopt the guidelines (Riaz & Verma, 2017). This in turn created a positive financial impact on the banks which started to show in their financial statements. The number of sanctioned loans towards environmentally harmful projects began to diminish (Shakil, Azam, & Raju, 2014),; integration of environment-friendly technologies escalated in practice (Islam, 2014); and a reduction in the carbon footprint started to see an upsurge in all branches and head offices (Islam & Das, 2013). This in turn prompted an upward trend in the banking sector, resulting in a rise in sustainability performance (Nabi et al., 2015), and created brand image and awareness in the environment amongst the stakeholders as well as initiating environment-friendly business practices (Khan, Naim, Islam, & Begum, 2017). Hence, these activities accrued over the years started to make a notable impact on the financial performance of the banks, while at the same time, the financial sector were seemingly able to create higher financial returns and increases in its assets, ROA, and ROE.

While exploring the correlation between sustainability performance and financial indicators with time lags, this study found that the causality is unidirectional. In this case, sustainability performance is having an impact on the financial performance of these banks, but having a better financial performance is not necessarily leading towards a better sustainability performance. The bi-directional causality contrasts with the study done by Weber (2017) on Chinese banks which suggests having a bi-directional relationship whereby corporate financial performance influences corporate sustainability performance and vice versa. This evaluation parallels institutional theory of corporate social responsibility (Campbell, 2007) (Brammer, Jackson, & Matten, 2012). It seems that institutional pressure to achieve higher sustainability performance is positively affecting the financial performance of the Bangladeshi banks. In an endeavor to find the link between corporate social performance and financial performance, Waddock and Graves (1997) also supported this result, suggesting that sustainability performance is positively associated with future financial performance. This is also found in yet another similar study (Ameer & Othman, 2012); that companies which implement superior sustainable practices have a established higher financial performance compared to those that do not engage in such practices.

This study found that the results did not show a bi-directional relationship between sustainability and financial performance; it did not find any positive change in sustainability performance when financial performance was rising. This represents an interesting aspect of the current baking sector in Bangladesh. Banks had been making profit (Dey, 2014) (Chowdhury & Ahmed, 2009) long before the sustainability and green banking guidelines were introduced. But initially after the introduction of the guidelines in 2011, many banks did not show much improved performance regarding sustainability (Chowdhury & Dey, 2016) (Shah & Habib, 2013). In fact, state-owned commercial banks and state-owned development banks showed the weakest performance (Islam & Kamruzzaman, 2015). This illustrates the lack of voluntary keenness to practice green banking which prevails in the industry to date. Bangladeshi banks are not seen investing their slack resources (George, 2005) into sustainability practices; a point which has been evidenced in similar studies from other countries (Zyadat, 2016; Fijałkowska, Zyznarska-Dworczak, & Garsztka, 2018; Gbadamosi, 2016).

Finally, the explanation for the non-significant relationship between non-performing loans (NPL) ratio and sustainability performance of Bangladeshi banks could be due to the lack of proper provisioning and lack of stringent application of existing policies (Ahmed, 2006).

Consequently, having too many banks for an economy size of $150 billion causes an influx of capital while political intervention hinders the effort to bring the existing big defaulters to the negotiation table (Bangladesh's bad loan ratio is higher than those of India and Nepal, 2018).

Chapter Six

6.1   Conclusions

Based on the results, this study concludes that the integration of sustainability into the financial sector increases financial performance and does not harm the profitability of the banks. Therefore, green banking policy such as Environmental and Social Risk Management may yield two distinct effects: 1) It would raise the banks' corporate sustainability performance; 2) It would create a more stable and successful financial sector in the long run for the economy. Hence, this study suggests that Bangladeshi banks should invest more in corporate sustainability thereby increasing their financial success. And, by earning more profit, they would be able to see the benefits of being sustainable and become more invested in sustainability activities.

The unidirectional causation seen between corporate sustainability performance and financial performance can be explained by institutional theory. What institutional theory does in this regard is it influences factors that are generated outside of the organization. These may include, but not limited to, public policies and regulations, social norms and views (Dees, 2007), business culture and activities, pressure from different environmental groups (Dalton, 2005) as well as international pressure such as Sustainable Development Goals (SDGs) by UNDP (Khan, 2017). Therefore, it is not only market factors and competitors that determine how an organization will behave, external factors are connected as well (Zakic, Jovanovic, & Stamatovic, 2008).

As mentioned before, while the banks in Bangladesh have just begun to reap the benefits of conducting their business in a sustainable way, they still lag far behind in investing their slack resources to create more sustainable products and services, especially in the case of government-owned banks compared to privately-owned ones (Mohammad, Abedin, & Rahman, 2017; Hasan & Baten, 2005; Ahmed, Rahman, & Ahmed, 2006). Another issue, that is proving to be a hurdle, is transparency (Khan, 2010). Banks are not being transparent in their sustainability reporting (Hossain, Bir, Tarique, & Momen, 2016) even though there are specific guidelines on how to report effectually both from Bangladesh Bank (Islam, 2015) and renowned international organizations such as GRI (Khan, Islam, Kayese & Ahmed, 2011). Currently, banks are reporting their sustainability activities in an integrative manner through their annual reports, which is not as per any national or international standard (Bose, Khan, Rashid, & Islam, 2018) and have many dissimilarities in the pattern and language of disclosure. Due to this, the benefits are not as apparent as they should be. As a result, the industry is not yet able to see the full benefit of sustainability (Mahmud, Biswas, & Islam, 2017).

As pointed out in the theoretical background (Masukujjaman & Aktar, 2014), Bangladesh still needs a lot of catching up to do with their counterparts in developing countries when it comes to implementing sustainability in the banking sector. It becomes more concerning when no Bangladeshi banks were found in the UNEPs signatories of the Equator Principles as this is regarded as one of the most crucial standards for responsible financing (Petsonk, 1989). Adding to the fact that the people of Bangladesh have very little knowledge and awareness regarding climate change issues (Faruque et al., 2016), the transition towards a sustainable economy will be harder and longer. Given the fact that banks can play a pivotal role in educating their clients (individual as well as business) and leading them towards a green economy, it is imperative

now more than ever to get the banking industry operating under sustainable guidelines (Biswas, 2011; Rahman, 2012).

It is not to say that sustainability activities are always free of costs. In fact, being sustainable means investing significant resources and a well-planned business strategy (Curtis el al., 2010) (Orlitzky et al. 2011). Bangladeshi banks also fall under this rule. To become sustainable, these banks needs to undergo a rigorous strategy change and make notable investments in products and services as well as infrastructure (Weber, 2017; UNEP, 2011), which is why they will only perform sustainable activities if they see a financial benefit in the present or near future (Confino, 2014).

As the study advocates a correlation between the size of banks measured by their asset size and their sustainability performance, it can be inferred that the regulatory authorities need to develop different policies under the same guidelines for banks of different sizes (Weber, 2017). The reason behind this is, smaller banks usually have less resources to work with due to financial constraints and they need more support to implement the strategies. The banks in Bangladesh have undergone three distinctive phases in implementing the environment guidelines introduced by Bangladesh Bank which have enabled them to carefully take each step and the time to adopt these newly introduced policies. However, this does not take the "availability of resource part" into consideration. Hence, in line with Weber (2017) and Zhang, Yang, and Bi (2011), this study proposes that the Central Bank take such factors as different business models of the banks, their assets and equity size, and availability of other resources into account. This will ensure an effective and successful implementation of the sustainability policy and guidelines and eliminate the disparity between banks in the long run.

Further research is required to examine the effects of environment and social risk management policy on the banking sector of Bangladesh. Also, more research is needed to determine whether sustainability performance is progressing steadily and, if so, whether banks are being motivated to invest in more sustainable initiatives. Due to lack of ample public reporting of Bangladeshi banks, this study relied on a relatively small sample size. Research conducted using big data approaches (Etzion & Aragon-Correa, 2016) will help in connecting more dots, using environmental, financial and economic factors. Based on the results of this study, another future research direction might be to investigate the requirement for core green banking products and services in the social and economic context of Bangladesh (Saha, 2013; Polonsky, Rosenberger III, & Ottman, 1998), given that as of yet Bangladeshi banks do not offer any direct green banking products and services (Islam, 2014).

Finally, once more data are available, future research should focus on analyzing how the existing regulations are having an impact (positive/steady/negative) and at what level of efficiency the banks are operating under the green guidelines. The scope of this research should not only be limited to banks and financial institutions but should also determine how the environment and sustainable development are being affected by the practice of the existing green regulations. This will bring more focus on the state of the current economic situation and will help to shed some light on the lack of awareness by bringing verified knowledge that would help relevant stakeholders to act more responsibly and sustainably.

References

Aazim, M. (October 16,2017). Green banking gets ready to take off in Pakistan. Retrieved from https://www.dawn.com/news/1364096

Achua. K. J. (2008), "Corporate social responsibility in Nigerian banking system", Society and Business Review, Vol. 3 No. 1, pp. 57-71

Adams, C. A., & Frost, G. R. (2008, December). Integrating sustainability reporting into management practices. In Accounting Forum (Vol. 32, No. 4, pp. 288-302). Elsevier.

Adeleke, D. A. Q., & Naim, M. J. (December 6, 2017). Green Banking: A progressive model for Bangladesh economy. The Asian Age Online, Bangladesh. Retrieved from http://dailyasianage.com/news/98059/green-banking-a-progressive-model-for-bangladesh-economy

Agarwal, M. K., & Berens, G. A. J. M. (2009). How corporate social performance influences financial performance: Cash flow and cost of capital. Marketing Science Institute.

Ahiduzzaman, M., & Islam, A. S. (2011). Greenhouse gas emission and renewable energy sources for sustainable development in Bangladesh. Renewable and Sustainable Energy Reviews, 15(9), 4659-4666.

Ahmed, A. U., Alam, M., & Rahman, A. A. (1999). Adaptation to climate change in Bangladesh: future outlook. In Vulnerability and adaptation to climate change for Bangladesh (pp. 125-143). Springer, Dordrecht.

Ahmed, E., Rahman, Z., & Ahmed, R. I. (2006). Comperative analysis of loan recovery among nationalized, private and islamic commercial banks of Bangladesh.

Ahmed, S. I. (2006). Banking Sector Performance in Bangladesh (Doctoral dissertation, East West University).

Ahsan, M. K., & Uddin, M. S. (2015). Justification of Present Status of Green Banking in Bangladesh. Asian Accounting & Auditing Advancement.

Akter, S. (2016). Overview of Financial Inclusion in Bangladesh.

Ameer, R., & Othman, R. (2012). Sustainability practices and corporate financial performance: A study based on the top global corporations. Journal of Business Ethics, 108(1), 61-79.

Asian Development Bank. (2017). Asian Development Outlook 2017 Update: Sustaining Development through Public–Private Partnership (Asian Development Outlook). Manila, Philippines: Asian Development Bank. https://doi.org/10.22617/FLS179053-3

Aupperle, K. E., Carroll, A. B., & Hatfield, J. D. (1985). An empirical examination of the relationship between corporate social responsibility and profitability. Academy of management Journal, 28(2), 446-463.

Baltagi, B. H. (1995). Econometric analysis of panel data (Vol. 2). New York: Wiley.

Bangladesh Bank (2017). Bankalap. Retrieved from http://www.bankalap.com/financial-literacy/ESRM-for-Banks

Bangladesh Bank steers the financial sector towards environmental sustainability & climate change resilience. (2017). Alliance for Financial Inclusion Retrieved from https://www.afi-global.org/blog/2018/04/bangladesh-bank-steers-financial-sector-towards-environmental-sustainability-climate

Bangladesh Bank. (2011). Policy guidelines for green banking. Dhaka, Bangladesh: Banking Regulation & Policy Department.

Banking on 2030: Citi & the Sustainable Development Goals. (n.d.). Retrieved from http://www.citigroup.com/citi/about/citizenship/download/Banking-on-2030-Citi-and-the-SDGs-Report.pdf?ieNocache=68

Banking on Sustainability-Financing Environmental and Social Opportunities in Emerging Markets. (2007). International Finance Corporation. Washington DC. Retrieved from https://www.ifc.org/wps/wcm/connect/1bba68804886595eb902fb6a6515bb18/FINAL_IFC_BankingOnSustainability_web.pdf?MOD=AJPERES&CACHEID=1bba68804886595eb902fb6a6515bb18

Banks & FIs. (n.d.). Retrieved from https://www.bb.org.bd/fnansys/bankfi.php

Barnett, H. J., & Morse, C. (2013). Scarcity and growth: The economics of natural resource availability. RFF Press.

Barth, J. R., Caprio Jr, G., & Levine, R. (2004). Bank regulation and supervision: what works best? Journal of Financial intermediation, 13(2), 205-248.

Bartlett, D. (2011). Going green: The psychology of sustainability in the workplace. In the British Psychological Society.

Basu, K. (2018, May 1). Why is Bangladesh booming? Retrieved from https://www.brookings.edu/opinions/why-is-bangladesh-booming/

BB Circulars. SFD Circular No.02 (2017). Sustainable Finance Department. Bangladesh Bank. Retrieved from https://www.bb.org.bd/mediaroom/circulars/circulars.php#

BB directs banks to form sustainable finance units. (December 2016). Retrieved from https://www.thedailystar.net/business/banking/bb-directs-banks-form-sustainable-finance-units-1325641

Biswas, N. (2011). Sustainable green banking approach: The need of the hour. Business Spectrum, 1(1), 32-38.

Boitan, i. A. (2015). Determinants of sustainable banks'profitability, evidence from eu countries countries. Financial studies, 19(1).

Bose, S., Khan, H. Z., Rashid, A., & Islam, S. (2018). What drives green banking disclosure? An institutional and corporate governance perspective. Asia Pacific Journal of Management, 35(2), 501-527.

Boston Common Asset Management. (2015) Are Banks prepared for Climate Change-Impact Report. Retrieved from http://news.bostoncommonasset.com/wp-content/uploads/2016/08/Impact-Report-2015-10-Banks-Climate-Change.pdf

Bouma, J. J., Jeucken, M., & Klinkers, L. (Eds.). (2017). Sustainable banking: The greening of finance. Routledge.

Bowen, F., & Aragon-Correa, J. A. (2014). Greenwashing in Corporate Environmentalism Research and Practice: The Importance of What We Say and Do. Organization & Environment, 27(2), 107-112. doi:10.1177/1086026614537078

Brammer, S., Jackson, G., & Matten, D. (2012). Corporate social responsibility and institutional theory: New perspectives on private governance. Socio-economic review, 10(1), 3-28.

Brouwer, R., Akter, S., Brander, L., & Haque, E. (2007). Socioeconomic vulnerability and adaptation to environmental risk: a case study of climate change and flooding in Bangladesh. Risk Analysis: An International Journal, 27(2), 313-326.

Brundtland, G., Khalid, M., Agnelli, S., Al-Athel, S., Chidzero, B., Fadika, L., ... & Singh, M. (1987). Our common future (\'brundtland report\'), p. 11.

Burritt, R. L., & Schaltegger, S. (2010). Sustainability accounting and reporting: fad or trend? Accounting, Auditing & Accountability Journal, 23(7), 829-846.

Cait, W. (2016). Change in GHG Emissions in Bangladesh (1990-2012)2, 3.

Caldecott, B., & McDaniels, J. (2014). Financial dynamics of the environment: Risks, impacts, and barriers to resilience.

Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. Academy of management Review, 32(3), 946-967.

Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. Academy of management Review, 32(3), 946-967.

Chang, C. H., & Sam, A. G. (2015). Corporate environmentalism and environmental innovation. Journal of environmental management, 153, 84-92.

Chauncy, E. (2012). What are ontology and epistemology? Retrieved from http://eddiechauncy.blogspot.com/2012/01/what-are-ontology-and-epistemology_12.html

Chowdhury M.A.A., Dey M. (2016) Green Banking practices in Bangladesh. The Cost and Management. University of Chittagong

Chowdhury, T. A., & Ahmed, K. (2009). Performance evaluation of selected private commercial banks in Bangladesh. International journal of business and management, 4(4), 86.

Clark, P. (June 2017). Bank of England to probe banks' exposure to climate change. Retrieved from https://www.ft.com/content/ec4d3446-52a1-11e7-a1f2-db19572361bb

Confino, J. (September 2014). Sustainable companies are more profitable, report finds. The Guardian. Retrieved from

Cornée, S., Kalmi, P., & Szafarz, A. (2016). Selectivity and transparency in social banking: Evidence from Europe. Journal of Economic Issues, 50(2), 494-502.

Coulson, A. B., & Monks, V. (1999). Corporate environmental performance considerations within bank lending decisions. Eco-Management and Auditing: The Journal of Corporate Environmental Management, 6(1), 1-10.

Crossan, F. (2003). Research philosophy: towards an understanding. Nurse Researcher (through 2013), 11(1), 46.

Crotty, M. (1998). The foundations of social research: Meaning and perspective in the research process. London: Sage.

Curtis K, Kauffman R, Mendelsohn R. O., May G.D., (2010). Can we afford sustainability? Retrieved from http://insights.som.yale.edu/insights/can-we-afford-sustainability

Dalton, R. J. (2005). The greening of the globe? Cross-national levels of environmental group membership. Environmental politics, 14(4), 441-459.

De Clerck, F. (2009). Ethical Banking*. In L. Zsolnai, Z. Boda, & L. Fekete (Eds.), Ethical Prospects: Economy, Society, and Environment (pp. 209–227). Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-1-4020-9821-5_10

De Clerck, F. (2009). Ethical banking. In Ethical prospects (pp. 209-227). Springer, Dordrecht.

Deephouse, D. L., Newburry, W., & Soleimani, A. (2016). The effects of institutional development and national culture on cross-national differences in corporate reputation. Journal of World Business, 51(3), 463-473.

Dees, J. G. (2007). Taking social entrepreneurship seriously. Society, 44(3), 24-31.

Derissen, S., Quaas, M. F., & Baumgärtner, S. (2011). The relationship between resilience and sustainability of ecological-economic systems. Ecological Economics, 70(6), 1121-1128.

Deutsche Bank Research (2014). Sustainable and profitable-not a contradiction. Retrieved from https://www.db.com/cr/en/concrete-Sustainable-and-profitable-not-a-contradiction.htm

Dey, M. (2014). Profitability of commercial banks in Bangladesh: a multivariate analysis. IOSR journal of Business and Management, 16(4), 92-95.

Dragan, O. (2012). Pathways to sustainable banking management. Annals of the University of Oradea, Economic Science Series, 21(2), 545-550.

Duru, C. U. (2014). Environmental degradation: Key challenge to sustainable economic development in the Niger Delta.

Dyllick, T., & Hockerts, K. (2002). Beyond the business case for corporate sustainability. Business strategy and the environment, 11(2), 130-141.

Elkington, J. (2013). Enter the triple bottom line. In The triple bottom line (pp. 23-38). Routledge.

Environmental Risk Management (ERM) Guidelines for Banks and Financial Institutions in Bangladesh. (2013). Bangladesh Bank. Available at: https://www.bb.org.bd/aboutus/regulationguideline/jan302011erm.pdf

Escrig-Olmedo, E., Muñoz-Torres, M. J., & Fernandez-Izquierdo, M. A. (2010). Socially responsible investing: sustainability indices, ESG rating and information provider agencies. International journal of sustainable economy, 2(4), 442-461.

Euromoney. (2016). Bangladesh debate-Bangladesh gears up for growth. Retrieved from https://www.euromoney.com/article/b12knwlx53ht4w/bangladesh-debate-bangladesh-gears-up-for-growth

Faisal, I., Shammin, R., & Junaid, J. (1991). Industrial pollution in Bangladesh. Toxiological and Environmental Chemistry, 191, 799-818.

Faruque Md. O, Biplob Md. N.K., Amin Md. A., Patwary Md. S.H. (2016) Green Banking and Its Potentiality & Practice in Bangladesh. Science Journal of Business and Management, 4(2), 28. https://doi.org/10.11648/j.sjbm.20160402.12

Fijałkowska, J., Zyznarska-Dworczak, B., & Garsztka, P. (2018). Corporate Social-Environmental Performance versus Financial Performance of Banks in Central and Eastern European Countries. Sustainability, 10(3), 772.

Financial System. (2017). Retrieved from https://www.bb.org.bd/fnansys/bankfi.php

Financing Green Growth in Bangladesh: Challenges & Opportunities. (2017) Economic Dialogue o Green Growth. Retrieved from

Flood, C. (September 14, 2017). Big investors take aim at banks over climate change risk. Retrieved from https://www.ft.com/content/a2616a52-988b-11e7-a652-cde3f882dd7b

French Treasury. (n.d.). Assessing climate change-related risks in the banking sector.15.

Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. Journal of Sustainable Finance & Investment, 5(4), 210-233. doi:10.1080/20430795.2015.1118917

Friede, G., Busch, T., & Bassen, A. (2015). ESG and financial performance: aggregated evidence from more than 2000 empirical studies. Journal of Sustainable Finance & Investment, 5(4), 210-233.

Gain, P., Moral, S., Raj, P., & Sircar, L. (2002). Bangladesh environment: facing the 21st century. Society for Environment and Human Development.

Galant, A., & Cadez, S. (2017). Corporate social responsibility and financial performance relationship: a review of measurement approaches. Economic research-Ekonomska istraživanja, 30(1), 676-693.

Gbadamosi, W. A. (2016). Corporate social responsibility and financial performance of banks in the United States.

Gbadamosi, W. A. (2016). Corporate social responsibility and financial performance of banks in the United States (Doctoral dissertation, Walden University).

George, G. (2005). Slack resources and the performance of privately held firms. Academy of Management Journal, 48(4), 661-676.

Gimenez, L., Jolliffe, D., & Sharif, I. (2014). Bangladesh, a middle income country by 2021: what will it take in terms of poverty reduction? Bangladesh Development Studies, 37(1-2), 1-19.

Global Climate Partnership Fund, (2018) Training Bangladeshi banks in E&S risk management. Retrieved from: https://www.gcpf.lu/news-detail/training-bangladeshi-banks-in-e-s-risk-management.html

Goddard, J. A., Molyneux, P., & Wilson, J. O. (2001). European banking: Efficiency, technology and growth. Wiley.

Granger, C. W. (1969). Investigating causal relations by econometric models and cross-spectral methods. Econometrica: Journal of the Econometric Society, 424-438.

Granger, C. W. (1969). Investigating causal relations by econometric models and cross-spectral methods. Econometrica: Journal of the Econometric Society, 424-438.

Greenhouse Gas Emissions Factsheet: Bangladesh | Global Climate Change. (n.d.). Retrieved March 13, 2018, from https://www.climatelinks.org/resources/greenhouse-gas-emissions-factsheet-bangladesh

Gregory, A., & Whittaker, J. (2013). Exploring the valuation of corporate social responsibility—a comparison of research methods. Journal of Business Ethics, 116(1), 1-20.

GRI among the most popular CSR instruments. (2013). Retrieved from https://www.globalreporting.org/information/news-and-press-center/Pages/GRI-among-the-most-popular-CSR-instruments.aspx

Griffin, J. J., & Mahon, J. F. (1997). The corporate social performance and corporate financial performance debate: Twenty-five years of incomparable research. Business & society, 36(1), 5-31.

Griffin, J. J., & Mahon, J. J. (1997). The Corporate Social Performance and Corporate Financial Performance Debate: Twenty-Five Years of Incomparable Research. Business & Society, 36(Mar 1997), 5 - 31.

Guidelines on Environmental & Social Risk Management (ESRM) for Banks and Financial Institutions in Bangladesh. (2017). Sustainable Finance Department. Available at: https://www.bb.org.bd/aboutus/regulationguideline/esrm_guideline_feb2017.pdf

Guidelines on Environmental & Social Risk Management (ESRM) for Banks and Financial Institutions in Bangladesh. (February 2017). Sustainable Finance Department. Bangladesh Bank. Retrieved from https://www.bb.org.bd/aboutus/regulationguideline/esrm_guideline_feb2017.pdf

Hackman, J. R. (1980). Work redesign and motivation. Professional Psychology, 11(3), 445.

Hasan, S., & Baten, A. (2005). Performance of nationalized and private commercial Banks in Bangladesh. Journal of Applied Sciences, 5(10), 1814-1818.

Hassan, S. (1991). Environmental issues and security in South Asia (No. 262). Brassey's for the International Institute for Strategic Studies.

Holliday, C. O., Schmidheiny, S., & Watts, P. (2002). Walking the talk. The Business Case for.

Horváthová, E. (2010). Does environmental performance affect financial performance? A meta-analysis. Ecological Economics, 70(1), 52-59. doi: 10.1016/j.ecolecon.2010.04.004

Hosen, M. K., Islam, M. N., Tapu, M. A. I., Islam, M. N., Mia, M. F. A., & Begum, S. A. (2016). Economic growth of Bangladesh and external sector behavior.

Hossain, D. M., Bir, A. T., Tarique, K. M., & Momen, A. (2016). Disclosure of green banking issues in the annual reports: a study on Bangladeshi banks. Middle East J. Bus, 7, 19-30.

Hossain, M. A. (1995). Inflation, economic growth and the balance of payments in Bangladesh: A macroeconomic study. Oxford University Press, USA.

Hossain, M. S., & Kalince, M. T. A. (2014). Green Banking Nexus Banks' Performance. Swiss Journal of Research in Business and Social Science, 1(3), 1-16.

http://www.greengrowthknowledge.org/sites/default/files/downloads/resource/Financing%20 Green%20Growth%20in%20Bangladesh%20Challenges%20and%20Opportunities.pdf

https://www.theguardian.com/sustainable-business/2014/sep/23/business-companies-profit-cdp-report-climate-change-sustainability

Initiative, G. R. (2013). G4 Guidelines–Reporting principles and standard disclosures. Amsterdam: GRI.

Islam, A. (2015). Green Banking Practices in Bangladesh. Volume 17. Issue 4.Ver. V. PP 37-42.

Islam, J (2017).BB to introduce ESRM guideline next year. Retrieved from http://www.daily-sun.com/arcprint/details/259849/BB-to-introduce-ESRM- guideline-next-year-/2017-10-08

Islam, M. A., Hossain, K. F., Siddiqui, M. H., & Yousuf, S. (2014). Green-Banking Practices in Bangladesh-A Scope to Make Banking Green. International Finance and Banking, 1(1), 1.

Islam, M. A., Hossain, K. F., Siddiqui, M. H., & Yousuf, S. (2014). Green-Banking Practices in Bangladesh-A Scope to Make Banking Green. International Finance and Banking, 1(1), 1.

Islam, M. A., Yousuf, S., Hossain, K. F., & Islam, M. R. (2014). Green financing in Bangladesh: challenges and opportunities–a descriptive approach. International Journal of Green Economics, 8(1), 74-91.

Islam, M. S. (2014). Green Banking in Bangladesh: How Much Implemented by the Practitioners? Abasyn University Journal of Social Sciences, 7(2).

Islam, M. S., & Das, P. C. (2013). Green banking practices in Bangladesh. IOSR Journal of Business and Management, 8(3), 39-44.

Islam, Mohammad Nahidul. (2015). Green Banking: A New way to Next level Banking in Bangladesh. 10.13140/RG.2.2.33567.97448.

Islam, S. N. (2010). Threatened wetlands and ecologically sensitive ecosystems management in Bangladesh. Frontiers of Earth Science in China, 4(4), 438-448.

Jackson, T. (2009). Prosperity without growth: Economics for a finite planet. Routledge.

Jagannathan, R., Ravikumar, A., & Sammon, M. (2017). Environmental, Social, and Governance Criteria: Why Investors Should Care.

Jeucken, M. (2010). Sustainable finance and banking: The financial sector and the future of the planet. Routledge.

Kahane, L. H. (2007). Regression basics. Sage publications.

Kamruzzaman, M. (2012). Corporate Sustainability in the Bangladeshi Banking Sector: An Overview.

Kempf, A., & Osthoff, P. (2007). The effect of socially responsible investing on portfolio performance. European Financial Management, 13(5), 908-922.

Khan, A., Muttakin, M. B., & Siddiqui, J. (2013). Corporate governance and corporate social responsibility disclosures: Evidence from an emerging economy. Journal of business ethics, 114(2), 207-223.

Khan, B. F. (2017). Governance for Green Growth in Bangladesh: Policies, Institutions, and Political Economy.

Khan, H. U. Z. (2010). The effect of corporate governance elements on corporate social responsibility (CSR) reporting: Empirical evidence from private commercial banks of Bangladesh. International Journal of Law and Management, 52(2), 82-109.

Khan, H. U. Z., Halabi, A. K., & Samy, M. (2009). Corporate social responsibility (CSR) reporting: a study of selected banking companies in Bangladesh. Social responsibility journal, 5(3), 344-357.

Khan, H. U. Z., Islam, M., Kayeser F.J., & Ahmed, K. (2011). Corporate sustainability reporting of major commercial banks in line with GRI: Bangladesh evidence. Social responsibility journal, 7(3), 347-362.

Khan, H. U. Z., Mohobbot, A., & Fatima, J. (2014). Determinants and recent development of sustainability reporting of banks in developing countries: The case of Bangladesh.

Khan, H.-U.-Z., Azizul Islam, M., Kayeser Fatima, J., & Ahmed, K. (2011). Corporate sustainability reporting of major commercial banks in line with GRI: Bangladesh evidence. Social Responsibility Journal, 7(3), 347–362.

Khan, M. S. R., & Hasan, M. M. (2011). Corporate Social Responsibilities in Bank: A Content Analysis on Commercial Banks in Bangladesh. Dhaka University Journal of Business Studies: A Journal of the Faculty of Commerce, University of Dhaka, 32(1), 175.

Khan, T. A., Naim, M. J., Islam, R., & Begum, K. (2017). GREEN BANKING: BANGLADESH PERSPECTIVE AND INTERNATIONAL EXPERIENCES. Russian Journal of Agricultural and Socio-Economic Sciences, 61(1), 10–16. https://doi.org/10.18551/rjoas.2017-01.02

Khan. Md. T.A. (September 2015). Sustainable Reporting Under Global Reporting Initiative (Gri). Volume 43. Number 5. The Cost and Management.

Kidney S, (January 2016). Central Bank of Bangladesh launches US$200m Green Transformation Fund & prepares green bond issuance. Retrieved from https://www.climatebonds.net/2016/01/central-bank-bangladesh-launches-us200m-green-transformation-fund-prepares-green-bond

Kochhar, R., & Fry, R. (2014). Wealth inequality has widened along racial, ethnic lines since end of Great Recession. Pew Research Center, 12, 1-15.

Lalon, R. M. (2015). Green banking: Going green. International Journal of Economics, Finance and Management Sciences, 3(1), 34-42.

Laufer, W. S. (2003). Social accountability and corporate greenwashing. Journal of business ethics, 43(3), 253-261.

Lin, C. S., Chang, R. Y., & Dang, V. T. (2015). An integrated model to explain how corporate social responsibility affects corporate financial performance. Sustainability, 7(7), 8292-8311.

Lin, C. S., Chang, R. Y., & Dang, V. T. (2015). An integrated model to explain how corporate social responsibility affects corporate financial performance. Sustainability, 7(7), 8292-8311.

Liu, C. C., & Ryan, S. G. (1995). The effect of bank loan portfolio composition on the market reaction to and anticipation of loan loss provisions. Journal of Accounting Research, 77-94.

Mahfuz, M. A., Ahmad, J. U., Sultana, M. S., Rahman, M. M., Goni, M. A., & Rahman, M. S. (2004). Status of physicochemical properties of wastewater in Bangladesh: A cash studies in Dhalai Beel of DEPZ. Bangladesh J. Environ. Res, 2, 9-15.

Mahmud, M. S., Biswas, T., & Islam, M. N. (2017). Sustainability Reporting Practices and Implications of Banking Sector of Bangladesh according to Global Reporting Initiative (GRI) Reporting Framework: An Empirical Evaluation. International Journal of Business and Management Invention, 6, 2319–8028.

Mahmud, S., Biswas, T., & Islam, N. (2017). Sustainability Reporting Practices and Implications of Banking Sector of Bangladesh according to Global Reporting Initiative (GRI) Reporting Framework: An Empirical Evaluation, 14.

Mahmud, S., Biswas, T., & Islam, N. (2017). Sustainability Reporting Practices and Implications of Banking Sector of Bangladesh according to Global Reporting Initiative (GRI) Reporting Framework: An Emprical Evaluation. International Journal of Business and Management Invention, 6(3), 01-14.

Malaysia, B. N. (2004). Governor's Keynote Address at the Malaysian Banking Summit 2004: Towards World-Class Banking-Efficient, Effective and Resilient Banking System, Speech by Governor of Bank Negara Malaysia, Tan Sri Dato'Sri Dr. Zeti Akhtar Aziz at Nikko Hotel Kuala Lumpur, 14 May.

Manni, U. H., & Afzal, M. N. I. (2012). Effect of trade liberalization on economic growth of developing countries: A case of Bangladesh economy. Journal of Business Economics and Finance, 1(2), 37-44.

Maqbool, S., & Zameer, M. N. (2018). Corporate social responsibility and financial performance: An empirical analysis of Indian banks. Future Business Journal, 4(1), 84-93.

Margolis, J. D., & Walsh, J. P. (2001). People and Profits? The Search for a Link Between a Company´s Social and Financial Performance. Mahwah NJ, London: Lawrence Earlbaum Associates, Publishers.

Masukujjaman, M., & Aktar, S. (2014). Green Banking in Bangladesh: A Commitment towards the Global Initiatives. Journal of Business and Technology (Dhaka), 8(1–2). https://doi.org/10.3329/jbt.v8i1-2.18284

Maxton, G. (2015). Economic growth doesn't create jobs, it destroys them. The Guardian. Retrieved from https://www.theguardian.com/sustainable-business/2015/apr/21/jobs-economic-growth-inequality-environment-club-of-rome

McGuire, J. B., Sundgren, A., & Schneeweis, T. (1988). Corporate social responsibility and firm financial performance. Academy of Management Journal, 31(4), 854-872.

McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: correlation or misspecification?. Strategic management journal, 21(5), 603-609.

Mehmood, S. (2012). Effect of different factors on gross domestic product: a comparative study of Pakistan and Bangladesh. Academy of contemporary research journal, 1(1), 18-35

Melo, T. (2012). Slack-resources hypothesis: a critical analysis under a multidimensional approach to corporate social performance. Social Responsibility Journal, 8(2), 257-269.

Millat, K. M., Chowdhury, R., & Singha, E. A. (2013). Green Banking in Bangladesh: Fostering Environmentally Sustainable Inclusive Growth Process. Department of Communications and Publications, Bangladesh Bank.

Moffatt, M. (2018). The Definition and Relevance of Panel Data in Economic Research. Retrieved from https://www.thoughtco.com/panel-data-definition-in-economic-research-1147034

Mohammad, N., Abedin, M. J., & Rahman, A. (2017). Sustainability of Banking Sectors in Bangladesh: A Study Based on Emerging Role of Corporate Governance, Corporate Social Responsibility and Intellectual Capital Disclosure. Accounting and Finance Research, 6(4), 164.

Monir, M. M. I. (2017) The Role of Port of Chittagong on the economy of Bangladesh.

Most banks make robust operating profits in 2017. (2018). New Age Business. Retrieved from http://www.newagebd.net/article/31543/most-banks-make-robust-operating-profits-in-2017

Nabi, G., Khan, M. R., Islam, S., & Uddin, J. (2016). Are We Greening the Economy? 11. Retrieved from https://www.bb.org.bd/pub/research/workingpaper/wp1618.pdf

Nabi, Md & Md. Mahmudul Alam, Dr & Mustafezur Rahman Manik, Md & Islam, Md. (2015). Green Banking in Bangladesh: Present Status, Opportunities and Challenges.

Ndiweni, E., Haque, F., & Hassan, M. (2018). Corporate Social Responsibility Practices of Banks in Bangladesh: A Structuration Theory Perspective.

Ofori, D. F., S-Darko, M. D., & Nyuur, R. B. (2014). Corporate social responsibility and financial performance: Fact or fiction? A look at Ghanaian banks. Acta Commercii, 14(1), 1-11.

Oni, O. (2016). Banking on Financial Sector Sustainability Regulations (master's thesis, University of Waterloo).

Orlitzky, M., Schmidt, F. L., & Rynes, S. L. (2003). Corporate Social and Financial Performance: A Meta-Analysis. Organization Studies, 24(3), 403-441. doi:10.1177/0170840603024003910

Orlitzky, M., Siegel, D. S., & Waldman, D. A. (2011). Strategic corporate social responsibility and environmental sustainability. Business & society, 50(1), 6-27.

Pava, M. L., & Krausz, J. (1996). The association between corporate social-responsibility and financial performance: The paradox of social costs. Journal of Business Ethics, 15, 321-357.

Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. The Review of Financial Studies, 22(1), 435-480.

Petsonk, C. A. (1989). Role of the United Nations Environment Programme (UNEP) in the Development of International Environmental Law. Am. UJ Int'l L. & Pol'y, 5, 351.

Phan, T. N., & Baird, K. (2015). The comprehensiveness of environmental management systems: The influence of institutional pressures and the impact on environmental performance. Journal of environmental management, 160, 45-56.

Policy Guidelines for Green Banking. (2011). Banking Regulation & Policy Department, Bangladesh Bank. Available at: https://www.bb.org.bd/aboutus/regulationguideline/guidelist.php

Polonsky, M. J., Rosenberger III, P. J., & Ottman, J. (1998). Developing green products: learning from stakeholders. Asia Pacific Journal of Marketing and Logistics, 10(1), 22-43.

Poncelet, A., Gemenne, F., Martiniello, M., & Bousetta, H. (2010). A country made for disasters: environmental vulnerability and forced migration in Bangladesh. In Environment, forced migration and social vulnerability (pp. 211-222). Springer, Berlin, Heidelberg.

Porter, M. E., & Kramer, M. R. (2011). The big idea: Creating shared value.

Porter, M. E., & Van der Linde, C. (1995). Toward a new conception of the environment-competitiveness relationship. Journal of economic perspectives, 9(4), 97-118.

Rahman, A. (2012, June). Green banking and sustainable development: the case of Bangladesh. In UN Conference on Sustainable Development (Rio+ 20 Summit) Rio de Janeiro, Brazil.

Rahman, A. (2013). Green Banking and Sustainable Development: the Case of Bangladesh, 4.

Rahman, F., & Perves, M. M. (2016). Green Banking Activities in Bangladesh: An Analysis and Summary of Initiatives of Bangladesh Bank. Research Journal of Finance and Accounting, 9.

Ramus, C. A., & Montiel, I. (2005). When are corporate environmental policies a form of greenwashing? Business & Society, 44(4), 377-414.

Riaz, A., & Verma, A. (2017). Perspectives: Exploring Bangladesh Bank's Catalytic Green Banking Ventures, 4.

Roy, I., Sarker, A. K., & Chowdhury, S. (2017). Corporate Social Responsibility Practices in Bangladesh: A Statistical Analysis on State-Owned & Private Commercial Banks. Economics, 5(4), 322-332.

Saha, A., Dey, S., & Khan, A. (2013). Corporate social responsibility in Bangladesh: A Comparative study of Commercial Banks of Bangladesh.

Saha, P. (2013). Developing Green Banking Products In Bangladesh: Involvement of Stakeholders.

Salwasser, H. (1990). Sustainability as a conservation paradigm. Conservation Biology, 4(3), 213-216.

Salzmann, O., Ionescu-Somers, A., & Steger, U. (2005). The business case for corporate sustainability: literature review and research options. European Management Journal, 23(1), 27-36.

Schaltegger, S., & Wagner, M. (2017). Managing the business case for sustainability: The integration of social, environmental and economic performance. Routledge.

Seber, G. A., & Lee, A. J. (2012). Linear regression analysis (Vol. 329). John Wiley & Sons.

Seifert, B., Morris, S. A., & Bartkus, B. R. (2004). Having, giving, and getting: Slack resources, corporate philanthropy, and firm financial performance. Business & Society, 43(2), 135-161.

Shah, P., & Habib, S. A. (2013). Green banking practices and sustainable energy in Dhaka city. WIT Transactions on Ecology and the Environment, 179, 815-824.

Shakil, M. H., Azam, M. K. G., & Raju, M. S. H. (2014). An evaluation of green banking practices in Bangladesh. European Journal of Business and Management, 6(31), 8-16.

Sharif, I., Nasir, N., Khanum, R., & Moniruzzaman, A. (2016). Climate change adaptation policies in Bangladesh: Gap analysis, 5.

Sharma, K. (2013). Green Banking in India: A Roadmap to Success. IBMRD's Journal Of Management & Research, 2(1), 229-239. doi:10.17697/ibmrd/2013/v2i1/52184

Sharma, S. (2002). Research in corporate sustainability: What really matters. Research in corporate sustainability: The evolving theory and practice of organizations in the natural environment, 1-29.

Sharma, S., & Vredenburg, H. (1998). Proactive corporate environmental strategy and the development of competitively valuable organizational capabilities. Strategic management journal, 729-753.

Sharmin, A. (2016) Water and wastewater in Bangladesh, current status and design of a decentralized solution. Retrieved from http://lup.lub.lu.se/luur/download?func=downloadFile&recordOId=8895656&fileOId=8895752

Simpson, W. G., & Kohers, T. (2002). The Link Between Corporate Social and Financial Performance: Evidence from the Banking Industry. Journal of Business Ethics, 35, 97–109.

Simpson, W. G., & Kohers, T. (2002). The link between corporate social and financial performance: Evidence from the banking industry. Journal of business ethics, 35(2), 97-109.

Singh, H., & Singh, B. P. (2012). An effective & resourceful contribution of green banking towards sustainability. International Journal of Advances in Engineering Science and Technology, 1(2), 41-45.

Slaper, T. F., & Hall, T. J. (2011). The triple bottom line: What is it and how does it work. Indiana business review, 86(1), 4-8.

Sneirson, J. F. (2008). Green is good: sustainability, profitability, and a new paradigm for corporate governance. Iowa L. Rev., 94, 987.

Soana, M. G. (2011). The relationship between corporate social performance and corporate financial performance in the banking sector. Journal of business ethics, 104(1), 133.

Sobhani, F. A., Amran, A., & Zainuddin, Y. (2012). Sustainability disclosure in annual reports and websites: a study of the banking industry in Bangladesh. Journal of Cleaner Production, 23(1), 75-85.

Sobhani, F. A., Zainuddin, Y., & Amran, A. (2011). Religion as an emerging institutional factor behind sustainability disclosure practices in Bangladesh: the case of an islamic bank. World Journal of Social Sciences, 1(1), 69-85.

Solutions, N. C. (2015). Sustainability pays. Studies that prove the business case for sustainability.

Sonia, F. J. (2018). Corporate Sustainability Reporting of Major Commercial Organizations in line with GRI: Bangladesh Evidence.Sonia, F. J. (2018). Corporate Sustainability Reporting of Major Commercial Organizations in line with GRI: Bangladesh Evidence.

Sri Lanka central bank to promote 'Green Financing.' (January 4, 2017). Economy Next. Retrieved from /Sri_Lanka_central_bank_to_promote_%E2%80%98Green_Financing%E2%80%99-3-6999-17.html

Stankeviciene, J., & Nikonorova, M. (2014). Sustainable value creation in commercial banks during financial crisis. Procedia-Social and Behavioral Sciences, 110, 1197-1208.

Stefan, V., & Firescu, V. (2008). Disclosures in the financial statements of banks and similar financial institutions. Prace Naukowe/Akademia Ekonomiczna w Katowicach, 345-352.

Sufian, F., & Habibullah, M. S. (2009). Determinants of bank profitability in a developing economy: Empirical evidence from Bangladesh. Journal of business economics and management, 10(3), 207-217.

Sustainable Banking as a Driver for Growth A survey of Nigerian Banks. (2017). Deloitte Touche Tohmatsu Limited. Retrieved from https://www2.deloitte.com/content/dam/Deloitte/ng/Documents/strategy/ng-deloitte-west-africa-sustainability-banking-survey.pdf

Sustainable Banking Network – Guidance from SBN Members. (n.d.). Retrieved from http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Company-Resources/Sustainable-Finance/SBN_GuidancefromMembers

Teofilovski, O. (2018). Thomson Reuters ESG Scores, 18. Retrieved from https://financial.thomsonreuters.com/content/dam/openweb/documents/pdf/financial/esg-scores-methodology.pdf

The Business Case for Sustainability. (n.d.). Retrieved from http://www.ifc.org/wps/wcm/connect/Topics_Ext_Content/IFC_External_Corporate_Site/Sustainability-At-IFC/Business-Case/Business-Case-for-Sustainability

The Daily Star (2018). Bangladesh's bad loan ratio higher than India, Nepal. Retrieved from https://www.thedailystar.net/business/bangladeshs-bad-loan-ratio-higher-india-nepal-1543630

Ullah, M. M. (2013). Green Banking in Bangladesh-A comparative analysis. World Review of Business Research, 3(4), 74-83.

Ullah, M. R. (2014). Economic Impacts of Globalization on Urban Environment at Dhaka city in Bangladesh. Journal of Economics and Sustainable Development, 5(25), 15-29.

Ullah, M. S. (2013). Corporate social responsibility practices in the banking sector in Bangladesh-An assessment. Bank Parikrama, XXXVIII (3 & 4), 129-152.

United Nations Environmental Programme Finance Initiative. (2011). UNEP FI Guide to Banking & Sustainability. UNEP Finance Initiative Switzerland.

Waddock, S. A., & Graves, S. B. (1997). The corporate social performance-financial performance link. Strategic management journal, 303-319.

Weber, O. (2014). Equator Principles Reporting: Do Financial Institutions Meet Their Goals?.

Weber, O. (2017). Corporate sustainability and financial performance of Chinese banks. Sustainability Accounting, Management and Policy Journal, 8(3), 358-385.

Weber, O., & Feltmate, B. (2016). Sustainable Banking: Managing the Social and Environmental Impact of Financial Institutions. University of Toronto Press.

Weber, O., & Kholodova, O. (2017). Climate Change and the Canadian Financial Sector.

Weber, O., & Oni, O. (2015). The Impact of Financial Sector Sustainability Regulations on Banks.

Weber, O., Fenchel, M., & Scholz, R. W. (2008a). Empirical analysis of the integration of environmental risks into the credit risk management process of European banks. Business Strategy and the Environment, 17, 149-159. doi:10.1002/bse.507

Weber, O., Hoque, A., & Ayub Islam, M. (2015). Incorporating environmental criteria into credit risk management in Bangladeshi banks. Journal of Sustainable Finance & Investment, 5(1–2), 1–15. https://doi.org/10.1080/20430795.2015.1008736

Weber, O., Hoque, A., & Ayub Islam, M. (2015). Incorporating environmental criteria into credit risk management in Bangladeshi banks. Journal of Sustainable Finance & Investment, 5(1-2), 1-15.

Weber, O., Hoque, A., & Ayub Islam, M. (2015). Incorporating environmental criteria into credit risk management in Bangladeshi banks. Journal of Sustainable Finance & Investment, 5(1-2), 1-15.

Weber, O., Koellner, T., Habegger, D., Steffensen, H., & Ohnemus, P. (2008). The relation between sustainability performance and financial performance of firms. Progress in Industrial Ecology, 5, 236–254.

Werner, R. A. (2014). How do banks create money, and why can other firms not do the same? An explanation for the coexistence of lending and deposit-taking. International Review of Financial Analysis, 36, 71-77.

Wildemuth, B. M. (1993). Post-positivist research: two examples of methodological pluralism. The Library Quarterly, 63(4), 450-468.

Willis, A. (2003). The role of the global reporting initiative's sustainability reporting guidelines in the social screening of investments. Journal of Business Ethics, 43(3), 233-237.

Wilson, M. (2003). Corporate sustainability: What is it and where does it come from. Ivey business journal, 67(6), 1-5.

Wright B, (2008). Types of Causality II. Retrieved from http://www.everydaysociologyblog.com/2008/08/types-of-causal.html

Yadav, R., & Pathak, G. (2014). Environmental sustainability through green banking: A study on private and public sector banks in India.

Zakic, N., Jovanovic, A., & Stamatovic, M. (2008). External and internal factors affecting the product and business process innovation. Economics and Organization, 5(1), 17-29.

Zhang, B., Yang, Y., & Bi, J. (2011). Tracking the implementation of green credit policy in China: Top-down perspective and bottom-up reform. Journal of environmental management, 92(4), 1321-1327.

Zyadat, A. A. H. (2016). The Impact of Sustainability on the Financial Performance of Jordanian Islamic Banks. International Journal of Economics and Finance, 9(1), 55.