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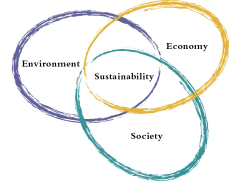
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## **Can Green Banking Help Promote and Enforce Sustainable Development? The Case Study of Egypt**

A Thesis Submitted to

Center for Sustainable Development

in partial fulfillment of the requirements for  
the degree of Master of Science in Sustainable Development

by **Nuran Ashraf Atef**

Under the supervision of:

Principal Supervisor

**Dr. Racha Helwa**

Assistant Professor

Department of Public Policy and Administration

Thesis Advisor

**Dr. Salah El Haggar**

Professor and Chair

Department of Mechanical Engineering

**May 2017**

## Dedications

To my father, I look up to you, and I would have never accomplished any goals without your selfless support and guidance. I aspire to be even half the person you are. May god bless you always and forever; eternally grateful to everything you do.

To my mother, thank you for your consistent prayers, for putting up with my frustration and for the love and care you show me. Your unconditional love was the fuel that kept me going, I love you!

To my sister Habiba, I admire you! I can't wait to see you grow up, and not just break – but also shatter my records. You have immense potential to be whatever you wish to become; I believe in you and will always be there for you. May I fill your life with joy the way you brighten up my world.

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## Abstract

The world is now witnessing massive climate change impacts and threats that are rendering numerous areas vulnerable to adverse consequences. The rapid global population growth is straining the demands on the natural resources as a result to the increased consumption and production patterns in the economic field all over the world. As such, the global economy ought to explore alternative approaches to its operations that consider the social and environmental aspect of their impacts. This new approach calls for the support of the private sector to govern the sustainable development integration as part of the economic growth model. Hence, capitalizing on the banking sector's key influential role in the economy to provide access to finance for projects is an asset. This research explores the viability of applying this concept in Egypt as a climate change vulnerable developing country struggling out of an economic recession. The literature review indicated a shortage in literature on developing countries and particularly Egypt in terms of green banking and promoting sustainability through the financial sector.

The research begins by identifying the key concepts of Sustainable Development, and Green Banking on a global scale, Green Banking in Egypt and the main instruments used to apply sustainability within banking operations. This foundation provides a base for the focus of this research: integrating sustainability in the lending operations of banks for corporate customers by indicating the academic findings and highlighting gaps in the literature. As such, this research aims to bridge the gap in studies between sustainable development and access to finance in developing countries, and present an attempt for policy recommendation to promote and enforce sustainable development. The research was conducted in a qualitative, descriptive approach using different methods as observation, online review of publications, and in-depth interviews. Global case studies were explored as good case practices to support the findings obtained from the conducted interviews with banks in Egypt. This allowed comparison and contrasting established approaches in other countries with similar realities, and compensated the shortage of literature on Egypt.

The result on the viability of applying sustainability was dependent on the benefits to the banking sector resulting from the adoption. As such, the research addressed the benefits to the banks in order to base a strong case to mainstream the concept across the sector using Performance (net profits and market share), and Risk Management (risk procedures and efficiency). It was evident in the analysis chapter that there were no direct benefits in terms of Performance, contrary to Risk Management, and other non-financial benefits that indirectly contribute to profitability were found as well. Hence, a policy recommendation was developed in the concluding chapter as an attempt to provide a recommended path to mainstream, promote, and enforce sustainability based on global good case practices and conducted interview findings.

**Keywords:** Sustainable Development, Social and Environmental Risk, Credit Risk Management, Banks Performance, Equator Principles, IFC Standards, UNEP-FI, Egypt, Policy.

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## List of Abbreviations

- **BB** Bangladesh Bank (State Bank of Bangladesh)
- **BDT** Bangladesh Taka
- **CBE** Central Bank of Egypt
- **CO2** Carbon Di-Oxide
- **EEAA** Egyptian Environmental Affairs Agency
- **EIA** Environmental Impact Assessment
- **EPs** Equator Principles
- **EPFIs** Equator Principles Financial Institutions
- **GHG** Green House Gaseous
- **GoB** Government of Bangladesh
- **GoE** Government of Egypt
- **MENA** Middle East and North Africa
- **MoE** Ministry of Environment
- **SDGs** Sustainable Development Goals
- **SLR** Sea Level Rise
- **SRI** Socially Responsible Investment
- **UNEP-FI** United Nations Environment Programme - Finance Initiative

## List of Definitions

### Research Terms:

- **Performance:** When written in-text as 'Performance' it refers to net profit and market share. If it is written 'performance', it refers to the actual definition of a process of performing a task.
- **Risk Management:** When written 'Risk Management', it refers to the aspect of research assessing improvement in risk management processes and operations. Otherwise, it refers to the actual meaning as per the context of the words.

### Definitions:

- **Corporate Social Responsibility:** Actions on the part of a firm that advance the promotion of social good beyond the immediate interests of the firm exceeding compliance with the set social and environmental regulations (Scholtens and Dam, 2007).
- **Equator Principles:** Voluntary principles based on the IFC Performance Standards on social and environmental sustainability. They provide a benchmark and framework for responsible project financing (Shakil, Azam and Raju, 2014).
- **Natural Capital:** A concept that addresses the stock of the planet from natural renewable and non-renewable resources to evaluate the finite capacity of the planet as well as the capacity of the natural system to tolerate the emissions and pollutants resulting from human actions (Jabareen, 2008)
- **Socially Responsible Investment:** A responsible financial investment process that considers impacts on the social and environmental aspects, as well as shareholder activism (Escrig-Olmedo, Muñoz-Torres and Fernández-Izquierdo, 2013)

# Chapter 1

## Introduction

The first chapter of this study provides an introduction to the research that is divided into three main sections: the research problem, objective, and justification of the study. This chapter provides an overview of the problem that triggered this research, which is the vulnerability of Egypt to climate change threats as a result of ineffectively regulated economic growth in terms of the environment and society. The research problem highlights the social and environmental threats to the world in general, and Egypt in particular. The objective for this research, and country case study selection are justified by the data provided from the literature in the second chapter. This chapter lays the foundation for the literature chapter as well as the remaining chapters of the study.

### 1. Research Problem

The rapid population growth has adverse consequential impacts on the economic growth, environmental health and social welfare with insufficient actions to combat it; a new governance system needs to be incorporated to limit harmful economic development on the sustainability of the eco-system. According to the United Nations Department of Economic and Social Affairs (UNDESA), by the year 2050, the world population is expected to reach 9.7 billion with Africa accounting to more than half of the population growth (UNDESA Report, 2015). As part of Africa, Egypt suffers from the growing population that demands more than the country's resources can supply. The increase in population results in an excessive surge in demands on natural resources, economic development, and production required for coping with basic needs of people (Caradonna, 2014; Ghanem, 2016). The increased level of production accompanied by lack of environmental and sustainability awareness has lead the country to rank as the 31<sup>st</sup> globally in terms of Green House Gases (GHG) emissions and is classified as one of the top-level countries in terms of growth in Carbon Di-oxide (CO<sub>2</sub>) emissions. Although the overall contribution of Egypt to GHG emissions is relatively limited, the exposure to human-induced climate change is high (Ghanem, 2016). This ultimately renders Egypt as a particularly susceptible country to adverse environmental consequences (Saber, 2009) and accelerated depletion of its natural capital (Ramzy, 2013).

Forecasting reports highlight the environmental threats that the world and Egypt can face due to climate change; and hence, requires urgent attention and rapid mitigation. The GHG emissions are causing a global warming effect, which shows an average increase in temperature in Egypt of 1 degree Celsius. Although the degree is minimal, its effect on the ecological and natural system is vast. The global heat results in a Sea level Rise (SLR) of approximately 0.5 meters causing the migration of more than two million people. This causes the loss of more than two hundred thousand jobs and displacement of people by the middle of the century (Frihy and El-Sayed, 2012). By looking more into significant lands in Egypt, Port Said is one of the highly vulnerable cities in the country; a one-meter rise of sea level can flood over

quarter of the Delta area and displace around 10.5% of the population. This is a very significant threat given that more than 27 million Egyptians are residing in the area (Saber, 2009). As such, the international platform and local governments have begun addressing the urgency of the matter in the quest for preventive solutions.

The international community, in response to the threatening climate change and increased level of awareness, are striving to reach a global consensus on finding the right balance between economic development that meets the needs of growing populations and environmental protection that can be driven down to countries (Caradonna, 2014). Most governments, particularly those in growing economies, struggle to strike a sound balance between the conflicting demands raised by producers and environmentalists. However, they have succeeded in the move to push for environmental reforms where the most recent is the Paris Agreement in 2016 to decrease greenhouse gas emissions and limit global warming as well as the introduced Sustainable Development Goals (SDGs). Most of these reforms were trickled down to regional and local levels in order for countries to adopt them according to their country's political and economic order.

Egypt has a long history of environmental and social legislation that strives to solve the sustainability challenges ahead (Abdel Wahaab, 2003). The most recent initiative is the Sustainable Development Strategy 2030 Vision; it is based on 12 sustainability pillars to foster responsible economic growth in Egypt (Ghanem, 2016). The main regulatory environmental entity is the Egyptian Environmental Affairs Agency (EEAA) established in 1982 as part of the Ministry of Environment (MoE). Its main role is to act as an administrative authority that would be responsible for the protection and management of the environment, as well as being the coordinating body for environmental policy-making in the country. In response to the environmental threats, Environmental Law no. 4 in 1994 formally introduced the Environmental Impact Assessment (EIA) to assess projects in the country as a preventive tool to adverse consequences (Badr, 2012). The initiative was introduced in Egypt later than it was in neighboring Middle East and North Africa (MENA) countries which allowed space to acquire good case practices; however, it proved insufficient to effectively protect the environment from irresponsible economic growth. Most organizations regarded the EIA as part of the required formal paper work to legalize their entity rather than a guideline to follow in order to prevent environmental or social harm. This is due to the lack of effective enforcement for monitoring, and evaluation systems for any updates on EIA developments by the EEAA post approval (Abdel Wahaab, 2003).

As such, the enforcement of sustainability regulations and principles requires the support of the private sector alongside governmental authorities to increase the capacity, widen outreach and ensure more effective enforcement mechanisms (Ruggie, 2014). Therefore, a new governance and enforcement mechanism ought to be introduced to the system in order to put an end to environmental degradation in Egypt and prevent the severe climate change threats the country can face.

## 2. Research Objective

The objective of this research is to provide Egypt, the country case study, with an alternative governance framework for sustainability enforcement, and limitation of adverse social and environmental impacts through the banking sector. This is based on the analysis of the literature on incorporating social and environmental sustainability in the banking field on a global scale, and in Egypt. The case of social and environmental risk management in banks has been proven successful in different countries around the world. Hence, this research tests the viability of replicating, and mainstreaming the practice across the sector in Egypt. The viability is conditional to positive impacts proven from sustainability adoption in the banking procedures. As such, the research aims to test the hypothesis of applying the Ecological Modernization theory detailed in the methodology chapter, and identifying the results from the bank's perspective. As such, the main aim is to assess the benefits of adoption to evaluate implementation decisions from the following aspects:

1. The financial gains from Performance and Risk
2. The non-financial benefits from adopting the system in the bank
3. Effective method of mainstreaming the process across the sector

The financial benefits will be evaluated based on the cost-benefit analysis of the system implementation in the banks, and enhanced risk operations. The non-financial benefits will be assessed based on branding, reputation, and impression of investors. The policy aspect will be based on the banks' view on Egypt mainstreaming the initiative as well as the needed support from the Government of Egypt (GoE) in the matter.

The results obtained from the research will be a solid foundation to base the argument to mainstream sustainability across the banking sector to promote sustainable development to other industries. This is due to the banking sector's influence on other economic sectors given its vital role in providing access to finance and liquidity. By achieving this, the impact and outreach would be maximized, particularly that the economic function is a great cause to the degradation of the natural capital; given its growing production to meet the consumption demand. A policy recommendation entailing a governance mechanism will thus be produced based on the results of the research.

## 3. Thesis Question

The main question for this research that directed the review of the literature is ***“Is there a strong case to mainstream green responsible banking approaches in Egypt to combat climate change impacts?”*** The question aims to explore the viability of the banking sector to be involved in the governance of sustainability to promote and develop a soft enforcement mechanism that can support a law regulation at a later stage. However, in order for banks, as a for-profit sector, to be open to this relatively new task, it has to assess its financial and non-financial benefits on Performance as well as the impact on the Risk Management.

## **4. Justification**

### **4.1. Study Selection**

On an academic level, the review of the literature revealed the need for this research to cover part of the gaps for this topic on both a global and national level. Initially, there is no clear definition for 'non-financial risks'; the term has not been properly articulated or defined in literature given that it is relatively new. Moreover, further research on the effect of managing non-financial risks on revenue, operations and strategy is needed (Wong, 2014) as well as further empirical data focusing on sustainability risk management (Lenssen, Dentchev and Roger, 2014). The present literature on social and environmental risk for corporations is mainly conducted in developed countries that have strict environmental regulations (Weber, Hoque and Islam, 2015). Therefore, there is an academic need for research on the topic in the scope of developing countries. Additionally, most research are conducted in a quantitative approach providing empirical data on the impact of incorporating sustainability in global banks; not enough qualitative research is conducted to reflect the experience of the institutions (Wong, 2014; Scholtens and Dam, 2007).

### **4.2. Country Case Study Selection**

Egypt is selected as the country case study for this research based on the country aspects revealed in the review of the literature. Egypt is one of the key players in the Middle East economy and the banking sector is of vital importance in terms of its contribution to the overall economic growth of the country and the region (Poshakwale and Qian, 2012). With the current economic challenges facing the region generally and Egypt specifically, incorporating sustainability in banking is a preventive key approach out of the economic crisis; it reduces the risks of defaults for banks (Ramzy, 2013). Alongside the economic significance of the country, it is also highly vulnerable to the effects of climate change, and adverse environmental and social impacts (Saber, 2009; Ghanem, 2016). Therefore, actions need to be taken to combat the potential threats.

The country is also participating in the budding field of sustainability given that it issued several regulations in this regard with the recent action of publishing the National Sustainability Strategy. There is high potential for achieving sustainability in Egypt; the country has laws, a moderate level of awareness, but lacks the resources and tools to effectively enforce them (Abel Wahaab, 2003). Therefore, this research serves to unfold the challenges and possible mechanisms to achieve sustainability effectively. Focusing on Egypt as a case study allows for an in-depth analysis to assess the existing economic, political and social factors that can enable or hinder green finance in the country. It provides room for detailed assessments and analysis to accommodate the reality of the country and the banking sector to manage sustainability effectively.

As such, Egypt is a developing country with potential in the field of sustainable development, and thus this research is an attempt to bridge the gap in the literature on developing countries and social and environmental risk assessment in banks.

## 5. Conclusion

Egypt is highly vulnerable to the threats of climate change and is affected by the negative consequences of rapid economic growth in response to the increasing population growth. Although the country is not mature enough in the aspect of achieving sustainability, there are attempts by the GoE to combat the adverse impact of unsustainable corporate behavior during their quest for economic growth. This chapter identifies the purpose of the research is a humble attempt to bridge the knowledge, academic and professional gap in achieving sustainability in Egypt. The focus of the research is to promote sustainability through the banking sector. This attempt capitalizes on the banks' influential role on a diverse range of sectors due to the economic dependency on banks for access to finance. There are three core objectives in order to mainstream and effectively promote sustainability through banks and these are the questions this research aims to answer in the coming chapters. The upcoming chapter will highlight the literature in the academic field on the topic to support the hypothesis as well as the methods to reach the objective of the research.

## Chapter 2

### Review of the Literature

This chapter lays the foundation of what has been recorded before and sheds light on the gaps in the literature and the needed research to be conducted. This anchors the research's contribution to the academic field as well as provides a better understanding of different dimensions of the topic in order to conduct effective analysis for the research. This research aims to explore the impacts of sustainability adoption in order to assess the bank's effectiveness in governing sustainability. Therefore, the literature focuses on exploring the aspects of green finance with a particular focus on Social and Environmental Risk Management systems in both theory and practice through the presented case studies. The reviewed literature allows assessing the existing data and utilizing the obtained material in the fieldwork's data collection.

The literature review section will be divided into five main parts in order to comprehensively cover the topic of this research from diverse relevant perspectives, and provide the reader with a more holistic overview. The first section of the chapter will begin by introducing Sustainable Development as a discourse and the chronological view of how it promulgated worldwide. It also tackles the relevance of the topic to the economic and financial sectors by providing the views of academics and scholars on the issue. The second section will address the Green Banking strategy to identify its history, views of scholars and what makes a bank 'green'. It also illustrates the different forms of adoption for sustainability in banks whether internal within banking operations or external performance. The section is related to the part of the question seeking to answer the impact on banks that adopt sustainability but from a general viewpoint; does it affect brand, shareholder attraction, stock market performance, etc. The third section digs deeper into the internal operations of sustainable banking; the focus of this research. It reveals what exists in the literature on how 'green banking' and incorporating sustainability in banks' lending procedures result in better performance, and acts as a sustainability regulator. The fourth section addresses the topic in the chosen country for case study, Egypt. It explores how the topic is addressed in research within the context of the country and sheds light on the gaps in the literature that justify the need for this research. The final section of the literature focuses on the instruments and international guidelines used to enforce sustainability in the banking sector. It also focuses on the main guidelines and standards that exist in Egypt based on exposure to the market during the research.

#### 1. Brief on Sustainable Development

The chronological journey of Sustainable Development shows the development and formulation of the concept over the years through a multi-disciplinary approach. In the 1960s, the philosophy of 'environmentalism' as a concept promulgated after the pollution resulting from the industrial and economic changes was no longer deniable (Elliott, 1999). The world had received several economic and environmental hits through the economic recession and the pollution that resulted from the phase



preceding it. Climate change had already begun to alter natural properties of the system. For example: the increased weather temperature and conditions, sea-level rise that flooded several areas due to melting icecaps, and the extinction of different ecological species (Caradonna, 2014). An ecological disruption was evident as all forms of economic growth and human activity cause stress on the natural resources of the planet. Consequently, people began to rediscover that they were also part of nature – the system - after centuries of industrialism and urbanization. The positive outcome of this phase was the global acceptance that the economic drawback, and environmental harm was a confirmation to the limitation of development, as they knew it. New approaches that considered both elements concurrently were required (Elliott, 1999).

By the 1970s, the two separate fields (environment and economic development) were finally viewed as interdependently intertwined and the response of the international community was immense. In 1972, the United Nations Environment Programme (UNEP) was established during the UN conference on Human Environment in Stockholm, and has been involved in numerous global conferences since then (Doyle, McEachern and MacGregor, 2015; Caradonna, 2014). Upon the involvement of the United Nations (UN), the term ‘Sustainable Development’ was first introduced with a clear definition as *‘development that meets the needs of the present without compromising the future generation’s ability and share to meet their own’* in the World Commission on Environment and Development in the Brundtland Report in 1987 (Elliott, 1999; Caradonna, 2014; Jabareen, 2008). By that time, environmental health and economic development were not seen as contradictory elements and were conjoined together under the umbrella of the new term Sustainable Development (Jabareen, 2008). The focus of this decade was to address the challenge to formulate integrative policies comprehensive of both environmental and economic aspects and sustainability policies were a desirable objective to be striven for (Elliott, 1999).

The introduction of policies paved the way for new concepts, principles and goals as sustainable development began to pick up momentum, and hence become a known term beyond the walls of global environmental organizations (Elliott, 1999). Among the concepts that emerged at that time was the Triple Bottom Line (TBL) developed by John Elkington. TBL refers to the idea that businesses should aim for the creation of frameworks that integrate the financial, social and ecological aspects of businesses which are also known as the ‘triple P’ concept: Profit, People, Planet (Doyle et al., 2015; Coradonna, 2014). Another concept introduced was the ‘Natural Capital’ introduced by Pearce, Turner, Barbier and Markandya. The concept addresses the stock of the planet from natural resources – the renewable and non-renewable – to evaluate the finite capacity of the planet as well as the capacity of the natural system to tolerate the emissions and pollutants resulting from human actions (Jabareen, 2008). However, the biggest movement of the century was the establishment of the UN Millennium Development Goals (MDGs). The MDGs were packaged in a set of eight understandable goals (Sachs, 2012) as the base foundation for the widely known Sustainable Development Goals (SDGs). The MDGs were set for the duration between the years 2000 and 2015 and the SDGs were a continuation of the MDGs building on their principles between the years 2015 and until 2030 (Griggs, Stafford-smith, Gaffney, Rockström,

Öhman, Shyam-Sundar, Steffen, Glaser, Kanie and Noble, 2013; Sachs, 2012). The main purpose of the goals was to set measurable targets with indicators addressing the main social issues facing the world - environmental issues were later introduced in the SDGs (Griggs et al., 2013). The SDGs' main highlight was its adoption of the TBL in a form of moral and practical commitment rather than legally binding one (Sachs, 2012). The 17 published SDGs introduced in 2015 remain a focus of global policy debates and national policy planning for a long period of time that it is now being incorporated in several policy forms on even corporation level (Sachs, 2012). These debates triggered scholars to suggest a change in the definition of sustainable development to be '*development that meets the needs of the present while safeguarding Earth's life-support system, on which the welfare of current and future generations depends*' (Griggs et al., 2013). However, these goals whether MDGs or SDGs, cannot be achieved without changes occurring in the economic development field. The economic cycle requires adjustments to enforce sustainability into the system (Griggs et al., 2013).

As such, it became clear to many policy-makers and financiers that it was fundamental to revisit the older models of mainstream finance that does not consider the environment, particularly with the increasing demand for a green and sustainable approach to finance (Caradonna, 2014). In light of this notion, several international initiatives materialized to promote for responsible finance considering that access to finance is the main enabler for any economy. Among the many initiatives are the Equator Principles (EPs), the Financial Initiative by the UNEP (UNEP-FI), the International Finance Cooperation (IFC) Performance Standards for credit procedures, and others.

## **2. Green Finance and Responsible Banking**

Green Finance has been given several definitions by different institutions throughout the years as banks began to adopt the concept more acceptingly. According to the IFC, Sustainable Finance is defined as the provision of financial capital and risk management products for businesses that promote or do not harm economic prosperity, environmental protection and social justice (Conley and Williams, 2011). The UNEP however defines Green Economy, a synonym to the model, as "economy that results in improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities" (Ramzy, 2013).

In 1992, the UNEP took a major step in cementing the concept of sustainability with financial institutions through the introduction of the '*Statement by Banks on the Environment and Sustainable Development*' as the UNEP Finance Initiative (Bettignies & Lépineux, 2009; Weber, 2005). This statement is a declaration of proactive cooperation by its signatories to work on common environmental goals and encourage financial institutions to develop services and products to promote environmental protection (Weber, 2005). Additionally, the UNEP-FI issued four principles for positive impact addressing the definition, framework, transparency, and assessment of the initiative in order to encourage banks to finance and contribute to the growth. This initiative was developed as an accelerator to achieve the 17 SDGs by providing funds and liquidity to implement the action steps to achieve them as follows:

Principle 1	<ul style="list-style-type: none"> <li>• Financial institutions (FIs) should finance positive impact businesses that contribute to one or more of the three pillars of sustainability (Social, Economic, or Environmental) mitigating risks and harm in these aspects</li> </ul>
Principle 2	<ul style="list-style-type: none"> <li>• FIs should develop adequate processes, methodologies and tools to identify and monitor positive impact activities to be financed or invested in</li> </ul>
Principle 3	<ul style="list-style-type: none"> <li>• FIs should provide transparency and disclosure on activities finances, the processes to determine eligibility, monitor, and verify impacts</li> </ul>
Principle 4	<ul style="list-style-type: none"> <li>• The assessment of the positive impact finance delivered by entities should be based on the actual impact achieved</li> </ul>

Table 1 (“Principles for Positive Impact Finance – United Nations Environment – Finance Initiative,” 2017)

There was strong indication at that time that sustainability has been mainstreamed in the financial sector when the ‘Dow Jones Sustainability Group Index’ was launched in September 1999 (Bettignies & Lépineux, 2009). The index’s purpose was to establish a tracking platform for financial performance of leading sustainability-driven organizations worldwide (Anderson and Anderson, 2009). Based on the literature, there is undeniable change of attitude towards sustainability by banks from resistance to acceptance. Mengze and Wei explain how this change happens through several phases of maturity arranged as defensive, preventive, offensive, and sustainable (2015). During the defensive phase, the banks would assume sustainability as a financial burden to their operations. In the preventive phase, bank is only addressing sustainability from internal operations and performance. The offensive phase is a more rigorous implementation where the bank would view sustainability as an opportunity, and finally sustainability is when the bank matures and adopts a business case for sustainable development (Mengze and Wei, 2015).

Before sustainability became a popular concept, Corporate Social Responsibility (CSR) –, one aspect of sustainability - was the controversial discourse addressing corporations’ demonstration of good behavior (Carroll and Shabanna, 2010). CSR is defined as actions on the part of a firm that advance the promotion of social good beyond the immediate interests of the firm exceeding compliance with the set social and environmental regulations (Scholtens and Dam, 2007). Milton Friedman, one of the key economists opposing the concept, and other CSR opponents argue that social responsibility dilutes the primary purposes of business. They explain that it distracts corporations from the only aim for which they are equipped which is profit maximization and it causes them to be less competitive in the global market

(Friedman, 1970; Carroll and Shabana, 2010). However, the modern literature shows that sustainability and finance are shifting from the perception of sustainability as a constraint to profit generation, towards a vision where financial markets can promote sustainability given its deep-rooted linkages with the economy (Zeidan, Boechat and Fleury, 2014). It became distinct that sustainability in general can co-exist with profit maximizing behavior in equilibrium. This is achieved when a non-market value is created for certain stakeholders that are willing to bear the costs of sustainability adoption (Scholtens and Dam, 2007).

The question on the motive for banks to adopt the concept of sustainability remains in the field with different and opposing views by scholars and facts illustrated in case practices. Some scholars argue that banks adopt such concepts only to render themselves advancing social good and be viewed as 'corporate citizens'; a form of 'green washing' (Scholtens and Dam, 2007; Conley and Williams, 2011). It is true that some entities' commitment to sustainability is broad-based and ends at the issuing of their brand-enriching press releases, or implementing it to enhance their competitive advantage when the market competitiveness is more intense (Eisner, 2004; Zeidan et al., 2014; Conley and Williams, 2011; Scholtens and Dam, 2007; Anderson and Anderson, 2009). Other entities, on the contrary, are truthfully demonstrating a business case for Sustainable Development (Wong, 2014). The adoption of sustainability enhances the caliber of recruitment for banks as it provides knowledgeable and aware applicants who have a broader view and a longer-term vision for the economic development (Scholtens and Dam, 2007). The truthfulness of the motive of an entity is thus identified based on the integration approach adopted for sustainability and the implementation of the concept within the organization.

There are two major methods highlighted in the literature on how sustainability is adopted in the profit-making sector while maintaining financial growth: internal and external methods. The external practices for sustainability are in the form of the bank's communication with its shareholders and how sustainability allows investors the opportunity to achieve better allocation of their investment portfolios. The internal practices are more focused on the core banking operations and the integration of sustainability into risk management models, lending practices and other banking operations (Zeidan et al., 2014). Nevertheless, banks manage their external and internal sustainability differently. While some banks handle them in different organizational units, some integrate them into one comprehensive division to develop, implement and monitor performance of the products and projects proposed. These are referred to as the centralized (in one department), or decentralized (across the bank's different departments) structures (Weber, 2005). On the external front, one of the main activities and a very important element is sustainability reporting. Following the Global Reporting Initiative (GRI) index developed by the IFC, banks set measurable social and environmental goals that they report on and the fulfillment of which can be tested the following year in the results reported. As part of the external social efforts, handicapped-accessible premises became part of the design policy for banks as well as offering of documents in large print or braille format to ensure financial inclusion (Weber, 2005). There are also other initiatives by banks - and corporations on a general note - which are in line with national

sustainability initiatives such as energy efficiency, water efficiency, reducing paper consumption, and having green premises with lower ecological footprint (Weber, 2005). On the internal front, banks incorporated the TBL approach in their product development and operational procedures (Bettignies & Lépineux, 2009; Zeidan et al., 2014). Elaborately, European banks began developing environmental policies as a form of new product design enabling the start of green environmentally friendly funds – a form of TBL application (Jeucken and Bouma, 2001). Other products may include green credit cards that are biodegradable, and the most important internal integration was incorporating social and environmental risk assessments in the lending and credit procedures of the bank (Zeidan et al., 2014). The internal practices also expand to reach the staff members who receive sustainability training in order to convey their knowledge with customers and ensure that the bank is meeting the market's demand for green finance (Caradonna, 2014). This sums up the different practices internally and externally for sustainability adoption.

According to Caradonna in his book 'Sustainability, a History', there are two behaviors for sustainability adoption to assess the impact and influence of the concept: the passive weak sustainability and the proactive strong sustainability (2014). Weak sustainability means that its adopters eliminate and reduce any destructive habits and work on maintaining and stabilizing the ecosystems, climate and human population. The effort ends there, as a preventive sustainability approach. However, strong sustainability goes the extra mile further than weak sustainability by mitigating existing adverse impacts and demand active repairing to the ecological damage that exists (Caradonna, 2014). While assessing the impacts of adoption of sustainability and the banking sector's potential to promote the concept, it is important to identify the regulatory functions that already exists and how banks can influence corporate governance and behavior of other sectors to the concept (Conley and Williams, 2011). The role of banks in contributing to sustainability is potentially immense due to its significance in the economic field. For any economy to flourish financial access is required and the banking sector - among all financial institutions – is the best way to acquire liquidity. Additionally, banks globally have the power to influence the pace and direction of economic growth particularly with the intermediary role they play in the field (Coulson, 2009; Jeucken and Bouma, 2001; Weber et al., 2010; Conley and Williams, 2011). Although commercial banks, particularly in developing worlds, are performing well on the social issues, there is still more to be achieved on the environmental and legislative ends (Zeidan et al., 2014). Therefore, a focus on core banking operations in sustainability was established in the early 2000s particularly in the lending procedures of the banks.

### **3. Sustainability Risk Management Systems in Banks Globally**

The research focuses on the internal adoption approach for sustainability in banks through the credit risk models and lending procedures. Credit risk – in the general sense – is defined as the “risk of economic loss [resulting] from the failure of a counterparty to fulfill its contractual obligations, which is influenced by various counterparty characteristics as reputation, leverage, earnings and collateral”

(Mengze and Wei, 2015). This definition entails the financial risks of a bank; it excludes other sustainability risk factors. The dialogue on sustainability risks is relatively new given that it is a newly emerging risk area; one of the critical areas for the 21<sup>st</sup> century. For the longer period, banks considered that their only contribution to the environmental risk could be summed up in their paper consumption and energy for lighting and electric machinery, etc. only (Jeucken and Bouma, 2001). Therefore, there is no clear definition in the literature to the 'non-financial or sustainability risks' that can affect banks indirectly (Wong, 2014). Sustainability risk management is concerned primarily with social and environmental responsibility threats while maintaining robust economic growth (Anderson and Anderson, 2009). Initially, sustainability risk only focused on the environmental aspect and the social risks were regarded at a later stage (Weber et. al, 2010). Numerous academic surveys indicated and most academics agree that there is clear evidence in the literature that a correlation exists between sustainability adoption by banks and improved financial performance and profitability (Weber et. al, 2010; Mengze and Wei, 2015, Coulson, 2009; Bettignies & Lépineux, 2009). As an example, Weber in his research mainly relied on a quantitative approach using discriminant analysis on a sample of 40 banks in Germany to compare their performance before and after sustainability adoption in lending procedures. Results showed that the bank's assessments for credit risks improved by the adoption eliminating from 78.9% to 86.6% (Weber et. al, 2010). Another example is Mengze and Wei's conducted cross-country analysis comparing the largest market-share holding banks in 12 different countries from the Asia-Pacific region. They assess their sustainability risk performance and the different adoption and institutional frameworks. Results showed performance increase in banks that adopt and the motives for adoption where the highest was found in Korea (Mengze and Wei, 2015).

Once a bank adopted social and environmental risk management systems, they started to witness noticeable improvements in their risk predictions and performance (Mengze and Wei, 2015; Weber, Scholz, Michalik, 2010). Sustainability credit assessments, which entail social and environmental aspects, complements the regular credit rating models adopted by banks as they provide in depth quantitative and qualitative information to improve the decision-making process (Zeidan et al., 2014). On the other hand, in a research assessing environmental credit risks, Germany showed that environmental risks imposed by their clients consumed 10% of all credit losses by its banks and that sustainability risk assessments could have spared them the losses (Weber et. al, 2010). The primary base for a bank's social and environmental sustainability consideration is to maintain the existing lending tradition of balancing financial risk and return while extending the process to incorporate social and environmental consideration in the process (Coulson, 2009). This is achieved by conducting industry-specific in-depth analysis for clients to examine its practices in comparison with global challenges and identify potential sustainability hazards (Zeidan et al., 2014; Stomper, 2006; Wong, 2014). This exercise establishes a strong knowledge base of industries that is essential to banks' development and growth. It provides banks with the expertise needed to derive market power from exposure to industry-specific risk and the opportunity to utilize the knowledge to develop industry-specific products (Stomper, 2006).

There are various reasons for a bank to adopt sustainability credit procedures in their lending processes such as risk minimization. A bank's reputation is one of the key elements for its brand, market position and competitiveness in the market. If a bank finances a project that leads to social or environmental disasters, its reputation may be put at risk by improper conduct of its borrowers (Scholtens and Dam, 2007; Conley and Williams, 2011). Also, with the instantaneous travel of news through Internet, some risks can be sudden and highly threatening such as boycotts and protests that emerge with a click of a button to attend the virtual events (Anderson and Anderson, 2009; Wong, 2014). If a project is shut down by social unrest due to its adverse impacts, the borrower will not be able to generate the required liquidity to repay the bank (Conley and Williams, 2011). Therefore, it is in banks' interest to incorporate social and environmental aspects with their risk assessments as they may pose indirect risk to the banks' performance, reputation and security (Coulson, 2009).

Sustainability risk management has its opponents who argue against the concept's success and effectiveness. While the concept proved positive results in terms of profitability and performance when adopted, it is argued that it can inflict negatively on adopting banks. The main criticism to sustainability risk procedures was that not all banks are adopting the approach which may deflect client attraction to other financing opportunities from entities that do not incorporate additional assessment to their requests (Conley and Williams, 2011; Coulson, 2009). A reason for banks' reluctance to adopt the concept was the concern that these actions can be perceived as an interference with the clients' activities (Jeuken and Bettignies & Lépineux, 2009). Another element of concern is that scholars view the screening process and monitoring of social and environmental assessments is a difficult and costly process that is not part of the standard banking procedures. Thus, can hinder their traditional operations (Scholtens and Dam, 2007). At this stage, the role of international institutions such as The World Bank Group, IFC, UNEP – and others- to increase awareness and stimulate new products that will require banks to act in unison towards sustainability is essential to the success and enforcement of these initiatives (Coulson, 2009; Bettignies & Lépineux, 2009). It is of high impact that the focus of these institutions is on the banking sector. This focus allows the developed guidance products to utilize the existing extensive and efficient credit assessment systems of banks and have a comparative advantage, knowledge and outreach to different industries (Bettignies & Lépineux, 2009). The guidelines should be developed on an international level but allow for the translation to national levels adapting to each country's economic reality. This will be highlighted in the review of the country case study for this research, Egypt.

#### **4. Green Finance and Sustainability Risk Management Systems in Egypt**

The literature did not reveal sufficient data about green banking or sustainability credit risk management in Egypt. As a general case, the field is relatively new on a global scale as shown in the literature, and it is still being established in the field of research. This justifies why the review of the literature addressed sustainable development in Egypt from a generic sustainability perspective or even focused on the social and environmental aspects separately. There are no case studies or research

attempts on sustainability risk management in Egypt. The available literature mainly covers two parts: economic development in the banking sector and literature on the environmental threats and initiatives in the country.

On the economic front, the banking sector in Egypt is very important and provides a significant share in the overall economic growth of the country. It accounts for 60% of the financial assets of the economy as well as large percentage of the GDP (Poshakwale and Qian, 2012). The sector is a cornerstone of the financial system with a critical role in the economy given its position as the main financial provider for businesses in the country (Poshakwale and Qian, 2012; Ramzy, 2013). Between the years 1992 and 2007, the loans requested from banks increased five folds from EGP58 million to EGP354 million (Poshakwale and Qian, 2012). The Doing Business reports from the World Bank for 2015 showed that Egypt ranks 131 among 190 different countries across the globe in ease in doing business in the country. The report also showed that the access to finance and credit acquisition also improved within a decade from 2004 to 2015 by 7 points (World Bank Official Website). This shows the high dependency of corporations on the banking sector and the ease for financial access and liquidity. Therefore, the Egyptian banking sector has a key role in the economy, and high potential to support the EEAA for mainstreaming sustainability, when it is properly utilized. However, it should also highlight that implementing sustainability could be achieved in a way that would not affect the nature of doing business in Egypt as shown in the report from the World Bank. Therefore, mainstreaming across the sector must provide a medium for corporations to adapt to the changes and sustainability requirements set.

On an environmental front, Egypt has long history of environmental and social legislation that strives to solve the sustainability challenges ahead. It is more exposed than other areas to the consequences of global warming such as rising sea levels affecting the northern coastal line, climate change affecting agriculture, and various problems that will affect social sustainability on the long run (Ramzy, 2013). The Government of Egypt (GoE) has been exerting efforts to anchor sustainability at the heart of national strategies and initiative; however - sustainability performance in Egypt faces challenges to create the desired social, environmental and governance impacts (Abdel Wahaab, 2003). The Ministry of Environment has introduced the EEAA that had previously presented the well-thought 'National Environmental Action Plan (NEAP)', 'Healthy Egyptian 2010' and the related initiative to this research, Environmental Impact Assessments (Anwar, 2003; NEAP, 2002; Abdel Wahaab, 2003). However, some of the initiatives particularly the EIA were rendered ineffective in enforcement and insufficient in mitigating adverse impacts on the environment (Abdel Wahaab, 2003) although they were comprehensive in development. The problem lies in the enforcement mechanism and governance structure of the issue and not in the instruments provided to achieve sustainability. Therefore, a new implementation approach needs to be explored in accordance to the global social and environmental sustainability enforcement systems. The GoE has prioritized its focus on introducing effective reforms to develop Egypt into a regional power. As a result, the 2030 Sustainability Development Strategy (SDS) was produced. However, the GoE cannot enforce and monitor compliance of corporations alone; it requires the support



of the private sector such as the financial institutions and banks to increase the capacity and widen the outreach (Ruggie, 2014).

The case that combined both sustainable development and economy was the scandal associated with Agrium Fertilizers Plant in 2007. As a result to the management's disregard of the public health of the nearby communities, the community in Damietta revolted against the initiative. The people in Damietta expressed their objection to the construction of the factory amongst the neighborhood residences and Damietta activist lawyers filed cases against the continuation of the factory as well as the governor and responsible authorities (Sowers, 2013). This case – not mentioned much in the literature as it is in news reports – relates as an example highlighting the correlation between a corporation's sustainability harms and reputation of its providing banks as mentioned previously in the literature. It is a case that calls for effective management and control that integrates both the social and environmental aspects to economic growth and development.

## **5. International Standards and Guidelines for Sustainability Adoption in Lending Procedures**

The role of international organizations as the World Bank and United Nations as well as others is numerous in the promotion of sustainability. Principles and standards are established to guide green finance on a global level. However, the focus for this research is on two main global sustainability standards for Financial Institutions (FIs). Those standards are chosen because they are the known existing and implemented standards in the country of case study, Egypt based on exposure to the market: IFC Performance Standards (PS) and the Equator Principles (EPs).

Standards to guide FIs to integrate social and environmental assessments into the credit risk procedures were introduced by international organizations (Scholtens and Dam, 2007) over the past decade and a half. The IFC-PS, which is a set of eight standards to introduce FIs to social and environmental risks, was of the initial promotion for sustainability but did not entail applicability guidance. In the late 1990s, ABN AMRO, Dutch Bank with its headquarters based in the Netherlands, approached the IFC raising concerns on the lack of established principles for banks to follow when they are faced with lending decisions that entailed social and environmental risks. The case faced by ABN AMRO was a profitable mining project located in Papua New Guinea that can severely contaminate the local water supplies if implemented. In 2002, ABN AMRO, the IFC and three other financial institutions namely: Barclays Bank, Citibank Group, and WestLB, addressed the concerns and proposed a list of standards and principles as a solution (Scholtens and Dam, 2007). In 2003, 10 banks announced their adoption to the proposed principles, which were then named and introduced as 'The Equator Principles'. In the three following years, around 40 more banks worldwide adopted them resulting in a total of 50 banks comprising 85% from the market of project finance in the developing world at that time (Scholtens and Dam, 2007; Ong, 2010; Schepers, 2011). In 2010, seven years after the introduction of the EPs to the financial sector, an EP association was formally established as a governance mechanism with Shawn

Miller of Citibank (New York) as the chair to cement the principles and green finance as well as expand outreach to reach over 70 adopters (Conley and Williams, 2011).

The EPs act as a protective shield for the banks against improper conduct of the borrowers that can affect the banks' finances, performance and reputation (Conley and Williams, 2011). It was initially formed for projects that require financing for 50 million dollars or more but then was readjusted to projects for 10 million dollars or more in order to maximize its effect (Schepers, 2011). These principles apply to four different financial products in banks: project finance, project-related corporate loans, finance advisory services and bridge loans. However, very few banks integrate it more widely across all credit and finance products (Zeidan et al., 2014). Some banks even adopt the principles only when the benefits they receive exceed the cost of its implementation and staff trainings to show commitment (Scholtens and Dam, 2007; Schepers, 2011). The EPs comprise 10 standing principles that were last revised in 2013 (EPs Official Website, 2017):

Table 2 Equator Principles Guidelines (EPs Official Website)

Principle 1	•Review and Categorisation
Principle 2	•Environmental and Social Assessment
Principle 3	•Applicable Environmental and Social Standards
Principle 4	•Environmental and Social Management System and Equator Principles Action Plan
Principle 5	•Stakeholder Engagement
Principle 6	•Grievance Mechanism
Principle 7	•Independent Review
Principle 8	•Covenants
Principle 9	•Independent Monitoring and Reporting
Principle 10	•Reporting and Transparency

These principles were established “based on an assessment process that categorizes social and environmental impacts according to three-tiered system”. This exercise is very beneficial to banks who adopt the principles as it strengthens their knowledge on social and environmental risks in order to share their expertise with their clients as a form of sustainability consultancy (Scholtens and Dam, 2007). The categorization of projects is a pre-condition to consider a project for financing. This is to comply with the antecedent of the EPs, the IFC PS (Schepers, 2011; Scholtens and Dam, 2007).

*Table 3 Categorization List (Schepers, 2011)*

Category	Impact	Tier Property
A	High	Projects with potential significant adverse social or environmental impacts that are diverse, irreversible or unprecedented
B	Medium	Projects with potential limited adverse social or environmental impacts that are few in number, generally site-specific, largely irreversible and readily addressed through mitigation
C	Low	Projects with minimal or no social or environmental impacts

Based on the categorization process, an Environmental and Social Impact Assessment (ESIA) may be required along with an Environmental Management Plan (EMP) indicating measurable action steps to mitigate and prevent potential adverse impacts. If a project is categorized A or B it is required to provide an ESIA and an EMP – category C is exempted. In addition, if a project is implemented in a non-OECD country or an OECD country that is not designated as high-income an ESIA and EMP are also required (Schepers, 2011; Scholtens and Dam, 2007). These provided documents are then added to the project's loan covenant that allows the bank to withdraw funding from the borrower in case of non-compliance as a breach to its social and environmental obligations (Scholtens and Dam, 2007).

The EPs are a form of private governance or a self-regulatory scheme in the form of a code of conduct. It is considered a practice of soft-law, which contrasts with the traditional command and control. In the condition where government has failed to materialize effective sustainability enforcement, governance structures promulgate to supplement the existing structure and fill the gaps left by traditional law (Schepers, 2011; Scholtens and Dam, 2007) – a new governance system. In developed countries, corporations must submit SEIAs and comprehensive EMPs according to the law. These laws are then backed up by the capacity of the government to monitor and evaluate compliance of the project with the standards of sustainability. However, in developing countries, sustainability is not always regarded as a priority by the government due to lack of incentive to stem the adverse impacts or due to lack of needed resources (Conley and Williams, 2011; Schepers, 2011). This is a milieu to incorporate the EPs as a supplement mechanism of enforcement through private organizations. Scholars however questioned the governance structure of the EPs' ability to compensate the government's shortcomings or to enforce sustainable development. The grievance mechanism provided no clear power over the dismissal of adopting banks that show misconduct regarding the principles from the EP. This allowed scholars to question how the commitment of the adopting banks will be measured particularly with the absence of measurable metrics (Schepers, 2011) and provided banks the opportunity to compete to undercut loan rates (Ong, 2010). Evidently, any voluntary governance process requires the cooperation of its sector in order to prevent a negative competitive environment (Coulson, 2009; Schepers, 2011). A collaborative platform needed to be established as a foundation for bank's commitment to sustainability in their lending processes and was introduced by the UNEP as the Finance Initiative.

## 6. Conclusion

This chapter explored the existing literature coverage of sustainability integration in banks in developing countries- particularly Egypt. It illustrated the opportunities for Egypt to expand the role of banks to enforce sustainable development. The literature provided both proponent and opponent view on the subject, which lays a solid foundation for the analysis and direction for the fieldwork and analysis. It also shed light on the development areas for the topic and how it is implemented in a tailored manner across different business realities. The chapter clarified the significance of sustainable development and how it promulgated across different countries; the developing and developed. It also identified the different forms of adoption based on the strong correlation between the rapid population growth and economic development. It is a crucial field in order to ensure stability of growth and fair equity across generations.

The chapter also highlighted the different adoption forms within banks with a particular focus on the lending procedures. The added stage for client assessment in order to identify potential risks saves both the ecological system as well as the bank against sustainability risks that may face the client. According to the literature there are many diverse tools for implementing sustainability worldwide but nothing can be comprehensive to fit all countries; it requires adaptation. The lack of sufficient literature on Egypt paves the way for the research to explore the concept in the county, in contrast to the case studies found in the literature across different countries. This chapter provides a hypothesis that needs to be tested as well as the missing data that should be explored in the following chapters.

## Chapter 3

### Methodology and Theoretical Foundations

The methodology is based on the previous chapters introducing the problem, and reviewing the literature on green finance. The review of the literature showed that previous work in the field of green banking followed no specific methodology, or any well-defined theoretical framework. The research methods that were previously used vary within a broad spectrum of methodologies. They mainly included basic descriptive statistical analysis for large samples, cross-country analysis, case study analysis that draw causal effect-relationships between sustainability risk management and banking performance, and mixed approaches (Weber et. al, 2010; Weber, 2012; Mengze and Wei, 2015). The remainder of the existing research used quantitative analysis to create some assessment models that compared the effect of sustainability, before and after integration in banking operations (Weber, 2005; Weber, 2012; Wong, 2014; Scholtens and Dam, 2007). As such, this research adopts a qualitative approach using a hybrid of theoretical framework to answer the research question.

#### 1. Research Question and Hypothesis:

- Research Question:
  - Main Question: *Is there a strong case to mainstream green, responsible banking approaches in Egypt to combat climate change impacts?*
  
- Hypothesis:
  - H0: Adopting Social and Environmental Management Systems by banks in Egypt does not lead to improvement in the banks' Performance and/or Risk Management
  
  - H1: Adopting Social and environmental Management Systems by banks in Egypt leads to improvement in the banks' Performance and/or Risk Management

#### 2. Context:

As indicated earlier, the main objective of the research is to assess the potential of creating an enforcement mechanism for sustainable development in Egypt through the banking sector. This matches with the internationally growing trend of Green Finance, a new banking model that incorporates sustainability measures into the risk assessment framework followed by conventional banks. However, a few points need to be considered in the process from the banks' perspective.

The first point is that banking institutions are part of a 'for-profit' sector. Therefore, it is necessary to explore the profit implications of the initiative on the banking sector. Hence, it is referred to as 'Banks' Performance', which is a combination of market share, profits, and non-financial benefits for commercial

banks once sustainability measures are incorporated. Banks' performance is considered the first dependent variable in this research.

The second point is to benefit and facilitate the day-to-day banking operations through risk minimization by incorporating sustainability measures into the risk management framework of conventional banks. 'Risk Management' is the second dependent variable we are investigating in this research.

These two points, alongside the assessment of the wider social benefit of incorporating sustainability guidelines through banking activities would provide a holistic view of the impact and consequences of the proposed objective of the research. As a result, the research addresses the issue of sustainable banking operations from the scope of 'Performance' and 'Risk Management'.



Figure 1 Research Context

### 3. Theoretical Foundations

Sustainable development is a new complex multidisciplinary field introduced in 1984 in the World Commission on Environment and Development (WECD) (Elliot, 1999; Jabareen, 2008; Harris, 2000; Weber, 2008). The field is also relatively new in the professional and academic arenas, which clarifies the reason why it is considered a confusing topic for many. The definition of 'Sustainable Development' itself is vague and there is no single definition agreed upon across disciplines (Jabareen, 2008). This is due to its multi-disciplinary nature and that every discipline interprets it differently. Every discipline defines sustainability based on the background and school from which they emerge; for example, sociological school views it in terms of equity, business school views it as integrative management, policy views it as political global agenda, etc. How broad sustainable development is a concept justifies the lack of a comprehensive theoretical framework to generally assess it (Jabareen, 2008). However, there are some attempts where every field adopts the theories from other disciplines, which can apply to incorporating sustainability in a said field. The review of the literature on sustainable finance, and social and environmental risk assessments revealed some of the different theories adopted. The assessment of financial performance usually related to business theories such as the economic equilibrium theory

(Stomper 2006), the law of unintended consequences borrowed from the legal literature (Conley and Williams, 2011), or development theories to assess sustainable development's performance in the business field such as climate change and global warming (Anderson and Anderson, 2009; Wong, 2014). For this research, a meta-theoretical view will be adopted incorporating different theories collectively to serve the different concepts of profitability and risk in incorporating sustainability: Theories from Finance, and Ecological Modernization

### **3.1. Banking Theories**

This section of the theoretical foundation assesses the main financial gains related to the Performance and Risk Management aspects of the research; it assesses the impact on the banking sector in terms of operations as well as financial benefits. The process of assessing profitability has been known as the Return on Assets (RoA) and Return on Equity (RoE) as set point of indicators until other internal and external factors in the bank were proven to affect its profitability and performance (Erina and Lace, 2013). The profitability of a bank denotes the strength of the banking portfolio and is assessed based on several factors among which are the capital adequacy ratio, coverage ratio, net interest margins, cost to income, credit risk, asset management, and most importantly the performance of their disbursed loans, alongside the RoA and RoE (Erina and Lace, 2013; Shekhar and Shekhar, 2013). The result of positive indicators is usually reflected in the efficiency of a bank's operations (Erina and Lace, 2013). Moreover, the net margin interests are not always an indicator to financial growth, as is it may be a result of factors such as taxation; thus, not a positive profitability factor (Demirgüç-Kunt and Huizinga, 1999). As such, for this research, the profitability indicators that will be adopted are the net profits, loans performance, and efficiency of operations.

In terms of risk process in banks, this research will adopt the approach of Risk-Based Supervision (RBS) introduced in early 2000s (Shakher and Shakher, 2013). The RBS is an approach to enhance the supervisory standards of banks by aligning their practices with global best practices. It is proven that RBS is more efficient than the traditional approaches of risk, given its comprehensive assessment beyond compliance of loans limited to the rules or the bank (Randle, 2009; Shakher and Shakher, 2013). The RBS system assesses the overall strategy of the bank and incorporates more extensive assessment measures for risk in terms of: inherent risk, controls, residual risks, and additional support. This extensive assessment creates a predictive rating system of risks based on probability and severity (Randle, 2009). RBS approach can be applied based on ten points entailing:

- 1) Risk profiling
- 2) Supervisory cycle
- 3) Supervisory program
- 4) Inspection process
- 5) Reviews and evaluations
- 6) Monitored action plan

- 7) Supervisory organization
- 8) Enforcement process and incentive framework
- 9) Role of external auditors
- 10) Change management implications (Shakher and Shakher, 2013).

As such, the RBS approach provides an in-depth assessment that can be applied to banks' customers and improves the banks' efficiency and performance. It is a similar approach to the additional layer of risk assessment introduced by the EPs or social and environmental risk management approaches in banks.

### **3.2. Ecological Modernization**

This aspect of the theoretical foundation assesses the social and environmental gains and benefits from incorporating sustainability into the business model of an organization. Ecological Modernization is a theory borrowed from the social discipline presenting the environmental-sociological perspective, advocating environmental policies with economics as a form of strategic environmental management on a macro and a micro-level (Buttel, 2000). The German Government was the first to use the term 'ecological modernization' in debates in 1998 after the concept was first developed in the Berlin Science Center and used by social-democratic circles (Jänicke, 2007). The theory can be coherently defined as "a theory of social change, exploring attempts in late industrial society to respond to the negative environmental consequences of modernity" (Baker, 2007). It is sometimes argued that sustainability hinders economic growth. The theory rejects this claim, as sustainability promotes accelerated economic growth that considers environmental impacts and the natural capital (Baker, 2007; Buttel, 2000; Jänicke, 2007).

Ecological modernization provides a framework of integration across disciplines, sectors and governance structures to integrate environmental policies with economic growth strategies (Baker, 2007; Buttel, 2000). The theory's core process is Environmental Policy Integration (EPI) that ultimately promotes sustainable development and requires collaboration of several stakeholders (Baker, 2007). Accordingly, the support of governments, industries and organizations to achieve a multi-level, and multi-stakeholder approach is needed. The collaboration of all stakeholders is needed to contribute to its implementation to ensure economic growth that is not incremental but rather advanced (Jänicke, 2007). The strategy also "promotes the 'win-win' advantages of institutional change in response to environmental crisis" (Baker, 2007). The logic of this theory supports this research as it indicates two main points. The first is advocating environmental reform by encouraging political practices and policy developments that support the ecological phenomenon intertwined with the modernization process. The second is capitalizing on the economic and social benefits from adopting responsible environmental behaviors in institutions. As such, this theory guides the aspect of the research exploring the benefits and impact on Performance.



A case study example on the benefits and approach for Ecological Modernization adoption is a Petrochemical firm in Hungary established in 1953. In 2000, the firm was acquired and Ecological Modernization was the management approach running the firm. Responsible behavior was integrated as part of the normative business approach. The commitment of the company was cemented by the management's determination to achieve 'corporate culture engineering' rather than superficial adoption. Over the years, the environmental reports have shown significant improvement that was a unique quality among its competition, and it affected the brand positioning of the company positively. This approach has led the firm to be the second largest petrochemical firm in Hungary with highest performance standards given the 'modern' top quality machinery that not only ensure quality but also contribute to the firm's energy efficiency (Pataki, 2009). This case study provides evidence to the potential win-win achievement from adopting sustainable development as part of the modernization and development strategy of a company on a micro-level.

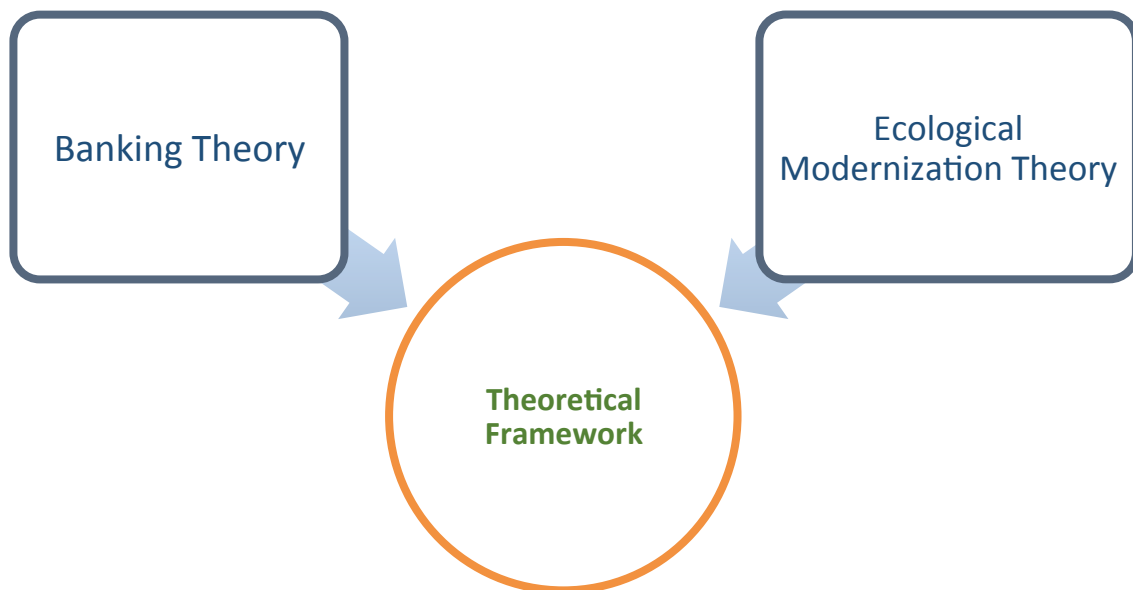


Figure 2 Theoretical Foundations

The adopted theories each serve a singular part of the research but jointly, they provide a holistic foundation upon which the research can be based on. The Ecological Modernization serves as a base promoting sustainability integration into plans, strategies and policies of entities. It indicates that it does not hinder economic growth; otherwise, it deems unsustainable and defies its purpose (Buttel, 2000; Jänicke, 2007; Baker, 2007). The theories in conjunction highlight and clarify the economic and beneficial connection between the banking industry and sustainable development serving the two elements of the research context. In terms of the Policy Recommendation, the New Governance Theory further elaborated in Chapter 5, guides the development of the recommended policy and analysis of enforcement mechanisms in the global best practices.

#### **4. Methods**

There can never be one comprehensive research approach to such a complicated topic as Sustainable Development, given that it combines three different aspects simultaneously and collectively - environmental, social and economic (Wong, 2014). This research is a short exploratory study that will be conducted following a qualitative approach. Qualitative research, also known as the interpretive approach based on the phenomenological theory, is committed to understanding social phenomena from the perspective of the subject; examining how it is experienced (Taylor, Robert and Devault, 2016; Hennink, Bailey and Hutter, 2011). It is a naturalistic process of data inquisition that requires the researcher to adopt strategies harmonious with the typical daily-life of the respondents – an unobtrusive manner (Taylor, et. al, 2015). It is the most suitable approach for small qualitative samples; this research entails a small sample of banks due to the limited availability of banks practicing social and environmental risk assessments as part of their lending procedures. This methodology serves this research as it entails methods to yield complete descriptive details (Taylor et al., 2016; Habib et al., 2014; Hennink et al., 2011), without limiting the scope of the research putting into consideration the context. A qualitative research allows the researcher the flexibility to explore and identify emergent themes from the participants under study.

##### **4.1. Research Approach**

The research approach followed is an inductive approach as it is most suitable for small samples producing qualitative data. The inductive approach primarily relies on observation and readings of raw data that derive interpreted concepts, models or themes. The findings arrived at are usually descriptive interpretation of the emergent coded themes found in participants responses. The findings allow the researched to identify connections for a conclusion (Thomas, 2006).

##### **4.2. Data Collection Method and Tools**

Qualitative data collection is a naturalistic process of data inquisition. It requires the researcher to adopt strategies harmonious with the typical daily-life of the respondents – an unobtrusive manner (Taylor, et. al, 2015). Three main methods will be used for the data collection: observation, online publications search, and In-depth interviews.

###### **a) Observation**

Participant's Observation method was applied to one of the sampled banks under study for duration of three weeks. Observation is a method used to explore the culture and setting in which the action happens and record people's behaviors, actions and interactions (Hennink et al., 2011; Bechhofer and Paterson, 2012). The main purpose of this method was to observe and induct themes and provide a guide for the needed data from interviews.

This method highlights the aspect of impacts on risk performance by observing the processes in action and formulating an understanding on how it affects the assessment process; positively or negatively. Therefore, observing the day-to-day lending procedures and the involvement will provide an un-filtered knowledge and understanding on how sustainability risk management is operated ( Taylor et al., 2016). The broader views obtained on the study from observing the practical implementation highlights the areas that need to be reviewed in more depth or are not recognizable through identifying performance bottlenecks and potential opportunities for development.

#### **b) Online Review**

This method was used to review the latest published annual reports, publications and websites of the sample of interviewed banks. It furnished an understanding of the operations of the bank and the structure in order to direct the interview guide to cover any missing data. Banks' annual reports entailed the Non-performing Loans ratio as well as profitability margin for each bank. This provided an indication to their growth pattern to compare with the country's economic situation as well as the newly integrated system. The online review also encompassed global reports such as the World Bank Doing Business Report, EPs publications and news reports to utilize in the analysis of data.

#### **c) In-depth Interviews**

In-depth personal interviews are the most common and recommended method for policy-related research (Hennink et al., 2011; Bechhofer and Paterson, 2012). They are also the most personal of all the research methods based on a one-to-one nature for data collection allowing for flexibility in data exchange through direct contact (Hennink et al., 2011).

The data collected from the interviews was based on a semi-structured questionnaire presented to research participants with a profile of Senior or Middle Management positions in the Risk Areas concerned with Corporate Credit approvals and decision-making operations. An interview guide (Annex 1) was presented to all participants and it allowed the researcher to direct the questions to the direction needed; in that case was the assessment of two main aspects: profitability implication and impacts on risk processes.

The questionnaire was divided into three main sections: The performance and profitability section, Improvement of risk processes section, and insights on the future of green finance for policy recommendations. The performance/profitability section mainly addresses the significance of adoption on the client attraction and stock performance, or if non-financial benefits were found such as attracting a wider pool of investors. The section mainly covered the assessment of the cost-benefit of adoption of sustainability. The second section mainly highlighted the implications on risk assessment in terms of adoption strategy and performance. The questions addressed the guidelines for social and environmental assessment and the impact on the organizational structure if it existed. It also highlighted the challenges and details of the assessment process in order to identify the gaps and shortcomings of the initiative. The

interview was concluded by general questions on the future of green finance in Egypt and the efforts the bank need from the CBE in order to effectively apply their newly introduced assessment processes. The answers collectively provided insights on the needed aspects for the modest attempt to formulate a policy to bridge the gaps as well as understand the sector's expectations from the regulatory authority; the CBE.

#### **4.3. Sample Selection**

There are 36 licensed banks in Egypt according to the Ministry of Trade (MoT Website), only 7 of which adopt a social and environmental management system in their risk assessment process (EPs Signatory List). Four banks participated in this research, the Commercial International Bank - Egypt (CIB) and the three remaining chose to remain anonymous and therefore, will be referred to as Bank A, Bank B, and Bank C.

The four banks have adopted sustainability within their banks in several forms, on both an internal and external level, which provided insights on the experience of promoting sustainable development. Yet, the sample provides a diversified input given that their legal form is different; CIB is a local-private bank, Bank A is an regional bank, Banks B and C are both international banks that have a franchise based in Egypt. As such, their experiences with customers and implementation differ.

#### **4.4. Research Process**

The data collection process begun gradual conditional to the IRB Approval granted in March 2017. As such, only online public data collection occurred prior to approval; however, interviews took place between the 9<sup>th</sup> and 12<sup>th</sup> of April 2017. The interviews were conducted for 40 to 50 minutes with each participant granting them the right to remain anonymous and decline any question they do not wish to answer; however, all interviews were conducted smoothly and all participants answered all questions. The Participant's Observation was conducted by virtue of the researcher's professional working experience; and thus, capitalized on the exposure upon approval from the CIB.

#### **4.5. Data Analysis**

In qualitative research, the data collection and analysis go hand in hand as it is a cyclic process to reach a conclusion (Hakim, 2000). The analysis is based on two data findings: the primary and secondary data collected. Primary data is the raw data that is obtained and will be the outcome of the interviews conducted, and the participant's observation (Habib et al., 2014). Secondary data is the analysis of pre-analyzed data and it will includes data sets collected from a variety of sources such as reports, previous research, literature, publications, etc. (Habib et al., 2014; Hakim, 2000).

The secondary data analysis will be divided into three main sub-sections: analysis of reports on sustainability in Egypt, analysis of reports on green banking in Egypt and the analysis of publications such as annual reports and press releases from the selected sample of banks. According to the literature review, bank's publications are not always a reliable source of data collection, as institutions are more

inclined to publish their positive achievements than their shortcomings. Consequently, the assessment of the actual integration and adoption of sustainability will highly rely on obtained data from the in-depth interviews.

Another layer is added to the analysis to compensate for the shortage of available sample pool for this research: international case studies. International case studies from developed and developing countries with closest reality to our sustainability adoption reality will be considered in order to provide a validation to the findings and contrast results. The two case studies provide evidence to support the findings used to analyze the case study of Egypt; the developed country provides a case for an established and tested adoption of sustainability, and the developing country provides a case for the integration process in a same-reality country. Most of the studies in the literature review was conducted based on a developed-country-reality (Weber et al., 2015) and thus, the shortage of literature on developing countries required a sample case study in order to validate the findings and compare results.

Each objective will be based on the theoretical framework as whole the Banking Theories will address the Performance and the Risk Management integrating an additional layer in customer rating. The Ecological Modernization Theory assesses the benefits obtained for the bank via the impressions on external factors indirectly affecting banks' profitability.

## **5. Ethical Consideration**

All participants were presented a consent form to provide a written acceptance to participate to this research stating that it is for academic purposes and can be published. The consent form also highlighted that participating to this research was voluntary-based and participants are free to withdraw at any point.

## **6. Research Limitations**

The research limitations were mainly encountered due to several factors. The first is the scarcity of literature on Egypt, as well as the topic in developing countries which makes the analysis process challenging. The literature mainly focused on developed countries applying the concept, which is a different economic and cultural reality than developing countries. Moreover, the novelty of the topic in Egypt limits the interviewing sample for interviews. There exist only 7 banks in Egypt adopting social and environmental assessment processes as part of their risk management, which is a small sample to generalize the concept. Moreover, not all Senior-Level Managers were available for the interviews due to time constraints so interviews were conducted with Middle Management levels. Therefore, case studies with a similar reality for the banking market were used as reference and support to the findings.

## **7. Conclusion**

This chapter provided the justified approach for the methods followed to conduct this research. The qualitative research has two hypotheses to be tested in order to explore the impacts of sustainability adoption on the banks; hence, identify the viability to mainstream the approach across the sector. The theoretical foundation is based on three theories to collectively guide answering the research question.

This is due to the absence of a holistic theoretical framework to encompass the research objective. International case studies alongside four banks in Egypt will be utilized for the data collection to analyze the case for green finance in Egypt using three methods: observation, online review and in-depth interviews. This chapter guides the Analysis Chapter flow and approach to assess the results obtained from data collection.

## Chapter 4

### Findings and Analysis

The methodology chapter discussed the framework followed to investigate the research question '*Is there a strong case to mainstream green responsible banking approaches in Egypt, to combat climate change impacts?*' This question assesses the viability of mainstreaming the approach across the banking sector by capitalizing on its influential role in the economic realm. However, the first step to test the viability of mainstreaming the adoption of sustainability is to explore the benefits for the banks from the two aspects mentioned in the context: Performance and Risk Management.

This chapter will present the analysis structured in two parts: the global case studies from developed and developing countries, and the case of Egypt. The global case studies will analyze the Spanish and Bangladeshi experience in terms of green finance in order to support the findings of the literature covering this topic. The case studies will be used as reference to compare realities and view the best practices on green banking with Egypt. This is due to the research limitation where the concept is relatively a new and there is a scarcity of information related to green banking in Egypt. The selection of Spain in this case intends to illustrate the experience of green finance in a developed country that emerged out of a struggling economy while incorporating sustainable development in its strategies; similar to the case of Egypt where new alternatives are being searched for by the Government to enhance economic growth. Moreover, Spain's introduction to sustainability and corporate social responsibility in the banking sector was in 2003 (Cuesta-González, Muñoz-Torres and Fernández-Izquierdo, 2006), relatively similar to the time of its introduction in Egypt. On the other hand, the Bangladeshi experience is used to contribute to the knowledge on the experience in developing countries, and whether sustainability leads to increased profitability and improved risk performance in regions with lower emphasis on sustainable development (Weber et al., 2015). The reality of Egypt and Bangladesh in these aspects are very similar as both countries are vulnerable to climate change impacts, have lower awareness rates on the issue, and have just recently begun to incorporate it within their banking systems. In the case of Egypt, the investigation was conducted through observation in one of the banks; CIB, online review of publications, and in-depth interviews with the four banks embracing sustainability as part of their lending decision processes.

The structure of the chapter will begin with the findings on the global case studies to identify the benefits and limitations to sustainability from different global perspectives; providing insights on the global experience of adoption. The second part will introduce the findings in Egypt, and the analysis based on the evidence found from the global case studies and fieldwork. The findings in Egypt will be presented in two aspects: financial and non-financial benefits. The financial benefits directed at the Performance and Risk Management, the two key aspects for the research question. The non-financial benefits found will be mentioned after to present the balanced picture on how the adoption of sustainability affects the banks positively. The final section will conclude with the opportunities that can result from the adoption as well

as the limitations on a country-level. This lays the foundation for the policy recommendation in Egypt based on the market needs mentioned in the chapter.

## **1. Global Case Studies**

### **1.1. The Case of Spain and Banco Santander**

The Spanish banking sector has recently demonstrated its resilience from the double-dip financial crisis that took place in 2007. This was evident in the reports by the World Bank on Spain as one of the fastest growing economies in the Eurozone for the year 2015 when it had a GDP (PPP) worth \$1.62 trillion (World Bank Report, 2017). This development included sustainability as an intertwined aspect in its strategy. In the early 2000s, sustainable development in terms of social and environmental responsibility was considered a new field in the Spanish banking sector; except for large banks, such as Banco Santander, that were the first to adopt the concept. A growing number of banks are started to realize the importance of implementing sustainability, and understand that it goes beyond the philanthropic community development initiatives. This means that banks needed to incorporate it within their strategic policies, and banking procedures taking into consideration their stakeholder's interests and expectations (Cuesta-González et al., 2006).

In the last few years, there has been a potential increase in Spain for the demand of products that lie within the parameters of social and environmental responsibility. This rise is expected to be a response to the rise in funds and financial indices on sustainable aspects. Generally, firms and investors recognize that “investing in accordance with the principles of sustainability can create long-term value and improve the firm's performance” (Escrig-Olmedo et al., 2013).

#### **1.1.1. Green Finance in Banco Santander**

Banco Santander is one of the world's ten largest banks and was established in Spain 150 years ago. The bank developed from being considered a second-tier player in Spain – a country that was not regarded of high significance in the field of banking - to a key player internationally (Guillén and Tschoegl, 2008). In 2016, Banco Santander made significant progress to its leading role with profits of EUR 6,204 million and market capitalization of EUR 72.314 billion. This was achieved alongside its non-monetary achievements including an expanded network of 675 branches worldwide and almost ten thousand employees (Banco Santander Official Website).

The vision of the bank mainly focuses on providing the best environment and service for its employees, customers, shareholders and the community. This sheds light on Banco Santander's efforts in the field of sustainable development. Banco Santander ensures its sustainability adoption by maintaining a strong and continuous dialogue along the following five lines: 1) customers, 2) shareholders, 3) employees, 4) suppliers, and 5) society (Xifra and Ordeix, 2009). The bank adopts a holistic approach to sustainability (Zeidan et. al 2014) where it follows the elaboration on both the external and internal levels of adoption indicated in the literature. The first level is by undertaking initiatives to



support the community or operating in an environmentally friendly behavior. The latter is the bank's efforts in incorporating sustainability within the core banking procedures. Thus entails assessing social and environmental impacts of the customers and the financing operations conduct by the bank (Cuesta-González et. al, 2009).

In 2007, the bank strived to expand their sustainability outreach and maximize their impact by investing in educational development and financing renewable energy projects by tailoring products that would serve sustainability (Xifra and Ordeix, 2009). It is worth mentioning that the bank's sustainability efforts are intertwined within its policies, where the General Sustainability Policy includes the following statement:

*"[The bank is] convinced that a socially responsible management approach contributes to long-term sustainable business, Banco Santander has voluntarily taken on certain ethical, social and environmental commitments that go beyond its legal obligations towards stakeholders."* (Banco Santander General Sustainability Policy)

The General Sustainability Policy is complemented by the group policies such as: climate change policy, human rights policy, volunteering policy, and sectorial risk management for sensitive sectors.

As such, the bank's performance in the field granted it ranks in the international platform such as "World's Greatest Bank" by Bloomberg and "Sustainable Global Bank of the Year - Transactions" by Financial Times in 2013, being enlisted in the Dow Jones Sustainability Index (DJSI), as well as FTSE4 Good Sustainability Index (Banco Santander Official Website).

### **1.1.2. Social and Environmental Risk Management in Banco Santander**

The profile of Banco Santander mainly relies on retail operations, where 16% of its credit risk distribution is a segment of Santander Global Corporate Banking (SGCB) and Spain counts as 35% of its operations (Banco Santander 2015 Annual Report). Banco Santander has been one of the Equator Principles (EPs) signatories since 2009 (Banco Santander 2015 EPs Report; EPs Signatories List), demonstrating strong commitment to social and environmental consideration in its banking operations. The bank considers "social and environmental issues as a crucial part of risk analysis and decision-making processes in its financing transactions" (Banco Santander 2015 Annual Report). The bank applies the processes using several stages of the financing operations such as identification, analysis and assessment of its credit transactions. These steps are conducted in lines of the policy of the Santander Group and policies based on the EPs criteria. Banco Santander is keen on providing the adequate periodic training to its staff members in the risk divisions to build their capacities. The trainings ensure a coherent understanding to the importance of social and environmental responsibilities as well as strengthen the knowledge on how to operate in compliance to them (Banco Santander 2015 Annual Report).

Banco Santander adopts the EPs processes to all financial products subject to its conditions and adapted its management and structure to accommodate the new operational reality. The products that are subject to the EPs are those, which fit the following list from the Bank's published 2015 EPs report:

1. Project Finance Advisory Services with total capital costs of US\$10 Million or more
2. Project Finance with total project capital costs of US\$10 Million or more
3. Project-related corporate loans where all four of the following criteria are met:
  - a. The majority of the loan is related to a single project over which the client has effective direct or indirect operational control
  - b. The total aggregate loan amount is US\$100 million
  - c. The EPFI's commitment is at least US\$50 million
  - d. The loan tenor is at least two years
4. Bridge loans with a tenor of less than two years that are intended to be refinanced by Project Finance or Project-related Corporate Loan that is anticipated to meet the relevant criteria (Banco Santander 2015 EPs Report).

The adapted structure required the development of units, namely: Projects, Business and Risk. These units are dedicated to analyze social and environmental risks according to both the bank and the EPs' policies combined. The units were integrated into a Social and Environmental Task force that is led by the Chief Compliance Officer of the bank. The task force coordinates with the annual auditing that is conducted by an internal auditor as well as a hired certified external auditor, to assess the social and environmental performance of the bank (Banco Santander 2015 EPs Report). In 2015, Banco Santander funded 55 EPs projects equivalent to approximately EUR 30 million. The 55 projects comprised 53 funded as Project Finance where only one portfolio was implemented in Spain as a medium risk, and the remaining two were Project-related Corporate Loans (Banco Santander 2015 EPs Report; Banco Santander 2015 Sustainability Report).

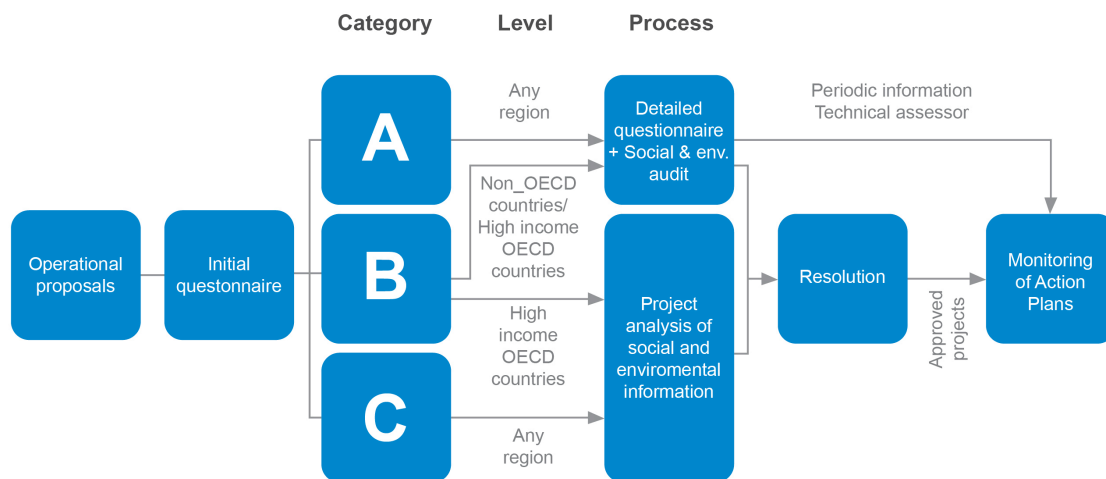


Figure 3 Banco Santander's Social and Environmental Risk Assessment Process (Banco Santander Annual Report, 2012)

The process for EPs projects in Banco Santander includes the stages for analysis and mitigation. It is applied according to the EPs standard processes in each of the locations where the bank is present. The processes begin with the categorization of clients according to the EPs questionnaire that determines if the project falls under category A, B or C (High, medium or low risk). They follow the same process that was elaborated by Sholtens, Dam and Shepers afterwards; categories A and B (high and medium risk) are advised to be audited in sustainability performance and present an environmental management plan to be followed addressing the recommendations of the auditors (Schepers, 2011; Scholtens and Dam, 2007). This is alongside the detailed sector-specific questionnaire available through the EPs processes (Banco Santander 2015 EPs Report). There are fourteen critical sectors listed by Banco Santander such as: gas and oil extraction and exploration, mining, forestry, power generation and distribution, general industry, agriculture, fisheries and livestock farming, construction, hospitals and transport and others (Santander 2012 Annual Report). These sectors are among the sensitive sectors the bank evaluates cautiously in the assessment process, as they are more likely to be listed in A or B categories.

### **1.1.3. Benefits for Banco Santander**

The benefits of adopting the sustainability risk management has opened new channels of opportunities for the bank, which is not necessarily linked to influencing the direct financial profit as it has on the risk processes. There has been noticeable improvement in the bank's Performance on a general note. This is believed to be a result of the enhanced economic situation in Spain rather from the sustainability adoption in risk operations (Santander 2015 Annual Report).

There has been no evident direct Performance impact from sustainability adoption in credit operations on Banco Santander, whether positive or negative except for improved insolvency rates (Cuesta-González et. al, 2009). However, the benefits were mostly in a non-financial form through enhancing reputation and branding. It was evident in the findings that social and environmental risk assessments shield Banco Santander from the consequential implications of corporations' undesired impacts. Early in 2015, Banco Santander issued a policy announcement on its discontinuity to extend further funding to one of its corporate customers for pulp and paper production in Indonesia; APRIL. This decision was conditional to APRIL's response to the recommendation of the bank's requested audit exercise conducted by internal and external consultants into their social and environmental performance (Banco Santander Social and Environmental Policy Announcement, 2015). The bank also indicated the implication of APRIL's actions on its reputation, and highlighted its long-standing worldwide recognition of its efforts in the field of sustainability. Santander branch in Brazil took a step further in sustainability risk adoption where the assessment was conducted to all credit operations since the implementation in 2015 for almost two thousand corporate customers (Banco Santander 2015 Sustainability Report).

On Risk Management, the adoption of social and environmental criteria in risk operations allowed the bank to develop more accurate pricing of interest rates, as well as better resource allocation (Cuesta-González et. al, 2009). This provides the bank with an opportunity to profit from increased interest rates on

Categories A and B (high and medium risk), as well as incentivize corporations to pursue and maintain a lower risk standing by implementing the needed mitigations and action-steps to reduce possible adverse sustainability impacts. This is additional to Banco Santander's improved decision making process on whom is more worthy of selection for financing; a bank would accordingly allocate finances to a project that imposes less risk with higher chances of performance than allocate to a project that may provide the same profile, except for dormant risks that are now spotted through social and environmental assessments.

#### **1.1.4. Opportunities for the Banking Sector in Spain**

The findings on an institutional level in Banco Santander in Spain highlighted an opportunity for growth that the Spanish banking sector can capitalize on for profit maximization. There is a growing demand for Socially Responsible Investments (SRIs) in Spain and the European Union as a whole where the first SRI fund in Spain was established in 1997 (Escrig-Olmedo et al., 2013). The growing presence of funds and global indices has affected the level of corporate awareness on the importance of sustainability, creating a pool of demand to be met. The banking sector can capitalize on this opportunity by becoming the trusted intermediary between customers and multilateral funding institutions like the World Bank or IFC, and many others to supply the market. This will aid in the banks' market share and profitability resulting from the discounted interest rates received.

The SRI market in the European Union has been rising steeply where it significantly increased between the years 2007 and 2009 from 2.7billion euros to 51trillion euros, approximately an 87% increase; this was the time social and environmental integration in banking operation was gaining global momentum (Escrig-Olmedo et al., 2013). During the recent time, BBVA, one of the leading and largest financial groups in Spain with presence in over 35 countries, also reported on the massively increasing demands on green bond that jumped from \$42billion in 2015 to \$87billion in 2016. The group also indicates that the country in which they excelled the most was Spain during 2016 (BBVA Official Website). This is an indicator that sustainable development adoption during financial crises can be viewed as an economic opportunity for growth.

According to the 'Doing Business' report published by the World Bank for 2016, Spain ranked as the 33<sup>rd</sup> country among 189 in terms of ease of doing business despite its economic challenges (World Bank Doing Business 2016 Report). According to the OECD economic survey report on Spain, the country is yet considered as more difficult in terms of ease of doing business than other OECD economies due to legal framework aspects in the country (OECD 2014 Spain Economic Survey Report).

This indicates that there may not be direct financial benefit in the banking sector but the opportunities that it opens for the sector would allow the banks to maximize their financial profits along-side the non-financial gains. These benefits entail improving operations of the bank as self-defense against reputational risks resulting from social and environmental scandals. It also cements the reputational position and

enhances brand image to shareholders, customers and employees as a corporate citizen and responsible entity, ultimately affecting the increase in customers of the bank and stock prices.

## **1.2. The case of Bangladesh and Prime Bank**

Bangladesh is a developing country with immense significance in terms of exporting for industrial sectors. The country has been undergoing financial system reform for the past two decades, which contributed to the economic growth through progress in market mobilization and growth of credit to the private sector (“Designing a Sustainable Financial System in Bangladesh: Summary Briefing,” 2015). This can partially relate to the growing significance of Bangladesh to the global industrial sector and the demand of corporations for liquidity through the banking sector. The country has become a hub for the migrating industries from Europe and other areas to its land such as leather goods, pharmaceuticals, fertilizers, cements, ceramics and others. Although these industries contribute significantly to the economy in Bangladesh, they also strain environmental health and impose adverse impacts on society. The social and environmental risk that results contributes to Bangladesh’s identification as one of the countries with high vulnerability to climate change impacts (Weber et al., 2015).

The Government of Bangladesh (GoB) began proactively addressing the social and environmental impacts through environmental management in the 1990s (Weber et al., 2015). This was in response to the climate change risks (Aubhi, 2016) combined with the effect of growing liability burden on banks resulting from borrower defaults due to non-compliance with environmental, social and governance (ESG) standards (Ahmed and Rahman, 2014). In 1997 specifically, the Bangladesh Bank (BB) - the Central Bank in the country – mandated all commercial banks to undertake necessary steps to address the issue and implement the provisions of the Environmental Conservation Act (ECA) that was issued in 1995. This act enables banks to undertake steps to control environmental pollution by ensuring that their corporate customers comply with the environmental policies and laws of the country; it was a condition to finance projects or provide working capital (Ahmed and Rahman, 2014).

The concept of green finance in Bangladesh is relatively new based on the chronological data on its policy establishments detailed in the next chapter. There are significant efforts on the aspect of external sustainability concerned with community development: banks tend to direct their charitable activities towards several diverse sectors as education, health, empowerment, and others. However, the banking procedures from an internal aspect, such as social and environmental credit risk management, have not yet materialized in a way that is satisfactory and effective (Weber et al., 2015).

### **1.2.1. Green Finance in Prime Bank**

Prime Bank is a fully licensed commercial bank founded in 1995, and approximately 78% of the bank’s portfolio is corporate accounts (Prime Bank Official Website; Prime Bank 2015 Sustainability Report). The bank’s sustainability initiatives range from providing charity to in-need communities, to community development initiatives, and specific funds encouraging pressing sustainability issues in the

country. Among the economic efforts are agricultural funds to support the agricultural performance in Bangladesh, developing a fund for empowerment of women entrepreneurship in the country, establishing green funds for energy efficiency and renewable energies. The environmental responsibility is evident in the bank's efforts to reduce its carbon footprint. This is achieved by establishing digital channels for its customers, reducing paper and energy consumption as well as using water resources wisely; this is incorporated in the internal policies for Prime Bank premises. On the social aspect, the bank supports education and founded the Prime Bank English Medium School for affordable education delivered to underprivileged or physically disabled Bangladeshi students. Not only this, but the efforts also extend to health support to communities by conducting visits for eyesight tests in areas in need (Prime Bank 2015 Sustainability Report). This demonstrated Prime Bank's adoption of the external sustainability aspects as a way of contributing to their community, brand image and reputation.

### **1.2.2. Social and Environmental Risk Management in Prime Bank**

By evaluating the internal adoption of sustainability in the bank, it begun with the support of the central bank. In 2011, the BB was the only national central bank to have circulated sector-wide indicative guidelines for social responsibility and environmental risk management. These guidelines were incorporated within the Credit Risk Management (CRM) of banks (Ahmed and Rahman, 2014). As such, Prime Bank incorporated environmental risk management as part of its existing CRM and started assessing their borrowers according to the environmental due diligence checklist developed (Prime Bank 2015 Sustainability Report).

The adopted approach of Prime Bank is different from that adopted in Banco Santander as an example; Prime Bank is not following the EPs, but rather a country-developed set of guidelines based on the national laws and regulations (Prime Bank 2015 Sustainability Report). Also, the sustainability structure for this aspect is not clearly reported to identify if there a specific team assigned to assess the portfolios, or all risk officers perform this task. However, the bank appointed the Environmental and Social Risk Manager as a custodian to develop environmental risk management policies and procedures to ensure social and environmental guidelines present in the bank to be followed (Prime Bank 2015 Sustainability Report).

This process of social and environmental assessment is applied to all individual customers ranging between corporations, institutions, and personal or even Small and Medium Enterprises (SMEs). However, their aggregate facilities must fall within one of the following financing thresholds in order to be considered for categorization (Prime Bank 2015 Sustainability Report):

1. SME financing for more that 2.5 million Bangladesh Taka (BDT)
2. Corporate financing for more than 10 million BDT
3. Real estate financing for more than 10 million BDT

After the threshold is identified, all portfolios pass through a categorization process to fall under one of the three categories: high risk, medium risk, or low risk. In the cases of high risk, the Board or Executive

Committee needs to approve the proposal - however, moderate risk follows the standard CRM procedures, and if the environmental impact is unclear, the borrower is requested to provide further data for decision-making purposes by the bank (Prime Bank 2015 Annual Report). In 2015, the bank assessed 192 of its clients that fit the threshold back. The categorization was based on the implemented social and environmental due diligence guidelines and results showed that 160 of their clients were rated as low risk, 32 rated as medium risk and 0 clients were high-risk business to finance.

### **1.2.3. Benefits for Bangladesh Banking Sector**

Incorporating sustainability criteria in the Bangladeshi banking system have proven that there are benefits to the adoption in developing countries as well. The concept makes sense to be applied and succeed similarly to its adoption in developed countries (Weber et al., 2015; Islam et. al, 2014). In terms of profitability, the adoption contributes to the increase of enterprise value while simultaneously lower its loss ratio which leads to a stronger portfolio generating better earnings (Aubhi, 2016). The process implemented across the sector has lead corporations and borrowers to demonstrate better ESG that was evident in the increasing number of eligible projects to the environmental due diligence in Prime Bank (Prime Bank 2015 Sustainability Report).

On the enhancement of risk procedures, it was found that incorporating social and environmental criteria in decision-making processes for lending allowed banks to predict credit losses resulting from unsustainable behavior of borrowers. It indicated that the system managed to spare the banks more defaults and undesired credit losses (Weber et al., 2015). In Prime Bank, they reported that adopting sustainability risk management opened an opportunity for the bank to re-visit their policies, procedures and programs governing overall green banking activities in order to enhance performance and bank position (Prime Bank 2015 Sustainability Report).

This shows that the benefit in Bangladesh is more on the social aspect as well as risk improvement. The profitability impact has not yet matured to outweigh the social and risk aspects of this approach.

### **1.2.4. Opportunities for the Banking Sector in Bangladesh**

The concept still requires improvement in Bangladesh in terms of providing clear quantitative guides for the incorporation within lending decisions for bank. It is of high importance to bridge this gap between the policy and application for it to have an effective and unified system across the Bangladeshi banking sector (Ahmed and Rahman, 2014). However, according to the 'Doing Business' report published by the World Bank for 2016, Bangladesh ranked 174 out of 189 countries in terms of ease of doing business (World Bank Doing Business 2016 Report). Therefore, Bangladesh needs to effectively assess its implementation process so that it does not affect business negatively at a time it needs it to flourish.

BB's efforts in enforcing sustainable development through social and environmental risk assessment in the banking sector lay a solid foundation for effective enforcement. There is notable momentum in the sector where banks are taking initiatives such as the Green Banking Policy Guidelines for green activities

formulated collectively in 2012 by 47 commercial banks in a bottom-up approach (Shakil et al., 2014). This was a response after the BB stressed that it is not forcing banks against their will to adopt sustainability, but rather creating a platform to guide banks that wish to a sound business case for sustainable development and incentivize those who do (“Designing a Sustainable Financial System in Bangladesh: Summary Briefing,” 2015). Therefore, there is a promising potential in Bangladesh to demonstrate sustainable commitment and positively fight against social and environmental threats.

## **2. The Case Study of the Egyptian Banking Sector**

The Egyptian banking sector is one of the main economic pillars of the Middle East (Poshakwale and Qian, 2012; Ramzy, 2013). Though Egypt is considered an emergent in the field of CSR and sustainable development (Darrag and Crowther, 2017), the literature section indicates that there are social and environmental efforts in organizations including the banking sector. This is evident through the publicized efforts by the banks in this realm, particularly the Egyptian Banking Institute (EBI), affiliated with the CBE. EBI is demonstrating social responsibility by establishing a program for training courses delivered to the banking sector’s employees in order to build capacities. The Institute is also promoting community development in spreading financial literacy to maximize financial inclusion under the project name ‘Shaping the Future’. This project is targeting the youth segment to raise awareness on the benefits of the banking industry and build a pool of potential clients from the participants (EBI Official Website).

In Egypt, there are eight banks adopting social and environmental risk management systems; seven of which are EPs Signatories: Ahli United Bank, Arab African International Bank (AAIB), Barclays Bank, Citibank, Crédit Agricole Bank, HSBC Bank, and National Bank of Abu Dhabi (EPs Association Members and Reporting List). In this research, four banks from the implementers of social and environmental risk management systems in Egypt were selected and had agreed to be interviewed. The interviewed banks in this research include one local private bank: the Commercial International Bank (CIB), and three other international banks. The three international banks have requested to remain anonymous in the research and hence will be referred to as Bank A, Bank B and Bank C. All the participating banks in this research are EPs signatories except for CIB. All banks participated in the in-depth interviews that took place during the month of April and were conducted with Senior and Middle Management upon their availability.

The interviews focused on answering the thesis question from the stated two aspects of the research objective: Bank’s Performance and Risk Management. However, the discussions also provided insights for the opportunities and policy recommendation to mainstream the initiative across the sector. The results will be presented based on the findings; beginning with the implementation strategies for adopting social and environmental risk measures, then the benefits from financial and non-financial perspectives.



## **2.1. Implementation Strategies and Structure of Social and Environmental Risk Management System by Banks in Egypt**

The interviews showed that there is a diversified approach to the implementation of social and environmental risk measurements in banks in Egypt. However, there seems to be an agreement to adopt the EPs in the development of standards for the risk assessment processes; they were the common denominator for the four banks' social and environmental risk management systems. Bank A considers that all international standards and guidelines for social and environmental assessments, whether EPs, IFC Standards or others, have a similar objective in protecting the environment and mitigating risks (Bank A, personal communication, April 9, 2017).

The process for adoption was conducted in a gradual approach in risk departments with a specified time-span in order to control its cost and gradually integrate it. CIB, as an example, had begun the discussions on, and implementations of a social and environmental risk management system in 2014, but the unit was added to their Department of Risk structure in the published 2016 annual report (CIB, personal communication, April 10, 2017; CIB 2016 Annual Report; CIB 2015 Annual Report; CIB 2014 Annual Report). Trainings on social and environmental risk management were conducted in three banks to all staff members through a Training of Trainers (ToT) program that was later delivered to all staff in risk areas. This training was the first stage for gradual integration by providing awareness sessions to staff members (Bank A, personal communication, April 9, 2017; Bank B, personal communication, April 12, 2017; CIB, personal communication, April 10, 2017). Bank C was the only bank that did not provide the training to its staff in Egypt, given their different structural system that assigns only one focal point in the country's branch as discussed in the following section. However, they have an online training course launched across the global network of the bank to all staff members (Bank C, personal communication, April 11, 2017).

In terms of processes and documents for the assessments, the in-depth interviews indicated that both the traditional and the sustainability approaches require significant amounts of documents and reports to assess the client's credit score system. Sustainability risk assessment mainly relies on the same data that were developed for the clients to launch their business projects; the same documents requested before the sustainability integration. The additional information on sustainability that might be requested by the bank, such as the Environmental Register, are relatively few in comparison to the sum of documents the clients normally submit. In very few cases - high and medium social and environmental risks - the clients are required to submit a social and environmental assessment report with mitigations to any risks found. This document is not considered a burden on the clients in terms of efficiency because a professional EPs-certified consultant usually prepares it for the clients themselves. In terms of financial burden, most cases high and medium risk companies that are required to take extra steps in investigating their impacts are well-established portfolios either multinational corporations or large local ones. This means that it is within their financial capacity to pay for a hired consultant to develop their reports; hence is not a burden compared to their budgets and was not an obstacle faced by any of the interviewed banks.

However, the implementation structure of the system differs from one bank to the other. For instance, the credit risk process in CIB and Bank B are very similar in terms of involved units and departments in the stages of assessment. Bank A has a similar process yet they don't have as many involved units dedicated to social and environmental credit risk. Whereas Bank C only implements the social and environmental assessment process via overseas office. However, the flow of the social and environmental process is different from most banks as follows:

#### **a) CIB's Implementation Process**

CIB had mentioned that the guidelines of the EPs were used as the foundation of the adopted system, and the bank developed its policies and guidelines around them. This enabled the bank to maximize its impact beyond the EP threshold and build awareness to wider pool of customers (CIB, personal communication, April 10, 2017). Yet, CIB remains the only bank that has not signed the EPs; this was due to their perception of the EPs' incompatibility with the Egyptian market. The bank is incorporating all credit portfolios putting into consideration that the economic recession and fluctuation of the Egyptian Pound's value against the US Dollar has greatly impacted the threshold of the EPs. Hence, it was a more logical step for them to encompass the concept in all credit approvals rather than apply only the EPs guidelines. CIB realized that the Egyptian market was not sufficiently aware of the concept of sustainable development or the climate change risks the country is exposed to due to the novelty of the topic on a public scale. Consequently, the purpose of implementing the EPs was to test the market's acceptability of the concept and the viability of its implementation. Therefore, the bank applies the assessment to all credit applications, including but not limited to customers within the EPs' threshold. The Chief Risk Officer at CIB explained the reason behind the bank's choice of a hybrid between the EPs guidelines, IFC Standards and the existing credit system. The reason is that "[They] usually don't follow one path, CIB chooses the best of everything and works on it. Also, [they] check what fits the Egyptian environment and customers to not be over-demanding with requirements that will not happen" (CIB, personal communication, April 10, 2017).

Furthermore, CIB integrated the social and environmental aspects by re-engineering its credit procedures to add a simplified version of the core guidelines of the EPs. For example, a reduced version of the EPs Questionnaire is required to be filled by clients roughly stating the social and environmental aspects that are most relevant to Egypt's economic function, and it is only sent to high and medium risk clients. This simplified process sheds light on the drawbacks and challenges that can arise from adopting sustainability in decision-making for lending had the EPs been adopted before this market-testing exercise was conducted.

The process for policies and guidelines development in CIB took place between 2014 and 2015 with actual effective implementation in 2016. The sustainability embedded in CIB risk materialized to become part of its structure in 2016, under the management of "Credit & Investment Exposure Management" area. There are three main measurement criteria 1) Portfolio concentration in high social and environmental

risk firms, 2) Percent of loans in social and environmental exclusions list sectors, and 3) breaches of social and environmental covenants. These three measurements are guided by the internal social and environmental credit risk policy (CIB 2016 Annual Report) as well as the Key Risk Indicators (KRIs) developed by the bank (CIB, personal communication, April 10, 2017) to ensure that the clients are compliant by the standards. As such, all credit operations have to be categorized and rated by the specialized unit before loans are disbursed.

#### **b) Bank A's Implementation Process**

Bank A's adopted process starts by identifying if the customer falls within the threshold of the EPs: above \$10 million (EPs Guidelines). Once the client falls within this criterion, they are requested to submit their EPs assessment report for categorization and assessment purposes. Afterwards, the bank accepts the report without further amendments and only conducts a second layer of investigation if the data looks inconsistent or suspicious. Hence, the bank relies on the investigation that takes place periodically during credit review by the external auditor hired by the credit customer to indicate if there are any red flags. Investigations and monitoring take place by the bank if there are specific recommended action plans by the consultant to be followed as mitigation for risks. In such case, the bank adds the plans and the investigation preparations in the contractual agreement for credit disbursement. However, in contrary scenarios, there are no visits that take place to the customer's project except in a case of threat and violation to maintain a dialogue.

#### **c) Bank B's Implementation Process**

Bank B has a similar operating reality to CIB given that both banks are applying social and environmental risk assessments to all their credit applications and not only those that fit the EPs threshold. Yet, Bank B took a further step to apply the assessment to all their clients even if their needed services do not require funding. This demonstrates their holistic adoption of strong sustainability as they apply it rigorously internally, externally and they work on preventing and mitigating harm.

Bank B's adoption to sustainability has been long embedded into their policies as part of their compliance with the environmental laws of the countries of operation. However, in 2007, the initial policy was published in its branches worldwide calling for a re-engineering of the operations to separate social and environmental aspects as a focused independent area. The credit approval process has become divided into two aspects according to their circulated global policy: a social and environmental rating, and compliance to sustainability policies such as forestry, mining, etc. The compliance policy does not only assess the borrowing client, it also assesses the supply chain for procurement to ensure that the client is not involved with a supplier imposing adverse environmental implications. Accordingly, a client may be rated category C (low risk) and will still not get credit-approved due to non-compliance with the bank's adopted policies whether by his company, suppliers or subsidiaries. In terms of credit investigation enforced on clients' projects, there is a dedicated department for this task, which assesses visually

different aspects as inventory. Yet, there is also a specialized risk champion who re-assesses the reviewed output of the business unit in order to concur the proposed rating and ensure that there is no further concerns; the same process followed as CIB. The process can be illustrated in the following diagram:

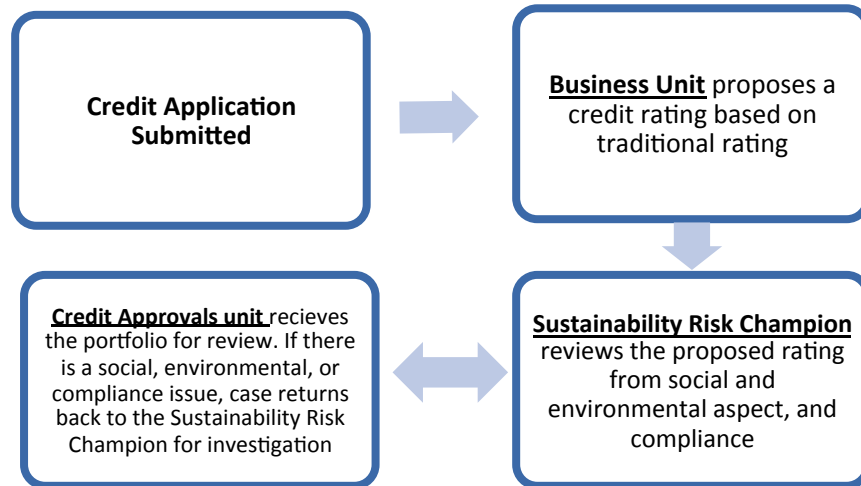


Figure 4 Bank B's Credit Approval Process

#### d) Bank C's Implementation Process

Bank C's process is the most complicated and time consuming among the four interviewed banks. The bank created a global social and environmental policy back in 2004 for the entire bank and not country-specific. An EPs assessment report is required to be prepared by an external consultant to assess the social and environmental aspects of a customer's project only when the threshold is met – same as Bank A. However, the entire process in Egypt is by conducted by the credit officer, who also assesses the risk aspect, and requires an offshore approval from the bank's Headquarters on the assessment results of social and environmental risks. This process is different from the standard credit procedures followed by the bank for other lending cases, and is considered time-consuming for the bank. Moreover, the bank does not apply rigorous procedures for sustainability due to the country's level of awareness and economic state. Hence, Bank C does not find benefit from social and environmental risk adoption in Egypt; it is applied by virtue of its global adoption by the franchise name.

##### 2.1.1. Implementation Challenges and Cost of Adoption

There were no obvious drawbacks associated to integrating sustainability in the interviewed banks' systems as well as in the literature. In fact, as mentioned in the previous sections, there were benefits associated with it. However, there were hindering obstacles that the banks faced, which impacted the effectiveness of the sustainability risk management system.

According to the discussions with Bank B, the main challenge faced with customers is their lack of awareness on why they need to be environmentally friendly. Most corporations view it as a requirement to

be certified as a green entity and acquire ISO certifications, for instance. However, they lack the understanding on how this supports the environment, which eventually supports their own businesses (Personal communication, April 12, 2017). Similarly, CIB faces cases where customers would not have the updated environmental documents that would aid in the social and environmental rating process of the corporations. This is due to the corporations' lack of understanding to the reasons why they need act responsibly. Hence, once the corporations become certified; they do not maintain their environmental reviews or update their documents to report on performance in that realm.

As such, the majority of clients had found the concept unusual at the beginning, yet the added layer of risk management was not considered an excessive load on corporate clients or alienated them from sustainability-adopting banks because the sustainability requirements are not strict. Banks in Egypt could not demand the updated documents conditional to the credit disbursement at the time being as it puts the bank in a risk of losing their clients to another competitor that does not impose the same stringent requirements. For instance, CIB would list the unavailable document as 'missing' to proceed with the categorization based on the available documents. This is a strong indication that the market is not nearly mature in this aspect and the lack of consistency in implementation across the sector leaves an opportunity for unhealthy and negative competition among the sector. Additionally, with the current economic turmoil, banks are trying to maintain growth amidst the economic downfall; not promote negative competition or risk their client retention and attraction.

Moreover, in terms of cost of adoption, there was a consensus among the four-interviewed bank that the costs of adoption were not quantifiable; however, it was not a burden on the bank and the benefits that resulted outweighed it. CIB and Bank A clarified that the trainings conducted for their staff members were not a costly process as the followed ToT approach reduced the cost of training thousands of employees to the few number of trainers delivering it to the bank. Accordingly, the cost-benefit result was in favor of the banks. Additionally, the EPs processes and assessments are normally handled by the credit customer, which imposes no financial burden on any of the four banks.

## **2.2. Financial Benefits**

The financial benefits are the findings that answered the research question exploring impacts on Performance and Risk Management. The Performance assessed the profitability and market share showing no improvement. However, Risk Management showed improvement that was unquantifiable.

### **2.2.1. Impact on Performance**

The research findings conclude from the case studies and the interviewed banks in Egypt that there are no direct Performance benefits in terms of profit and market share from adopting social and environmental risk assessments. Conversely, it is worth noting that all the interviewed banks had significant increase in their loans portfolios according to their last issued annual reports. For instance, Bank A's loan portfolio grew by 12.3% in Egypt (Bank A 2015 Annual Report), Bank B's loan portfolio

grew by 3.22% in Egypt, Bank C's global loan portfolio grew 4% with net revenues growth in the Middle East and Africa of 15% (Bank C 2016 Annual Report), and CIB's loan portfolio grew 56% (CIB 2016 Annual Report). Yet, according to the interviews, this increase was not necessarily attributed to the sustainability adoption in risk procedures in these banks. However, this may be due to the difficulty in assessing the causality relationship between the implementation of sustainability measures into risk assessment system of the bank and the generation of profits. Yet, it is easier to quantify External Sustainability adoption as it is feasible to measure cost of energy efficiency, and reducing consumption of resources while Internal Sustainability adoption is largely an indirect profitability aspect (CIB, personal communication, April 10, 2017).

Nevertheless, the research finds that there are several opportunities that banks can capitalize on in order to indirectly maximize their profits. Presently, investors are interested in knowing the institution's sustainability adoption procedures. It is in the bank's interest to anchor their efforts in social and environmental risk assessment in order for them to attract a wider pool of investors and increase their market share. Another aspect that is currently being studied by CIB is developing green products that would benefit both the credit customers and shareholders (CIB, personal communication, April 10, 2017). The products would act as a service to enable credit customers to mitigate their social and environmental risks and begin the due diligence process. For example, a customer with high reliance on non-renewable for energy generation, may consider a Green Loan with reduced interest prices. This loan will enable the customer to implement an energy efficiency system or increase reliance on renewable energy sources such as solar panels. Hence, the bank retains their clients in more than one aspect and is therefore able to maximize their profitability while ensuring social and environmental compliance.

### **2.2.2. Impact on Risk Management**

There is a consensus that there is a positive improvement in Risk Management for banks adopting social and environmental risk assessment in their lending procedures. All four banks interviewed agreed that although Risk Management cannot be measured, they took into account the enhancement of the risk operations that allowed the identification of risks that aren't explored using traditional credit assessments (Weber et. al, 2008). The additional layer of screening provides a stronger portfolio of loans, and minimizes risks of defaults or non-performing loans. The adoption also built the capacity of employees further resulting in a distinct caliber of risk professionals, and increased sustainability awareness among the staff members. This resulted in higher confidence in the lending decisions taken in the bank by the employees, customers as well as investors.

It was established in the literature that among the positive effects on Risk Management is the loans' performance, given that more stringent assessments of loans take place to prevent losses. Conversely, given the economic recession and the devaluation of the Egyptian Pound (EGP), some banks' Non-Performing Loans (NPL) percentages have increased instead. According to the annual reports of the banks in this study, CIB's non-performing loans increased from 3.98% in 2015 to 6.76% (CIB 2016

Annual Report). Bank A's non-performing loans also increased from 3% in 2014 to 4% in 2015 (Bank A 2015 Annual Report) with expectations to further increase in the 2016 report given that the currency devaluation occurred in that year. On the other hand, Bank B's non-performing loans percentage decreased from 3.76% in 2014 to 3.11% in 2015 as a result to its high reliance on internationally affiliated clients and limiting exposure to local companies; also, international branches compensate the loss (Bank B 2015 Annual Report). This made the assessment of the impact of adoption on the loans' performance more difficult to scrutinize. Therefore, NPL percentages were not indicative to the impacts of social and environmental risk management systems in Egypt contrary to the conducted research in the literature.

Moreover, in terms of risk-based pricing, setting a special interest rate based on a client's social and environmental rating and assigned category, has not been implemented in all of the interviewed banks. The banking sector will not be able to take the step of risk-based pricing unless the concept is mainstreamed across the sector. Otherwise, banks are subject to losing their clients for a much lower interest rate in another bank with less strict procedures. In the meantime, CIB are assessing how to incorporate this aspect to become an incentive for their corporate customers to shift into responsible business approaches.

### **2.3. Non-financial Benefits**

The non-financial benefits add to the results obtained from the research contributing to the viability of mainstreaming sustainability in the sector. Although they are not profit generating, they indirectly contribute to the profitability of the banks as well as present opportunities for growth. The non-financial benefits are mainly: Brand Positioning and Reputational Image, and the Social and Environmental Benefits to combat climate change risks in Egypt.

#### **2.3.1. Brand Positioning and Reputational Image**

There is a consensus in the presented case studies that the main benefits of sustainability adoption are non-financial social benefits rather than direct profitability outcomes. Bangladesh Bank listed seven benefits to adopting a Green Banking strategy across Bangladesh and they mostly covered the social aspect for increased awareness, preventing environmental harm, being efficient and productive as well as increase goodwill and improve brand image (Islam and Hasan, 2015). The adoption of social and environmental risk management systems legitimizes the banks' position as an 'ethical bank' that acts responsibly. This concept serves in the brand positioning of entities and is sometimes utilized as a low-key marketing tool for banks via setting a positive reputation. Bank A, for example, alongside their internal sustainability integration, chooses to proactively invest in initiatives that will eventually reflect positively on its brand image, than to allocate the same amount for billboards where there will be no positive impact from them (Bank A, personal communication, April 9, 2017). An ethical bank's image has a positive impact on client attraction, employee's pride in the entity as well as accommodates the shareholders and attracts investors; hence it shapes the reputation of the bank.

An example on negative reputational consequences on banks due to irresponsible social and environmental operations by bank customers was the Exxon Valdez oil spill in Alaska and Rajawali Conglomerate in Malaysia. Both firms have a good profitability forecast and are key players in their fields, a very tricky portfolio for bank if they do not look into social and environmental risks. Both companies faced scandalous crisis that affected their reputation and shed light on the banks that financed their initiatives as contributors to the catastrophe. The environmental and economic crisis ended up costing the company billions of dollars after trying to escape the allegations and compensation demands (Warner, 2010). The other catastrophe was in Malaysia regarding the local conglomerate Rajawali's contribution in accelerating deforestation rather than combating it (Jufri, 2016). The environmental clean up needed affected the companies profitability let alone the deep dive the stock prices took downwards for Exxon Valdes. The issue here is that the public opinion affected the client attraction and ultimately the reputation of the banks involved. Therefore, the approach shields the banks against reputational risks as well as reflect positive image to the public; double reputational benefit.

The influence of the enhanced brand image on investors was common in all four banks; it was particularly higher on foreign investors than on Egyptian ones (Bank A, personal communication, April 9, 2017; Bank B, personal communication, April 12, 2017; Bank C, personal communication, April 11, 2017). Particularly, that the concept of sustainability and social and environmental responsibility is still at its budding stages in Egypt. In accordance to the Daily News, a sustainability awareness survey was conducted on the Egyptian Stock Exchange (EGX) revealing that 87.5% of the investors in Egypt were unaware of the sustainability indices that differentiate corporations in the stock market. This is because most of the investors do not see the link between a company's profitability and sustainable practices; they are unaware of the risk minimization impacts it imposes (Ahmed, 2015). Thus, they do not pursue information and knowledge in the aspect of sustainability ratings and rankings. However, foreign investors are growingly more interested in the issue. CIB has not quantified their investors' interest in sustainability, as it is very difficult to assess whether the changes in the stock prices of a bank are affected solely because of sustainability aspects or not. Nonetheless, there is a noticeable increase and shift in the investors' inquiry about the bank's social and environmental performance as a prerequisite to their investment (CIB, personal communication, April 10, 2017). Yet, there is agreement by all the interviewed banks that it all comes down to the level of knowledge and awareness the investor has; whether a local or a foreign investor.

### **2.3.2. Social and Environmental Benefits**

On a social and environmental aspect, adopting social and environmental risk management is a leap forward towards resolving the environmental challenges that Egypt faces. As previously mentioned, Egypt is one of the most vulnerable countries that could be affected by climate change resulting from the increased consumption and production to meet the growing populations' demands. Climate change does not only affect the resources and land; it also has an impact on economic development. The displacement



of populations in Egypt due to environmental risks strains the economic network and the development of areas as a result of increased traffic, consumption on food, water and energy sources, and higher demands on the job market (Abdel Wahaab, 2003). This does not threaten the future generations alone, it threatens the present ones too; it has gone beyond the definition of sustainable development to a more critical level. As such, enforcing social and environmental responsibility through the banking system provides a larger outreach to reduce, and actively address, the climate change threats.

The banking system plays a critical role in economic development as it indirectly lays the foundation for other sectors on how they should operate as any industry is highly reliant on money transfers and liquidity from banks (Guillén and Tschoegl, 2008), particularly in Egypt. The bank's efforts in promoting sustainable development across different sectors, sustains the bank's performance in itself through sustaining the other industries. If an industry operates on an irresponsible basis, it will ultimately deplete its own needed resources till it is out of business. This reflects on the bank in terms of a declining retention of customers.

The interviewed banks are embracing the concept by adopting lines of defense specifically dedicated to social and environmental risks. The first step conducted is assessing the high or medium risk cases presented in order to identify whether minor adjustments or a comprehensive action plan will be needed to address the concerns. As mentioned, high and medium risks are required to present an action plan with mitigations. These mitigations are then listed as part of the contract to approve the credit request. As such, the banks review the progress in that aspect during their periodic assessments to the customers' performance. Hence, it cements the benefit to sustainable development in Egypt across different sectors and protects the environmental health. This can be utilized as an enforcement mechanism regulating the environmental laws in Egypt and materializing the monitoring of environmental compliance and performance by diverse industries.

### **3. Opportunities for Green Finance in Egypt**

In Egypt's case, the opportunity is presented in the alignment of social and environmental risk assessments and mitigations with the strategy and national direction of the country. Egypt is aiming to enhance its economic position by attracting foreign investors, and therefore, it has applied for the International Monetary Fund (IMF) loan to encourage Foreign Direct Investment (IMF Press Release No. 16/501). The GoE is also attempting to improve its economic position in a sustainable manner, thus it has followed the recommendations set by the UN Sustainable Development Goals (SDGs); as witnessed in the Sustainable Development Strategy Egypt 2030 Vision (El-Magharbel, 2015). Sustainability adoption in lending procedures would be a step closer towards cementing the environmental regulations and compliance by corporations operating in Egypt. This can be supported by the existing laws and regulations issued by the EEAA since the 1990s (Abdel Wahaab, 2003; Ramzy, 2013).

Moreover, the shifting demands to green products is expected to rise whether due to availability of clients in the country or because the global trend will shift the economy in Egypt to this direction as well

(Bank A, personal communication, April 9, 2017). This can broaden the spectrum of banking products as well as increase the market share of banks. It is an opportunity to serve the budding entrepreneurial initiatives towards cleaner production and environmentally responsible solutions to climate change challenges.

#### **4. Limitations and Challenges for Green Finance in Egypt**

According to the in-depth interviews, the main challenge faced on an institutional level is the local customers' lack of awareness realization to the importance of updating their data. This is particularly a result of lacked rigorous monitoring and evaluation system embedded by the EEAA. Though environmental laws are in place in Egypt, the enforcement mechanism remains the challenge against its effectiveness. Thus, the economic system does not always comply with the issued regulations if an opportunity not to, presents itself.

All interviewed banks agreed that there were no defaults in their disbursed loans as a result to social or environmental risks. However, this is due to banks' inability to not terminate financing of a customer for non-compliance with social and environmental procedures, because the social and environmental risk assessment concept is not shared across the sector. As mentioned in the challenges faced by the interviewed banks, this ultimately leads to the fear of losing customers to more lenient banks that do not enforce the same policies. Another limitation is that the environmental laws in Egypt are not effectively enforced and thus, there are cases where adverse impacts mostly go unpunished. Yet, even if they are punished, the legal process takes a long time and hence it may surpass the needed time to repay the credit loan or save the environment (Bank A, personal communication, April 9, 2017; Bank B, personal communication, April 12, 2017; Bank C, personal communication, April 11, 2017; CIB, personal communication, April 10, 2017). Until this reality of the economy in Egypt changes, and awareness levels are raised in terms of social and environmental threats, social and environmental risk management systems will be rendered ineffective.

#### **5. Conclusion**

This chapter aims to present the results of the research analysis based on review of literature, global case study analysis, and in-depth interview findings conducted with four banks adopting sustainability in their lending procedures in Egypt. The research illustrates that there is no direct evidence for financial benefit or effect on Performance. However, there is evidence for the effect of applying sustainability measures on Risk Management along with non-financial gains by avoiding reputational loss. Consequently, social and environmental risk in Egypt acts as a reputational boost; based on brand position in the international arena. It is mainly a tool to attract investors as well as enhance brand positioning among competitors; in that case, providing the image that investors will have their money in a responsible institution.

As such, there is a strong case for Green Finance in Egypt benefiting both the economy, the environment and society. The above stated opportunities and limitations for green finance highlight the suitable approaches that can be adopted in mainstreaming the concept across the Egyptian banking sector. The next chapter will explore the suitable policy to be recommended on a state-level across the sector to mainstream the initiative based on the findings of the Analysis Chapter.

## Chapter 5

### Conclusion and Policy Recommendation

This chapter concludes the research findings and presents a humble attempt for policy recommendation to promote and enforce sustainability through the banking sector in Egypt. The research questioned the viability of applying a Green Finance model that mainstreams social and environmental risk assessment procedures in the lending decision of banks based on global best practices. The methodology used for this research followed a qualitative inductive approach based on participant's observation, online review of publications, and perception-based in-depth interviews with four banks in Egypt that incorporate sustainability measures in their lending decisions. The analysis questioned whether banks can benefit from the sustainability adoption from two aspects: Performance and Risk Management, with the understanding that a better bank performance or better risk management processes would create a direct incentive for banks to embrace the sustainability adoption.

The analysis chapter concluded that there has been no direct evidence of financial benefit in terms of Performance, but there was clear evidence on financial gains in terms of Risk Management based on the conducted interviews and fieldwork. There is also strong evidence in terms of social and environmental gains that Egypt can particularly achieve by promoting sustainability. The GoE has realized the importance of adopting sustainability and that it would contribute greatly to the overall development of Egypt; hence it has launched its 2030 Sustainable Development Strategy in 2016. (Ahram Online 2016). The additional enforcement step through the banking sector will cement the national strategy as well as support Egypt's vulnerable position against the climate change threats to its social, environmental, and ultimately economic stability. There are additional non-financial benefits found in terms of brand positioning and reputational gains; these benefits although non-financial, they indirectly contribute to the financial profits of banks.

These findings align with the literature findings that what began as a change in lending procedures by a number of global banks in an important but limited arena – project finance – is spreading throughout the industry transforming the values of business practices of banks across the spectrum of lending activities (Conley and Williams, 2011). However, this leads to the important question on what can be an effective model to incorporate Green Finance and responsible lending in Egypt that will maximize the benefits of the banks, and curb the limitations? The global view on policy adoption is that sustainable development and credit risk in banks are intertwined in concept. However, there is a need for multi-level, and multi-stakeholder approach to governance where the private sector and the non-governmental partner with the government as a collaborative and comprehensive governance system (Jänicke, 2007).

On an international level, governments are now taking proactive approaches in mainstreaming and enforcing social and environmental management guidelines. For instance, the Netherlands National Environmental Policy Plan (NEPP) inflicts a responsibility on the banking sector, in case one of its clients causes environmental damages, for unsustainable behavior or operations. The system in Netherlands

requires that the cleanup costs of such actions are the sole responsibility of the banks financing business projects that violate the law. Hence, this obliged banks to become more aware of the possible social and environmental threats to avoid additional costs and reputational damages. As such, all banks in the Netherlands abide by a set of standards to self-protect themselves from adverse impacts by their borrowers. Additionally, the Dutch government issued a formal request in its policies for all banks to take a proactive role in promoting and achieving sustainable development (Bettignies & Lépineux, 2009).

However, for banks to enforce social and environmental risk policies and encourage sustainability, the right tools must be provided for them to effectively apply. The self-implementation of sustainable practice by banks, as illustrated in Egypt's case, limits its applicability and is also perceived by borrowers as an intervention in their operations (Coulson, 2009). Therefore, banks need the support of a regulatory authority –hence in Egypt's case it's the Central Bank of Egypt (CBE). This chapter will evaluate the mandated policy implemented by the Bangladesh Bank, and contrast it with the interview findings from the four banks to identify if the approach should be bottom-up or top-down.

The structure of this chapter will begin by the first section presenting the New Governance theory upon which the policy recommendation is based. The second section presents a good case practices from Bangladesh as a global developing country with similar market realities demonstrated in the Analysis Chapter. The following section will evaluate the policy approach recommended for Egypt based on the in-depth interviews in order to address the challenges and limitations found in the Analysis. The final section will conclude with a policy recommendation with the aims to mainstream social and environmental risk assessment across the sector capitalizing on the benefits of its adoption.

## **1. The New Governance Theory**

The New Governance Theory was the beginning of the shift from government to governance promoting a more self-regulation approach for corporations (Conley and Williams, 2011). Governance, as described by Ruggie, is the set of norms and systems to which any given entity – at any level – complies (2014). There is a general global shift from government to governance that was developed on the premise that no single state can meet the requirements to effectively manage adverse impacts of the economy on the society and environment. There is a need for regulatory change to create a system combining other actors to incorporate a hybrid of public regulation, government-supervised regulation, and corporate self-regulation (Eisner, 2004; Ruggie, 2014). As a result of this notion was the rise of Responsive Regulation (RR) and Regulatory Reforms. RR promotes governance structures like public-private partnerships (PPP), informal cooperation, multi-stakeholder processes, etc. These structures leverage capacities to promote sustainable development (Abbott and Snidal, 2013). As Conley and Williams elaborated, academics and professionals perceived the shift from government to governance as a response to the “weakening of top-down governmental regulations” (2011). The United Nations with the support of other international organizations exerts continuous efforts in promoting sustainability governance on a global level through multinational corporations. The reason for this is because there are

no global governments but rather global governance to regulate issues on an international level (Ruggie, 2014). International Organizations begin to push standards and sustainability principles through corporations that have high influence on neighboring sectors in order to magnify impacts and achieve sustainability.

## 2. Implementation Strategies in Other Developing Countries

Bangladesh provides a good case practice from a developing country's perspective. Bangladesh began its sustainability incorporation within the system in 1990s as a response to the climate change impacts that threatens the country (Weber et al., 2014; Aubhi, 2016). Since 1992, the GoB has demonstrated its political willingness to tackle the environmental challenges facing Bangladesh through sustainable development. The GoB focused on strengthening its institutions and capacity building that support environmental sustainability in 23 government sectors which are linked to environment in the country, delegating the Ministry of Environment and Forest as the focal point (National Report on Sustainable Development, 2012). Additionally, new policies were introduced such as the Environment Policy (1992), the Forest Policy (1994), the Energy Policy (1995) and the Fisheries policy (1998). These policies were important in developing a sectorial approach, and hence the policies served as guide to influence the activities of the relevant ministries and agencies working in the field of the environment (Akhtar, 2009). As such, the Green Finance approach came as part of the overall sustainability strategy of the country and not an independent initiative (World Bank Economic Forecast, 2017). This contributed in a great deal to the success of sustainability adoption in banks due to the buy-in of various governments and sectors, which supported the effective implementation and enforcement of the initiative. The adoption took a gradual approach as follows:

*Table 4 Chronological Adoption of Sustainability Management in Bangladesh*

Year	Action
1992	GoB published the National Environmental Policy
1995	Environmental Conservation Act was issues by the GoB
1997	The BB requested all banks to undertake the necessary action steps to implement the provisions of the ECA
2008	BB issued guidelines for CSR to emphasize social and environmental practices in banks
2011	Policy guidelines were published and circulated for 'Green Banking' and 'Environmental Risk Management Guidelines'
2015	Enforcement of Environmental Risk Management Guidelines as a voluntary-based approach providing incentives to encourage its practice

(Ahmed and Rahman, 2014; BB's Environmental and Social Management Framework, 2015).

The development of the policy framework required the BB's understanding of the environmental and social capacities and gaps of the financial institutions in the country in order to present the adequate facilitation that would strengthen the financial market in general and banks in specific, to adopt an environmental and social approach and provide compliant services (BB's Environmental and Social Management Framework, 2015). The BB was also aware that the nature of the banking sector would result in banks neglecting the published Environmental and Social Management policies because they are based on voluntary adoption. As such, the bank developed an incentive mechanism to encourage its practice such as: priority in opening new branches, separate treatment in capital adequacy calculation and supervisory ratings, and positive publicity by including the bank's name within the top 10 announced Green Banks (Ahmed and Rahman, 2014; "Designing a Sustainable Financial System in Bangladesh: Summary Briefing," 2015).

### **3. Reality of Social and Environmental Management in Egypt**

According to PwC's report on the global economic order change by 2050, Egypt was listed as the 15<sup>th</sup> place in terms of economic power, with a predicted GDP (PPP) \$4.333 trillion (PwC, 2017). Hence, Egypt has a huge potential in terms of economic development and consequently the concept of sustainability has high potential to be mainstreamed across different sectors. As previously mentioned, sustainable development is one of the criteria that attract international cooperation funds; therefore, it increases the chances for Egypt to develop a wider pool of investors. Moreover, the concept of social and environmental management system is gaining high momentum on a global level with an accelerating growth; thus, adopting sustainability in management system increases the chances of Egypt's economy to reach the development pace desired (Bank A, personal communication, April 9, 2017). As explained previously in the Literature Chapter, Egypt is facing significant threats as a result of the climate change consequences. An established effort to combat the consequences and threats can significantly improve the country's social and environmental situation. The government is slowly embracing the concept of sustainability in response, by taking measures in enforcing and promoting it. This was illustrated in the few conducted discussions and roundtables on the topic of sustainability by the CBE and EBI as well as the development of the Sustainable Development Strategy, Vision 2030.

Additionally, the banking sector has been exerting efforts in promoting sustainable development. However, the bank does not have authoritative power to effectively manage its proper implementation; hence support of the government is required to maximize the impacts and benefits of sustainable development. For instance, the interviewed banks mentioned their challenges in collecting the needed documents to thoroughly assess their clients from a social and environmental aspect. The banks attempt to fulfill the needed documents - however, it is more likely that the clients will not always have their updated and reviewed documents, which limits the banks' ability; outdated documents do not reflect the development or any possible changed conditions. The main argument provided by the clients is that the needed documents are not required by the government and thus, they are legitimate to get their credit

loans. This is a significant indicator that the banking sector needs the support of the government to effectively implement the system, and take the necessary measures to combat and abate adverse environmental impacts (CIB, personal communication, April 10, 2017).

The conducted interviews with the banks in Egypt provided a strong insight on the most suitable approach that is based on their direct experience on the matter and experience with clients. The research illustrated that while it is difficult to assess the Performance of green finance for banks, yet there are non-financial benefits and enhanced Risk Management. This indicates that the benefits were more directly associated with banks that have high level of exposure to foreign investors; the case of adoption is hence more socially and environmentally beneficial on the macro-economic level and to key economic players in the banking industry.

The findings of the research in terms of policy development have indicated that the policy implementation and development ought to take a **top-down approach**. Additionally, based on the case study of Bangladesh, the adoption of sustainability in the banking sector has to be integrated within the overall national sustainability strategy. As such, the GoE should capitalize on its national strategy in order to build a stronger momentum that will support both the CBE and EEAA in developing an infrastructure for adoption. This approach will also ensure a more effective ripple effect of awareness that will accelerate the effectiveness of adoption in terms of witnessing positive results. It is expected that the adoption may hinder the processes at the beginning due to it being an alien to traditional economic behaviors. Therefore, gradual implementation on two phases is necessary until the market is accustomed to the modifications. The First Phase capitalizes on incentive mechanisms for the banks that may not see the added value in adoption; a stepping-stone to encourage the banks. The Second is by enforcing hard laws and regulations particularly with the current economic recession in order to ensure compliance and prioritization of the matter.

### **3.1. The First Phase of Implementation in Egypt:**

This phase will be the foundation for the adoption by focusing on fostering the culture and encouraging banks to see the added value of adopting sustainability using soft governance approaches. The phase should entail trainings to banking employees as well as incentives to ensure the banks' buy in. There are four proposed incentive methods, to compensate the lack of direct financial benefits in Performance, as listed below:

- 1) Providing Funds for Green Businesses to Banks: This fund is not specific to businesses associated with green fields, but also to businesses that demonstrate social and environmental responsibility as part of their operations, by addressing their social or environmental risks and mitigating them. The CBE can allocate specified funds for banks adopting sustainability risk management systems to disburse to the businesses that comply with the social and environmental standards. This fund should be provided at a special interest rate for the granted banks that will in turn increase their profitability. In such case, the banks will have a profitability



motive to adopt sustainability measures. On the other hand, companies will also be interested in a lower interest rate credit facility and thus, the fund will act as an incentive mechanism for corporations.

- 2) Provide a Lower Rate for Bank's Reserve Requirement: As part of the requirements for the banking sector in Egypt, banks deposit 12.25% of its overall deposits in the CBE to act as a reserve cushion to cover risks such as operational, market, credit, or cyber-security risks (CBE Website). The bank can provide an incentive through reducing the percentage deposit conditional to adopting social and environmental risks, or providing lower interest rate credits to Green Businesses as mentioned in the preceding point.
- 3) Facilitating Procedures for Branch Opening: Any bank that plans to expand its branches' network is required to go through an approval procedure from the CBE. The central bank can provide a special service to facilitate or shortcut the procedures providing a higher priority to the banks adopting social and environmental risk management systems. This will widen the pool of banks encouraged to adopt the sustainability strategy.
- 4) Building a Bank Rating for Foreign Investors: This will provide banks a higher chance of exposure to foreign investors as well as the bank's chances to be involved in large-scale projects.

### **3.2. The Second Phase of Implementation**

Although the incentives in the first phase encourage banks to adopt sustainability, further initiatives are needed by the CBE to ensure effectiveness of the adopted sustainability risk management systems. The first step in the Second Phase is to ensure that the enabling factors of the system are functioning conveniently; for instance, the environmental documents needed for the banks to assess the social and environmental performance of a client. The CBE needs to collaborate with the EEAA in clients' preparation of the Environmental Registers (ER) and Environmental Impact Assessments (EIA). The EEAA in collaboration with the CBE must develop a law and law enforcement mechanisms to ensure the periodic update of both documents for the bank to have a legitimate stance when requesting them from the clients. Additionally, the CBE must issue a policy requiring the banks to review these documents before disbursing corporate credits; this also has to be backed up by a stringent law in the constitution. This approach will anchor sustainability as part of the culture of financial access. The shift in operations requires the support of the private sector, particularly with the increased demanded efforts that may be beyond the capacity of the EEAA. The increased number of reviews that will be imposed on the EEAA may create an over-capacity load on the agency. Thus, the GoE should explore systems of implementation to facilitate the process such as contracting external certified consultants to outsource the reviews and environmental audits.

As such, this research provided the banks' perspective on the impacts of social and environmental assessment integration in credit procedures. Although there are no direct financial impacts on the bank in

terms of Performance, it has been proven that there is a strong case to mainstream sustainability in the banking sector in Egypt based on the non-financial benefits that can indirectly improve it and improved Risk Management. Additionally, the literature and global case practices as well as analysis of the Egyptian market, provide insights on the influential role of the banking sector in promulgating behaviors of its borrowing sectors. As such, the banking industry is a valuable enforcement mechanism for laws and regulations, if adopted as part of their internal banking policies. This requires the support of the regulatory authorities such as the CBE and the collaboration of the EEAA. The adoption of sustainability in Egypt will align with the national strategy for sustainability and foreign investments; particularly with the capitalization on opportunities such as demand on green financing products. Sustainability adoption is a stepping-stone in Egypt's progression out of its economic recession as well as climate change threats to its stability. It is globally evident that acting sustainably is no longer a luxury for the wealthy corporation; but it is a necessity for the survival and stability of the ecosystem. It is a time for transforming the global mindset to the significance of sustainability, as well as capitalizing on the opportunities it presents us with.

## Policy Recommendation

This research has provided a strong case to mainstream and adopt sustainability as part of the lending decisions in the banking system. This is to capitalize on the banking sector's influential role in the economy to enforce sustainable development. This is a humble attempt to provide a policy recommendation for the CBE and EEAA to collectively enforce and promote sustainable development practices in the Egyptian banking sector on two stages. The gradual implementation ensures cementing sustainability as a core aspect for the banking industry in Egypt within a holistic national sustainability strategy.

### a. Stage 1: Fostering the Culture and Soft Governance

1. Develop awareness strategies to raise awareness on sustainable development sector-wide and incorporating it as part of the bank's procedures; such as green funds, green loans and social and environmental risk management systems.
2. Publish guidelines on Green Banking initiatives focusing on external sustainability
3. Provide incentives for green practices such as awarding high-performing banks in sustainability
4. Incorporate a general guideline on social and environmental assessment as part of the published Risk Management Guidelines by the CBE
5. Develop a committee comprising members from CBE and the banking sector in order to review the adoption strategy in collaboration with IFC or UNEP-FI
6. Incentivize banks incorporating social and environmental management system based on the previously mentioned incentive methods
7. Request bi-annual reporting on social and environmental performance from adopting banks in order to assess the viability and effectiveness of the system
8. Encourage banks to adopt an added-value approach in discussing sustainability with clients in order to prepare the customers to the business transformation of the banks

### a. Stage 2: Enforcing Laws and Regulations

1. Provide sector-specific assessment guidelines for banks in order to comply with the environmental laws and regulations based on sector-reality
2. Mandating social and environmental risk management system as an essential part of the risk management guidelines in the sector. The guidelines will support banks in having similar implementation approaches in order to ensure effectiveness and prevent negative utilization of the system against competitors
3. Require annual reporting on social and environmental risk performance of the bank as part of their annual reports
4. Rewarding high performing banks and incentivizing the sector as per the previously-mentioned incentive strategy

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## Annex 1 Interview Guide Senior and Middle Management of Banks Adopting Sustainability

**Interviewer: Nuran Ashraf Atef**

### Opening Questions:

These questions are introductory to know the bank's history in terms of sustainability adoption as well as motive. The motives show indicators to the approach to be followed in the policy recommendation if the case for green banking was viable. It clarifies whether to present a top-down approach from CBE to the sector or a bottom-up approach from the banks and federation to the CBE.

### Key Questions:

#### **A) Assessing Profitability and non-financial benefits:**

The profitability questions will look at the impact on financial performance of the bank from the aspect of "non-performing loans" or bank "defaults" and "brand image".

#### Question 1: **Client Attraction**

<b>Purpose</b>	To assess the impact on client attraction for the bank and how the adoption affected it.	
	<b>Question</b>	<b>Probes</b>
	How did corporations react to your adoption and added steps in your lending procedures?	<ul style="list-style-type: none"> <li>• Extra work?</li> </ul>
	How was the increase in portfolios before and after adoption? Did it decrease or increase?	<ul style="list-style-type: none"> <li>• Economic recession impact?</li> <li>• Alienation?</li> <li>• Shift in industries?</li> </ul>

#### Question 2: **Investors and Stock rate**

<b>Purpose</b>	To assess the impact on investors and stock market rate.	
	<b>Question</b>	<b>Probes</b>
	How was the stock performance of the bank ever since the adoption?	<ul style="list-style-type: none"> <li>• Compensate economic challenges and instability</li> </ul>
	Are investors now more attracted to invest through your bank?	

#### Question 3: **General Non-financial Benefits**

<b>Purpose</b>	This shows effect on brand image of the bank to identify non-financial benefits of sustainability adoption.	
	<b>Question</b>	<b>Probes</b>
	What non-financial benefits did you get out of your sustainability adoption?	<ul style="list-style-type: none"> <li>• Brand image</li> <li>• Market positioning</li> </ul>

#### Question 4: **Profitability, Defaults and NPL**

<b>Purpose</b>	Assessing the factors affecting the bank's NPL score and defaults ratio. To know whether positive or negative impact is because of the economic recession in the country or the adoption of sustainability.	
	<b>Question</b>	<b>Probes</b>
	Did the ratio differ since the adoption? - +VE: Due to sus. Risk minimization? -VE: Due to economic challenges?	<ul style="list-style-type: none"> <li>• Any of the defaults due to S&amp;E risks?</li> <li>• Will it be enhanced with the sustainability adoption?</li> </ul>

Question 5: **Cost of Adoption**

<b>Purpose</b>	To estimate the cost of adoption based on the reality and context. This will show if the benefits outweighed the costs or the case for green banking in Egypt is considered weak.	
	<b>Question</b>	<b>Probes</b>
	Did you require a consultant for the transition?	<ul style="list-style-type: none"> <li>• Caliber change</li> <li>• Staff trainings</li> <li>• Hiring consultants</li> <li>• Financials</li> </ul>
	How was the transition to integrating sustainability risk assessment? Was it sudden or gradual? (Time consuming?)	

**B) Assessing Impact on Risk Performance and Processes:**

The risk assessment questions will look at the impact on the banking operations in terms of “Overall risk management processes” and “Reduction of risk for the bank”.

Question 1: **Followed Standards**

<b>Purpose</b>	To know if they follow a specific international standard and which standard was more beneficial to their procedures and performance and why?	
	<b>Question</b>	<b>Probes</b>
	Which would you consider as the most effective standard or guideline for sustainability risk assessment in Egypt?	<ul style="list-style-type: none"> <li>• EPs, IFC, UNEP-FI, Hybrid?</li> </ul>
	How did you come up with your hybrid assessment framework?	<ul style="list-style-type: none"> <li>• How different are the indicators used?</li> <li>• How is it more beneficial?</li> </ul>

Question 2: **Process Improvement**

<b>Purpose</b>	To identify the differences that occurred in the risk assessment process of the bank since they adopted social and environmental measures	
	<b>Question</b>	<b>Probes</b>
	On a general note, how did sustainability adoption in risk assessment benefit the bank?	<ul style="list-style-type: none"> <li>• Speed of risk assessment</li> <li>• More accurate</li> </ul>
	How different are the obtained client assessment info after adoption?	<ul style="list-style-type: none"> <li>• How does this impact your clients?</li> </ul>
	How do you categorize a portfolio?	<ul style="list-style-type: none"> <li>• Based on EEAA, IFC?</li> </ul>
	How do you identify low, medium or high sustainability risk?	<ul style="list-style-type: none"> <li>• Is it different from other banks (-ve competition)</li> </ul>

Question 3: **Post Risk Identification Steps**

<b>Purpose</b>	To understand the actions taken against a risk imposing client and the procedures to mitigate social and environmental risks. It would also show if this changes the process against traditional actions	
	<b>Question</b>	<b>Probes</b>
	How do you handle a high-risk company generally?	<ul style="list-style-type: none"> <li>• What if it is only s&amp;e risk?</li> </ul>
	What are the standard lines of defense followed by the bank in a case of evident risk?	<ul style="list-style-type: none"> <li>• Covenants?</li> <li>• Mitigation?</li> <li>• Do you follow up on them?</li> </ul>
	Did sustainability integration in credit procedures affect risk-based pricing?	<ul style="list-style-type: none"> <li>• Interest rates</li> </ul>



Question 4: **Performance Drawbacks**

<b>Purpose</b>	To know if their sustainability adoption will require extra measures beyond risk assessment as sustainability enforcement or it only ends within bank operations (Strong or Weak sustainability). It shows where their social and environmental risk management process ends.	
	<b>Question</b>	<b>Probes</b>
	Do you require the involvement of other departments for the sustainability strategy?	• Credit info department for follow up and periodic checks
	Do you support you provide trainings for your clients to incorporate sustainability in their own operations?	
	Do you generally find any drawbacks from adoption?	• Slowing process • Staff resistance • Cost

**Closing Questions:**

These questions would tackle the future plans for the bank in the field of sustainability as well as show indicators to what can be an effective policy recommendation for the Egyptian banking sector.

- How beneficial would it be if this were mainstreamed across the sector?
- What is the bank's future plans in this regard?
- What should be the efforts of the government of CBE be to promote sustainable banking?
- How do you see the future of green finance in Egypt?