

# **Banking on Financial Sector Sustainability**

## **Regulations**

by

Olawuwo Oni

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## **Declaration**

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

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

## **Abstract**

Based on their influence as going concerns and financial intermediaries that are essential to the growth of economies, some banks, through the oversight role of their Central Banks and other regulatory bodies are seen to be adopting sustainability regulations and are beginning to address respective principles of each regulation for better performance as it relates to sustainable development. These financial sector sustainability regulations encompass issues pertaining to both banks' operations and business activities, addressing the need for banks to engender sustainable strategies, products and services as well as practices in order to drive solutions to diverse sustainability issues which include but are not limited to climate change, environmental pollution, eco-efficiency, poverty and human rights. Financial sector regulatory authorities in China, Nigeria and Bangladesh led the way in the establishment of mandatory guidelines in 2012 although guidelines have existed since 2007 and 2011 for China and Bangladesh respectively. However, oblivious of the effect of these regulations on the performance of banks in these countries in addressing the principles of their country-specific regulation, this research, on one hand, examines the impact of the Chinese Green Credit Guidelines (GCG), Nigerian Sustainability Banking Principles (NSBP) and the Bangladeshi Environmental Risk Management (ERM) Guidelines on banks within the territory of respective regulatory establishment by carrying out empirical analysis of their annual, sustainability and corporate social responsibility reports. On the other hand, consideration is given to banks in countries similar to the aforementioned to analyze their performance in addressing the regulatory principles of their mandated peers.

*Keywords:* financial sector sustainability regulations, sustainable development, GCG, NSBP, ERM Guidelines, China, Nigeria, Bangladesh.

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## **Dedication**

I dedicate this thesis to my Late Mother, Mrs. Oyinade Adeyinka Oni, whose dream upon graduation from my first degree was to see me embark on graduate studies outside my home country but did not live to see it come to pass. May you continue to rest well.

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## 1.0 Background

### 1.1 Introduction

*“Banks are influential! with influence comes responsibility”* (Commercial International Bank (CIB) Egypt, 2014) - these are the words of Her Excellency Dr. Nadia Makram Ebeid<sup>1</sup>.

Banks play a pivotal role in shaping the rate of economic growth and income distribution in societies (Beck, Demirgüç-Kunt, & Levine, 2010). Financial institutions and financial markets of which banks are key actors possess and exercise the ability to have a strong impact on economies, societies and sustainable development (Helleiner, 2011; Mezher, Jamali, & Zreik, 2002; Scholtens, 2009; Scholtens, 2011; Weber, 2014) - a visionary development paradigm (Drexhage & Murphy, 2010) defined as the development that meets the need of the present generation without compromising the ability of the future generation to meet their own needs (Brundtland, 1987).

The influential role of banks can be observed in several ways:

Perhaps the most obvious, popular and explicit role is intermediation through which capital is channeled from the surplus segments of societies made up of depositors and investors to areas of deficit such as individuals, households, businesses, organizations and the public sector aiding economic growth. Referring to capital as being the major driving force for wealth creation

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<sup>1</sup> Her Excellency Dr. Nadia Makram Ebeid was Egypt’s first Minister of the Environment – a post she held for five years. She is a Board Member of Commercial International Bank (CIB) Egypt and Member of the CIB Foundation’s Board of Trustees. CIB Foundation is a leading supporter of Corporate Social Responsibility and pediatric health care in Egypt. At present, she is the Executive Director of the Center for Environment and Development for the Arab Region and Europe (CEDARE). At CIB, Ebeid has championed the bank’s role as one of Egypt’s leading advocates of Sustainability (CIB Egypt, 2014). She also got credit for the initiation of a \$100 million River Nile Pollution Prevention Program through which the Nile River has been declared free from polluted industrial wastewater discharge (Ecocity World Summit 2015 <http://www.ecocityworldsummit.com/component/content/article/9-speakers/128-ebeid>)

particularly in the last decades of the 20<sup>th</sup> century (Soppe, 2004), the impact of banks for such feat cannot be underestimated because they have been instrumental in allocating funds to the highest valued use in the economic system (Greenwood & Smith, 1997) and channeling capital to different markets, regions, sectors, projects (Weber, Diaz, & Schwegler, 2014), individuals and households.

Apart from the intermediary approach, banking operations are another avenue of influence particularly as it relates to sustainable development because the banking business entails the employment of both non-human and human resources which makes such institutions capable of contributing immensely to the triple-bottom line<sup>2</sup> in several ways. While banks are able to contribute to environmental sustainability through efficient use of resources such as energy, water, paper and adoption of newer technologies for resource conservation, they are also able to have tremendous imprint on social sustainability by encouraging gender equality and human right and economic sustainability through wages and salaries for employees as well as through the performance of civic duties by means of tax payments which support public expenditure.

According to Jeucken and Bouma (1999), banks play an important role in sustainable development and their intermediary role can be qualified as both qualitative and quantitative - while they foster sustainability by improving in-house environmental and social performance, they also do so by weighing risks and attaching prices to these risks through efficient credit approval system and also by developing sustainable products such as environmental or ethical investment funds as well as green or socially responsible funds (Weber, 2005).

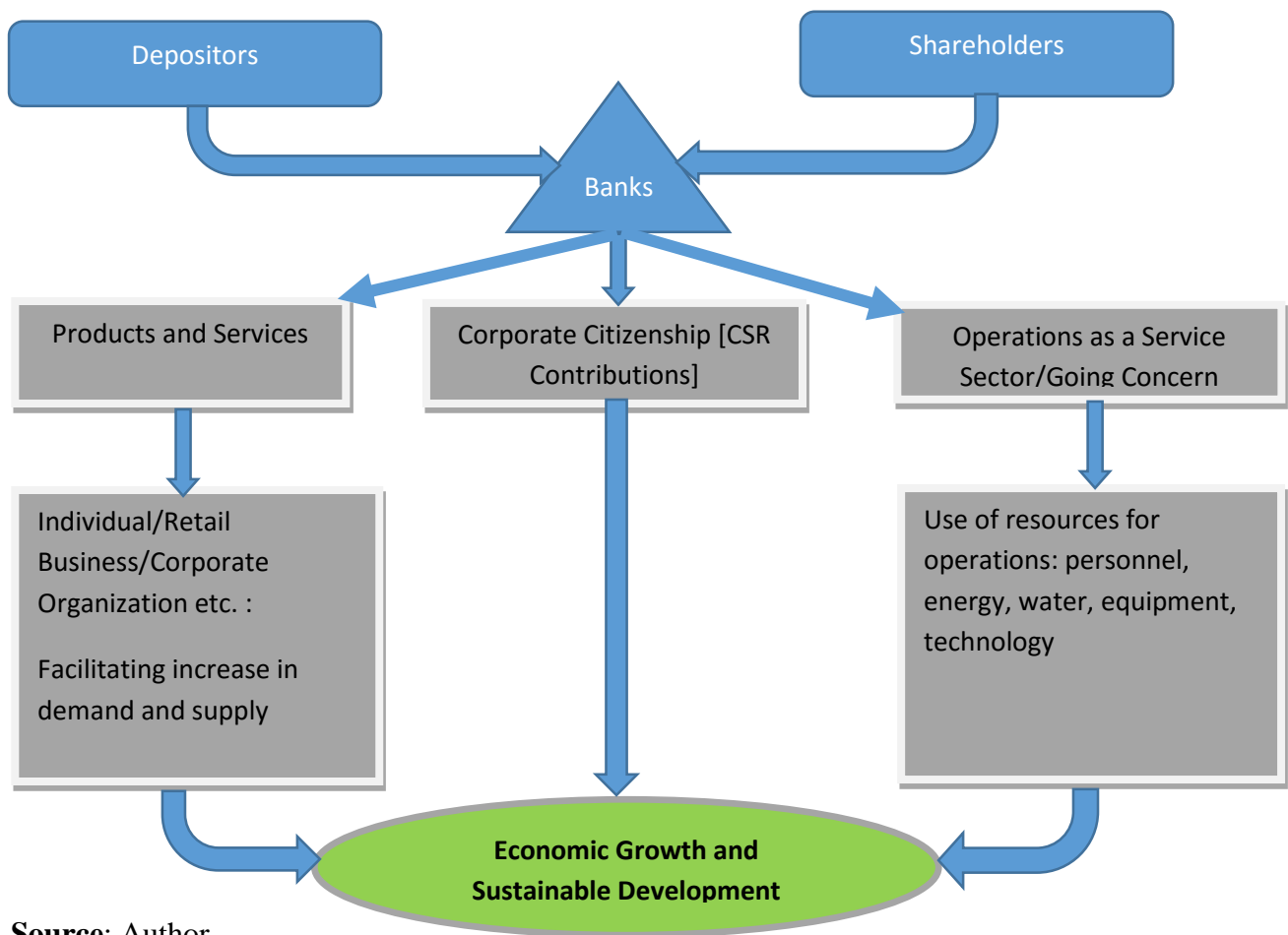
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<sup>2</sup> Triple Bottom Line: The idea that a business activity can simultaneously deliver financial, social and environmental benefits (Henriques & Richardson, 2013)

Also, by being corporate citizens, banks contribute significantly to sustainable development through corporate social responsibility (CSR)<sup>3</sup> thereby engaging in actions that augment other efforts for societal good.

These varying impacts through intermediation, business operations and CSR as shown in Figure 1 below are therefore pointers that banks are indeed influential.

Figure 1: Influence of Banks on Economic Growth and Sustainable Development



Source: Author

<sup>3</sup> McWilliams, Siegel and Wright (2006) define CSR as situations where the firm goes beyond compliance and engages in “actions that appear to further some social good, beyond the interests of the firm and that which is required by law”.

As depicted in Figure 1, funds received from the surplus parts of an economy made up of depositors or shareholders can be channeled to the deficit areas made up of individuals, retail or small scale businesses, or corporate organizations through available bank products and services to facilitate demand and supply of raw materials, goods and services. Furthermore, the management of human and non-human resources for operations and CSR efforts through contributions to different sectors of the economy such as health, education, security and many others reflect how banks can influence economic growth and sustainable development.

As a result of the potential of contributing to sustainable development, the influential role of banks is attracting interest from institutions and organizations such as the United Nations through the United Nations Environment Programme (Jeucken & Bouma, 1999), World Bank particularly through International Finance Corporation (IFC) – a member of the World Bank Group as well as governments particularly through their regulatory agencies chiefly the Central Banks. The interest of these bodies mainly lies in the design of a sustainable financial system to propagate policy options that will improve the financial system's effectiveness in mobilizing capital towards a green and inclusive economy (UNEP Inquiry, 2015) which by extension trends the path to sustainable development.

## **1.2 Matters Arising**

Inasmuch as capital provided by banks have aided economic growth, there seems to be a needed shift from capital to nature (Soppe, 2004) and the welfare of humans on the planet in being the dominant value driver of the present and future based on the negative impact to the environment



and society of accessibility and inaccessibility to banks' capital on one hand and banking operations on the other.

While the resultant economic growth based on accessibility to capital over time has been at a cost to the environment and society at large by means of pollutions and emissions from financed ventures, financial exclusion which brings about inaccessibility to capital has triggered social issues of poverty and insecurity (De Koker & Jentzsch, 2013) and perhaps worsened these issues particularly that of poverty which in itself is regarded as a major sustainable development challenge (Gandhi, 1972). On the other hand, the use of resources such as energy, water and paper in banks and for operations also impacts in no small way because banks often operate extensive network of branches hence have significant impact on carbon footprint<sup>4</sup> based on non-renewable energy consumptions as well as water footprint<sup>5</sup> based on enormous quantity of consumed water.

As a consequence of this reality, the financial sectors in few African, Asian and South American countries have come up with sustainability policies regulating or guiding the activities of banks within their territories. The countries are Nigeria and Kenya in Africa, China, Bangladesh, Indonesia, Mongolia and Vietnam in Asia, as well as Brazil, Peru and Colombia in South America (IFC, 2016).

This development is seen because banks are now being held accountable for the impacts of their activities particularly the effects of loans and investments in the society (Coulson, 2009) thereby

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<sup>4</sup> Developing its root from Ecological Footprinting, carbon footprint stands for a certain amount of gaseous emissions that are relevant to climate change and associated with human production or consumption activities (Wiedmann & Minx, 2008).

<sup>5</sup> Water footprint is an indicator of freshwater use that looks not only at direct water use of a consumer or producer, but also at the indirect water use (Aldaya, Chapagain, Hoekstra, & Mekonnen, 2012)

influencing the environmental behavior of businesses on one hand and on the other fostering sustainable development through inclusion (Klein & Mayer, 2011) based on available banking products and services as well as their activities in corporate social responsibility (Weber et al., 2014). These regulations also seek to address in-house resource consumption for positive contributions to sustainable development.

As it pertains to the effect of capital through which loans are created and investments are made, this development highlights the fact that money, corporately referred to as capital and made available by financial institutions of which banks are key players, acts as a corrective tool for better sustainability through the formulation of appropriate policies or regulations that govern its provision and flow. This aligns with the strategy of financing sustainable development (Sachs & Schmidt-Traub, 2014), equally addressed by these policies which shows how impactful the channeling of funds for sustainable causes can be rather than just for speculative, precautionary or transaction motives (Keynes, 1936).

However, despite the yet increasing levels of regulatory adoption of sustainability policies to govern financial sectors and foster sustainability within and outside territorial boundaries, there still seems to be a somewhat low participation in the formulation and enforcement of financial sector sustainability regulations (FSSR) among countries with attendant consequences of continuous environmental unsustainable development through pollutions of environmental resources (air, water, soil) and emissions resulting to climate change; and social unsustainable development through issues such as slave labor, both owing to projects financed by banks.

On the other hand, lack of access to capital and by extension the financial system has led to financial exclusion which has paved the way in aiding poverty and is closely associated to social

issues of insecurity caused by terrorism (De Koker & Jentzsch, 2013). This is because on one hand people outside the financial system who have been excluded due to high entry thresholds of affordability, eligibility and geographic barriers (ibid.) do not benefit from the products and services offered in the system and therefore do not gain access to resources capable of taking them out of poverty. In another dimension, funds used to finance terrorism can sometimes be channeled through informal financial settings by financially non-transparent people who do not appear under the radar of law enforcement agents and ultimately limits the number of transactions subject to Anti-Money Laundering and Combating Financing of Terrorism (AML/CFT).

All these culminate into moral or equity problems resulting into negative externalities borne by the society.

Financial institutions particularly banks are also not spared as they could face consequences for both internal and external environmental and social issues. While internal environmental and social sustainability issues could increase costs of operations and litigation costs respectively based on law cases against them by staff, external environmental issues leading to damage of collaterals used to secure credit facilities pose as a source of systematic credit risk (Frye et al., 2000; Weber, 2012) that goes a long way in affecting a bank's profitability and impacts heavily on investors owing to reduced return on investment (ROI)<sup>6</sup> due to increased provisioning for bad loans. External environmental and social issues can also lead to litigation and act as reputational risks to the bank. Invariably, all these consequences go a long way in affecting the financial bottom-line of banks.

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<sup>6</sup> Return on Investment (ROI) is a performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. ROI measures the amount of return on an investment relative to the investment's cost. (<http://www.investopedia.com/terms/r/returnoninvestment.asp>)

All these appear to confirm the words of Dr. Ebeid (CIB Egypt, 2014) that banks are indeed influential calling for a high degree of responsibility on their part for the furtherance of the sustainable development agenda and even for their survival as going concerns.

### **1.3 Significance and Contributions to Study**

Although several researches have ascertained the existence, key drivers and role of financial sector sustainability regulations, this research equally addresses such and goes beyond identifying country-specific financial sector sustainability regulations to investigating how such regulations have impacted the performance of banks with addressing the various sustainability criteria of the regulations.

This research therefore helps to establish whether these sustainability regulations are actually having the intended impact for which they were developed and, by so doing, helps to bridge the gap between ideas that “presence of regulations makes things work” and “what actually is” that is whether these regulations have actually had a positive impact on banks.

The ultimate aim is to identify if a relationship exists between sustainability regulations and performance of banks in addressing its principles and guidelines such that based on the existence of such relationship, more regulations to govern financial sectors can then be proposed and subsequently developed allowing for the amalgamation and contribution of the sector in the correction of anomalies, attainment of a green economy (Oyegunle and Weber, 2015) and efforts to achieve sustainable development.

This therefore implies that banks will be coerced into acting sustainably with benefits accruing to the banks, the environment and society at large based on implementation of sustainable strategies for operations and internal processes on one hand and influencing the business of their clients and financial inclusion through products and services on the other.

## **2.0 Literature Review and Theoretical Framework**

This chapter unveils both the literature review and the theoretical basis of this research.

### **2.1 Literature Review**

The literature review of this research presents the conventional objectives of financial sector regulations, the emerging interest of sustainability in the financial sector as well as supporting frameworks for sustainability in the financial sector. Also discussed in this section are the existing financial sector sustainability regulations (FSSR) that are considered for research in analyzing the performance of banks in complying to the regulations.

These coverage areas were engaged in order to perform an impactful and comprehensive literature review so as to recognize previous efforts in this field of study, the strengths and weaknesses of existing studies as well as their implications in order to advance knowledge through research which are preconditions of a good research (Boote & Beile, 2005). More so, the approach deployed and extent covered is to put the research into a scientific perspective and avoid duplication of effort (Dane, 1990).

#### **2.1.1 The Conventional Objectives of Financial Sector Regulations on Banks**

Kane (1997) explains regulations as consisting of rulemaking and enforcement while Spong (2000) refers to bank regulations as framework of laws and rules under which banks operate. But of what significance are bank regulations?

An insight into the justification of regulations for the financial sector can be explained based on altruistic public benefits notion which treats rules as governmental instruments for increasing fairness and efficiency across society as a whole (Kane, 1997).

With the rapid increase in set of laws that preside over all aspects of banking such as entry restrictions, capital requirements, reserve requirements, auditing and reporting requirements as well as restrictions on the type of assets banks are allowed to hold, banking can be said to be among the most heavily regulated industries in the world (Grossman, 2006). Apart from banks being highly regulated, significant levels of support have been clamored for the autonomy of central banks - a key financial sector regulator – so as to enable them pursue doggedly, through regulations, the objective of price-stability which is largely agreed to be an important factor contributing to long-run growth and prosperity (Downes & Vaez-Zadeh, 1991). Other regulatory objectives are provision of efficient and competitive financial system, maintenance of prudential guidelines and consumer protection for the maintenance of adequate banking services and the ultimate purpose of protecting insured depositors (Spong, 2000) from the collapse or failure of banks resulting from their mismanagement. These objectives are also for the maintenance of adequate banking services.

Therefore, with the protection of bank depositors who are made up of bank's internal and external clients on one hand, and the use of laws and policies to maintain price stability which helps to curb inflation and stimulate economic growth and development on the other hand, it can be accepted that financial sector regulations engender rules that govern a course of action, activities or processes of banks for the overall public good.

## 2.1.2 Financial Sector Sustainability – *An Emerging Interest*

Recently, financial sector regulations have gone past the fringes of maintaining price stability, ensuring adherence to prudential guidelines and specifically relating to banks - the provision of an efficient banking sector and are now addressing sustainability issues that hitherto had not been a major issue of consideration to the financial sector. In circumstances where financial institutions seriously considered these issues, it was as a result of “self-protection” from credit risks associated with sustainability issues on one hand and for increasing profitability through cost-cutting measures associated with imbuing a sustainable culture and using modern and efficient technologies that ensured reduction in resource consumption for operations on the other hand rather than for the overall public good.

This however marked the beginning of sustainable banking in the conventional financial sector which can be said to have evolved through different aspects as shown in Figure 2 below:

*Figure 2: Main Aspects of Sustainable Banking*



**Source:** Sustainable Banking – History and Current Developments (Weber, 2012:9)

As illustrated by Weber (2012), initial attempts of the financial sector in addressing sustainability challenges focused on managing environmental impacts of banks’ operations for the purpose of saving cost in the midst of increasing energy prices and dealing with waste and emissions on one hand for which environmental management and measurement systems in addition to



environmental reporting were introduced to reduce resource (energy and water) consumption and emissions. On the other hand, internal environmental management was implemented to boost corporate reputation and put them in the position as leading by examples. While the goal of cost savings was achieved through reduced energy cost of their buildings and offices, the attempt served as an avenue to present the business case of imbibing sustainable culture and strategies to potential clients and especially commercial borrowers (Weber, 2012). One may wonder that since this effort is “internal”, of what use is it to sustainable development? The assertion of Jeucken & Bouma (1999:26) nonetheless, that “*internally, banks are a relatively clean sector. The environmental burden of their energy, water and paper use is not comparable to many other sectors of the economy. However, the size of the banking sector overall is large enough to make the environmental impact significant*”, explains why such interest in internal environmental management is good for sustainability despite the motive not being for public good.

The aspect of internal environmental management was followed by environmental credit risk management. As suggested by Bauer and Hann (2010), legal, reputational and regulatory risks associated with environmental incidents owing to poor environmental practices can influence the credit standing of borrowing firms, and invariably, affect the asset performance of lenders (Weber, 2012). While such risks arising from environmental incidents can negatively impair the continuation of a client’s business resulting in credit default to the detriment of lenders, these lenders, in a bid to recoup their assets, may end up with reduced profits or losses in circumstances where assets pledged by borrowers as collaterals diminish in value owing to contaminations and in addition, clean-up costs for such pollutions (Weber, 2012). This led to the birth of better credit risk management.

Following the era of better credit risk management to protect assets was the emergence of socially responsible investments. Originally known as “ethical investments” and gaining recognition in the 1990s, socially responsible investment is referred to as an investment discipline or style that adds concerns about social or environmental issues to the normal ones of risk and return as determinants of equity portfolio construction or activity (Sparkes, 2008). It is also described as an investment process that considers the social and environmental consequences of investments, both positive and negative, within the context of rigorous financial analysis (Social Investment Forum, 2006). Such investments serve as platforms through which environmental and social issues are considered in the development of new products and services (Weber, 2012) and the modification of existing products and services to positively contribute to sustainable development. According to Statman (2007), screening, which accounts for 68 percent of the money in socially responsible mutual funds in 2005, is the most prevalent form of socially responsible investing followed by shareholder advocacy (26 percent), community investing (1 percent) and the remaining 5 percent being accounted for by a combination of screening and advocacy. Where negative screening entails the exclusion or reduction of portfolio weights of companies with weak environmental, social or governance records, positive screening increases the portfolio weights of companies with strong records. While shareholder advocacy involves actions by shareholders to encourage corporate social responsibility such as filing shareholder resolutions and voting on them, community investing directs capital to people and institutions underserved by traditional providers of financial services (Statman, 2007). As a result of the emergence and growth of socially responsible investments, markets have witnessed the appearance of several indices such as the Dow Jones Sustainability Index, FTSE4Good, the Jantzi Social Index, Hang Seng Corporate Sustainability

Index or STOXX Sustainability Indices for evaluating the sustainability performance of companies by ensuring that serious consideration is given to sustainability (Weber, 2012).

Carbon finance followed the period of socially responsible investments and was an offshoot of the Kyoto Protocol launched in 1997 (Weber, 2012) and represents a milestone in climate policy as negotiators laid out targets to reduce aggregate anthropogenic carbon dioxide emissions by at least 5 percent below 1990 levels in the commitment period 2008 – 2012 (Manne & Richels, 2000). The 1997 treaty which became effective February 2005 led to the creation of two mechanisms – Joint implementation and the Clean Development Mechanism (CDM) to encourage investments in projects that reduce carbon emissions in industrialized and developing countries respectively (Labatt & White, 2011). According to Labatt and White (2011) and Weber (2012), this interest in carbon finance has brought about the development of financial products and services targeted at CO<sub>2</sub> reductions, and through these mechanisms, based on a McKinsey study, market value of carbon trades which was estimated as \$85 billion in 2007 could have a trading volume of \$2.6 trillion by 2020 (Twining, 2008).

Sequel to carbon finance is the phase of impact investing which is related to, and probably developed its root from the concept of socially responsible investing (SRI). However, as reported by Simon and Barmeier (2010), impact investments deal with business models that are for-profit which will generate impacts beyond the financial bottom-line if successful. In other words, such investments help to solve social or environmental problems while generating financial returns (Bugg-Levine & Emerson, 2011). According to the 2014 report on US Sustainable, Responsible and Impact Investing Trends, the market of business models encompassing sustainable, responsible and impact investing has increased tenfold from below \$1 trillion in 1995 to \$6.57 trillion by 2014 (US SIF, 2014). With increasing awareness of global sustainability issues as

evidenced by the adoption of Sustainable Development Goals in September 2015 to replace the millennium development goals at its expiration after being operational for fifteen years, and the Paris Climate Change Conference from November to December 2015, it can be deduced that more of such investment models encompassing the broad spectrum of sustainable, responsible and impact investments will be deployed to resolving several environmental, social and economic sustainability issues with the financial sector playing a key role as provider of funds to finance sustainable development.

So far, these main aspects of sustainability interest in the financial sector as reported by Weber (2012) can be said to be supported by two frameworks: the first being abiding by voluntary codes and the second - adherence to guidelines and mandatory principles of country-specific financial sector sustainability regulations.

### **2.1.3 Supporting Frameworks for Sustainability in the Financial Sector**

The works of Weber and Adeniyi (2015), Oyegunle and Weber (2015) as well as Weber and Oni (2015) illustrate the two basic frameworks that have supported financial sector interest in sustainable development. While Weber and Adeniyi (2015) entailed analysis of voluntary sustainability codes of conduct in the financial sector, Oyegunle and Weber (2015) and Weber and Oni (2015) focused on mandatory financial sector sustainability regulations on banks.

Weber and Adeniyi (2015) describe “voluntary” sustainability codes of conduct which are also referred to as soft laws (Watchman, Delfino, & Addison, 2007) as guidelines adopted by corporations on their own in order to address issues around corporate sustainability. The major financial sector voluntary sustainability codes of conduct addressed in the analysis carried out by

Weber and Adeniyi (2015) are the United Nations Environment Programme Finance Initiative (UNEP FI) launched in 1992, the Equator Principles (EP) launched in 2003, the United Nations Principles for Responsible Investment (UNPRI) launched in 2006, the Global Alliance for Banking on Values (GABV) founded in 2009 and the Impact Reporting and Investment Standards (IRIS) by the Global Impact Investing Network which was launched also in 2009. Indeed, as shown by studies, these codes of conduct have been pivotal in the appearance of companies that have embraced them in top CSR ranking systems for corporate citizenship, sustainability, ethical behavior and public perception (Erwin, 2011). Also, it is viewed that the adoption of these codes of conduct can also mount pressure on other sector players to adopt same practices (Lubin & Esty, 2010). However, as stated by Weber and Adeniyi (2015) that these major financial sector voluntary sustainability codes of conduct are able to integrate formerly separated issues such as finance, environment and sustainable development, their analysis of these codes of conduct reveals interesting key findings stated as follows:

1. Enforcement of these codes of conduct presents a major challenge which is attributed to the absence of independent bodies playing an oversight role on the codes.
2. It appears focus of these codes of conduct lies in the business case of sustainability and not the impact of the codes on sustainability (sustainability case for business) as emphasis lie in better management of sustainability risks in lending and investing.
3. The non-mandatory structure makes these codes of conduct compromises that many financial institutions can agree to.

Based on these findings, this research therefore builds on the works of Weber and Oni (2015) and Oyegunle and Weber (2015) which focus on the second framework - mandatory financial sector

sustainability regulations and its impacts on banks to determine how effective such regulations are in influencing the performance of banks in addressing several sustainability issues.

#### **2.1.4 Existing Financial Sector Sustainability Regulations**

There are several viewpoints in support of regulatory frameworks for achieving sustainable development although not without opinions in contrast to mandatory mechanisms.

Addressing banking regulation holistically, Wallison (2005) identified instances where banking as well as savings and loans industries which he described as being two of the most heavily regulated industries became highly unstable when economic conditions were unfavourable. This instability was attributed to paucity or decrease in market discipline — *“the loss of the wariness and skepticism that investors should feel when they commit funds to an enterprise—because of government regulatory policies”*. *In the case of regulated depository institutions, those policies communicated a general sense to investors that government regulation was seeing to the safety and soundness of the enterprises, and thus that the usual risks of investment and the usual need for monitoring were much reduced”* (Wallison, 2005:14).

Although the above explanation does not specifically address the issue of sustainable development, it holds water as a likely-effect of a regulatory framework. Therefore, relating this notion to the discuss on financial sector sustainability regulation, this idea implies that regulators may, on the knowledge that regulations have been put in place, rest on their oars and watch till things go awry.

Also, it can be deduced that regulations can be “hard” and “costly”. This is because regulations entail formulation, approval process, dissemination, amendments and audits which can be resource

consuming particularly as it relates to manpower, time and cost of implementation. This differs from voluntary codes that are compromises which financial institutions can agree to which are capable of guaranteeing a high number of signatories because of the inherent characteristic of their “softness” thereby incentivizing adoption and performance (Weber and Adeniyi, 2015).

Another striking opinion against regulations, as upheld by economists and regulators, is the propensity of regulations to stall economic growth (Lanoie, 2014). Pertaining to the financial sector, this can manifest in two folds. Firstly, restrictions or reductions on activities or processes which hitherto had fostered effective operations. Secondly, certain economic activities can be impeded indirectly through the role of financial institutions as intermediaries that can channel funds out of polluting, non-green, non-socially inclusive economic sectors to greener ones. This contrary opinion is however still subject to much debate since one can argue that all aspects of knowledge and therefore of business, innovation and technology have not been fully harnessed which can help in the transition from a non-green to a green economy.

Nevertheless, there have been viewpoints in favour of regulatory mechanisms.

Regulations can result from conscious policy choices in a country’s broader economic, legal and other institutional underpinnings which as claimed by Esty and Porter (2001) supports environmental performance. Hopwood, Mellor, & O’Brien (2005) further stated that absence of regulation could imply maintenance of status quo which has a weak commitment to environmental sustainability.

Also, Van Gelder and Stichele (2011) proposed the use of financial regulation for incentivizing banks in order for them to integrate sustainability criteria in their risk assessment and decision making process by arguing that such incorporation will contribute to fulfilling all objectives of the

different areas of financial regulation such as prudential, conduct of business as well as systemic regulation and by so doing strengthen financial soundness, improve systemic financial stability whilst contributing to a more ecologically sustainable just and peaceful world which by extension is synonymous with the view of Weber, Scholz & Michalik (2010) concerning integrating sustainability criteria into credit risk management which helps with improved risk prediction and can subsequently alter the channeling of capital to projects with high sustainability risks thereby contributing to sustainable development.

Furthermore on the backdrop of neglected environmental issues by financial officials, the opinion that policy makers would serve the goals of both financial stability and environmental sustainability by seizing the reform moment of the financial crisis to “green” international financial regulations can be credited to Helleiner & Thistlethwaite (2009). This statement does seem to imply the enormous power in the coffers of policy makers who can, as synonymous to the current standards in the financial sector, seek to incorporate sustainability principles for better sustainability performance in the sector.

Also, according to IFC (2015, n.p.n<sup>7</sup>) *“to effectively shift to sustainable banking practices, banks require an enabling regulatory context that ensures a level playing field and provides the right economic incentives”*.

It is therefore pertinent to identify the financial sector sustainability regulations and investigate the effects so far on the performance of the banking sector in addressing issues pertaining to sustainable development. Although, addressing sustainability issues by way of reporting differs from actual sustainability performance as it may be an act of greenwashing when there are no

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<sup>7</sup> No page number



enforcement mechanisms in place to guarantee compliance, reporting in itself connotes awareness of issues or concerns which is capable of driving performance over time.

Sustainability regulations governing financial sectors have been pioneered for the development of requisite regulatory guidance which focus on more effective management of environmental and social risks in lending and support for businesses that are greener, climate friendly and socially inclusive (IFC, 2015). These regulations have been established majorly in developing and emerging economies with the earliest ones from China which was introduced in 2007, Bangladesh developed in 2011, Brazil which was issued in 2008 and 2009 for public and private banks respectively as well as Colombia and Nigeria, both developed in 2012 (IFC, 2016). Other financial sector sustainability regulations are those of Indonesia and Mongolia developed in 2014 and the latest ones from Peru, Vietnam and Kenya, all developed in 2015. According to Oyegunle and Weber (2015), these regulations have all been developed to cater for country-specific sustainability issues, although through the Sustainable Banking Network (SBN) - an informal and exclusive group of banking regulators and associations that are interested in sustainable banking policies, guidelines and practices which was formally launched in 2012, collective learning is facilitated among its members who are supported in policy development to create drivers for sustainable finance practices (IFC, 2015).

Of the ten established financial sector sustainability regulations, focus lies on the regulations of China, Nigeria and Bangladesh. This is because 2012 marked the year in which the three countries established “mandatory” sustainability guidelines or principles for their financial sectors which are the Chinese Green Credit Guidelines (GCGs), Nigerian Sustainable Banking Principles (NSBPs) and the Bangladeshi Environmental Risk Management (ERM) Guidelines making them the earliest regulations and as such are expected to have greater impact than the voluntary guidelines

established same period or the recently established regulations. It is however worthy to note that the Chinese Green Credit Policy and Bangladeshi Environmental Risk Management Guidelines have been in existence since 2007 and 2011 respectively before the development of the GCGs and establishment of the Bangladeshi ERM Guidelines as mandatory in 2012.

#### **2.1.4.1 Chinese Green Credit Guidelines (GCGs)**

Adapted from the works of Weber and Oni (2015).<sup>8</sup>

In 2007, China, the world's second-biggest economy, introduced policies for integrating environmental issues into financial decision making (Bai, Faure, & Liu, 2014) which led to the development of the Green Credit Guidelines in 2012. The introduction of these guidelines has achieved international recognition (Zadek and Robins, 2015) and opened the discussion over whether sustainability issues should be integrated into financial sector regulations. Oversight functions on the green credit policy which started in 2007 is carried out by three agencies: the Ministry of Environmental Protection, the People's Bank of China, and the China Banking Regulatory Commission (CBRC) (Aizawa & Yang, 2010). A crucial theme of the program requires the restriction of loans by banks to heavily polluting industries and offer adjusted interest rates depending on the environmental performance of the borrowers' sectors. For instance, pollution control facilities, borrowers involved in environmental protection and infrastructure, renewable energy, circular economics and environmentally friendly agriculture qualify for loans with lower

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<sup>8</sup> Weber, O., & Oni, O. (2015). The Impact of Financial Sector Sustainability Regulations on Banks. CIGI Papers No. 77. Waterloo, ON: CIGI. [www.cigionline.org/publications/impact-of-financial-sector-sustainabilityregulations-banks](http://www.cigionline.org/publications/impact-of-financial-sector-sustainabilityregulations-banks)

interest rates (Zhao & Xu, 2012). The regulation even asks lenders to limit loans to polluting industries and to withdraw loans that were already provided if environmental controversies or instances of non-compliance occur (Jin & Mengqi, 2011). Furthermore, the interest rates for polluting industries have to be higher than for non-polluting borrowers. A consequence of the program has been that, since 2007, Chinese banks have been introducing environmental policies (Chan-Fishel, 2007) strategies and assessment systems to evaluate credit clients.

Whether the program has been implemented successfully and has been contributing to environmental improvements as well as to a low carbon economy, however, has been the subject of controversy (Jiguang & Zhiqun, 2011; Zhang, Yang, & Bi, 2011). Zhao and Xu (2012) report that the Industrial and Commercial Bank of China – the biggest of the banks by assets, for instance, has 68,000 borrowers that are qualified as environmentally friendly clients with a total loan sum of US\$760 billion. In order to support banks in implementing the program and overcoming difficulties in assessing environmental information from clients, the CBRC issued green credit guidelines in 2012 .

It must be emphasized, however, that not only the CBRC contributed to greener and sustainable banking. Many local and regional governments also introduced regulations to support green banking (Jiguang & Zhiqun, 2011) although local governments sometimes still support polluting industries because of economic benefits (Jin & Mengqi, 2011). Although the name of the guidelines suggests they focus on environmental issues, they in fact address both environmental and social aspects of lending. Similar to the Nigerian and Bangladeshi guidelines, they focus on policies and practices that are not easy to monitor. Consequently, in 2013, the CBRC issued a notice on the submission of the green credit statistics form (CBRC, 2013) and published key

performance indicators, enabling the commission to supervise the compliance with the guidelines in 2014.

The key performance indicators can be found in Appendix 2 however the GCGs are grouped under seven chapters as follows:

- Chapter One – General Rules
- Chapter Two – Organizational Structure: Roles and Responsibilities
- Chapter Three – Policies and Capacity Building
- Chapter Four – Lending Process Management
- Chapter Five – Internal Management and Information Disclosure
- Chapter Six – Supervision and Inspection
- Chapter Seven – Supplementary Provisions

The GCGs are detailed in Appendix 1 (CBRC, 2012).

#### **2.1.4.2 Nigerian Sustainability Banking Principles (NSBPs)**

Adapted from the works of Weber and Oni (2015).

The NSBPs consist of nine principles that cover environmental and social (E&S) risk management, E&S footprint, human rights, women’s economic empowerment, financial inclusion, E&S governance, capacity building, collaborative partnerships and reporting. Nigeria’s central bank mandated full adoption and implementation of these principles and guidelines by the financial institutions, and offers incentives for compliance. It also requires a quarterly report of progress from all banks, with the expectation that Nigerian banks will have implemented and integrated the

principles by December 2015 at the latest. The guidelines had been developed as voluntary standards by Nigerian banks. The reason for the development of the NSBP was to guarantee access to foreign investments for Nigerian banks, because financial institutions, such as the Netherlands Development Finance Company (FMO), require information about how sustainability is addressed by their investees. Later, the banks asked the Central Bank of Nigeria to regulate the guidelines in order to guarantee enforcement and compliance. This is in contrast to the Chinese and Bangladeshi approach that followed a top-down process and implemented regulations that had to be accepted by banks. While the Nigerian approach was driven by the interests of the banks, the Chinese and Bangladeshi approach focused mainly on the impacts banks could have on environmental and social sustainability in their home country.

The Central Bank of Nigeria's (2012) nine sustainability principles are:

- Principle 1 — Our Business Activities' Environmental and Social Risk Management: "We will integrate environmental and social considerations into decision-making processes relating to our Business Activities to avoid, minimize or offset negative impacts."
- Principle 2 — Our Business Operations' Environmental and Social Footprint: "We will avoid, minimize or offset the negative impacts of our Business Operations on the environment and local communities in which we operate and, where possible, promote positive impacts."
- Principle 3 — Human Rights: "We will respect human rights in our Business Operations and Business Activities."
- Principle 4 — Women's Economic Empowerment: "We will promote women's economic empowerment through a gender inclusive workplace culture in our Business Operations"

and seek to provide products and services designed specifically for women through our Business Activities.”

- Principle 5 — Financial Inclusion: “We will promote financial inclusion, seeking to provide financial services to individuals and communities that traditionally have had limited or no access to the formal financial sector.”
- Principle 6 — E&S Governance: “We will implement robust and transparent E&S governance practices in our respective institutions and assess the E&S governance practices of our clients.”
- Principle 7 — Capacity Building: “We will develop individual institutional and sector capacity necessary to identify, assess and manage the environmental and social risks and opportunities associated with our Business Activities and Business Operations.”
- Principle 8 — Collaborative Partnerships: “We will collaborate across the sector and leverage international partnerships to accelerate our collective progress and move the sector as one, ensuring our approach is consistent with international standards and Nigerian development needs.”
- Principle 9 — Reporting: “We will regularly review and report on our progress in meeting these Principles at the individual institution and sector level.”

The NSPBs address both social and environmental issues of banking. However, they mainly state that banks will develop policies, practices, and products and services to address the various sustainability issues. In particular, outcomes of the NSBP are not defined. Therefore, it is not easy to enforce the guidelines and to supervise compliance. Consequently, criteria have to be developed that enable the central regulator to enforce the guidelines.

### **2.1.4.3 Bangladeshi Environmental Risk Management (ERM) Guidelines**

Adapted from the works of Weber and Oni (2015).

The ERM Guidelines - Bangladesh's environmental and social guideline for banks, were formulated and introduced at the end of 2011 by Bangladesh Bank, the country's central bank, with the support of its local banks and other international and local stakeholders. The mandatory guidelines were however launched in 2012 (IFC, 2016) as Environmental Risk Management (ERM) techniques and procedures became increasingly important globally with stakeholders particularly communities, customers and shareholders being increasingly aware of environmental issues (Bangladesh Bank, 2011) as well as social risks (IFC, 2014). The guidelines mandate banks to train their staff and raise their awareness on E&S issues, formulate their own E&S risk management framework, introduce sector-specific policies and start reporting on E&S issues. The policy includes the classification of investments into high-, medium- and low-risk categories and division into sector-specific aspects to complement the general due diligence guidelines. It also focuses on strengthening the banks' ability to evaluate environmental risks as part of lending and investment activities (Islam & Das, 2013). The guidelines were established as a minimum standard on what banks and other financial institutions should do in terms of environmental risk management. The main goals are to protect the banks' financing from the risks of a deteriorating environment and ensure sustainable banking practices (Bangladesh Bank, 2011). In addition, the policy aims at ensuring that a level playing field is maintained in the financial sector in Bangladesh. It also allows that banks and other financial institutions can go beyond the guidelines. It is based on the Environment Conservation Act established by the Department of Environment in 1995, the

Environment Conservation Rules from 1997 and the Circular on Environmental Compliance (BRPD<sup>9</sup> Circular. No 12, 1997) by Bangladesh Bank (Ahmed, 2012).

The ERM guidelines are structured in three phases:

- Phase 1, issued in December 2011, asked for the formulation of policies on general environmental policy formulation and governance; incorporation of environmental risk in credit risk management; initiating in-house environment management; introducing green finance; creation of climate risk fund; introducing green marketing; online banking; supporting employee training, consumer awareness and green events; and reporting green banking practices.
- Phase 2 from December 2012 asked for the implementation of: sector-specific environmental policies; green strategic planning; setting up green branches; improved in-house environment management; formulation of bank-specific environmental risk management plan and guidelines; rigorous programs to educate clients; and disclosure and reporting of green banking activities.
- Phase 3 (The final phase) from December 2013, asked for policies on: designing and introducing innovative products; and reporting in standard format with external verification.

Similar to the Chinese green credit policy, the ERM Guidelines focus on green finance. However, they focus on green products and services instead of regulations to reduce loans to polluting industries and to increase lending to green industries.

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<sup>9</sup> Banking Regulations and Policy Department



Therefore, identifying that these financial sector sustainability regulations were developed through mandates by institutional regulators and influencers for the purpose of “greening” financial sectors, this research aligns with the institutional theoretical framework which among other reasons explains that establishments behave similarly because they react to institutional pressure.

## **2.2 Theoretical Framework**

The theory discussed in this section suggests to be relevant in explaining the reason why mandatory guidelines are existent in order to address the financial sector’s growing interest in sustainability-related issues.

### **2.2.1 Institutional Theory**

Since its emergence in the 1970s particularly through Meyer and Rowan’s (1977) model article publication, there have been proliferations of organizational analyses based on institutional theory with investigated works in the field covering a wide range of phenomena (Tolbert & Zucker, 1999). The theory has become vibrant over time and has risen to prominence as a popular and powerful explanation for both individual and organizational action (Dacin, Goodstein, & Scott, 2002) emphasizing the dependence of modern organizations on their environments (Meyer, 2008). According to Kostova, Roth & Dacin (2008), the theory provides a rich theoretical foundation for examining a wide range of critical issues, allows for multiple levels of analysis and can be fundamentally applied in international management literature to: conceptualize national

environments in terms of regulatory, cognitive and normative pillars which introduces important constructs such as country institutional profile; and conceptualize processes of large-scale transformation of national systems through the notions of institutional transition, upheaval and imperfection among many other applications however for the purpose of this research, its applicability will be based on the considerations stated above.

Institutional theory considers the processes of institutionalization by which structures, including schemes, rules, norms, and routines, become established as authoritative guidelines for social behavior (Scott, 2004). Referring to Meyer and Rowan (1977), institutionalization involves the process by which social processes obligations, or actualities take on a “rule-like” status in social thought and action. The concept of institutionalization brings up the issue of structures which aligns to several prevailing theories that assume the coordination and control of activities as key dimensions for the success of formal organizations in the modern world with the other reason for structures being its institutional legitimacy as structural ideas are embedded in societal values because many programs and policies are enforced by public opinion, knowledge “legitimated through educational system”, social prestige, laws, and many others. As a result, they stated that the use of institutional structures display responsibility and avoids claims of negligence. This is vital with regards to regulations as non-adherence to stated rules reflects irresponsibility which could bring about some form of disciplinary actions or sanctions.

As reflected by Bansal (2002), issues are valued by societal actors when they are institutionalized highlighting that firms are more likely to respond to institutionalized issues and actions because of their pervasiveness due to continuous reinforcements by societal and organizational actors. By extension, these firms are also bolstered to adapting regulations under a coercive structure particularly to avoid sanctions where punitive measures are put in place.

According to Meyer (2008), most institutional theories see local actors – whether individuals, organizations, or national states – as affected by institutions built up in much wider environments. These theories range from realist institutional theories to social organizational version of sociological institutionalism and subsequently to a phenomenological version of such. Arising from economics with actors such as individuals or organizations acting in market-like environments and political science with sovereign national-states as actors, Realist Institutionalism involves the notion that some essential institutional principle must be in place before systems of actors can effectively operate. The social organization version of the Sociological Institutionalism on the other hand highlights that actors are significantly empowered and governed by institutional contexts, and that these contexts go far beyond a few norms or network structures while the phenomenological version illustrates actors of present-day societies as not merely influenced by the wider environment but as constructed in and by it.

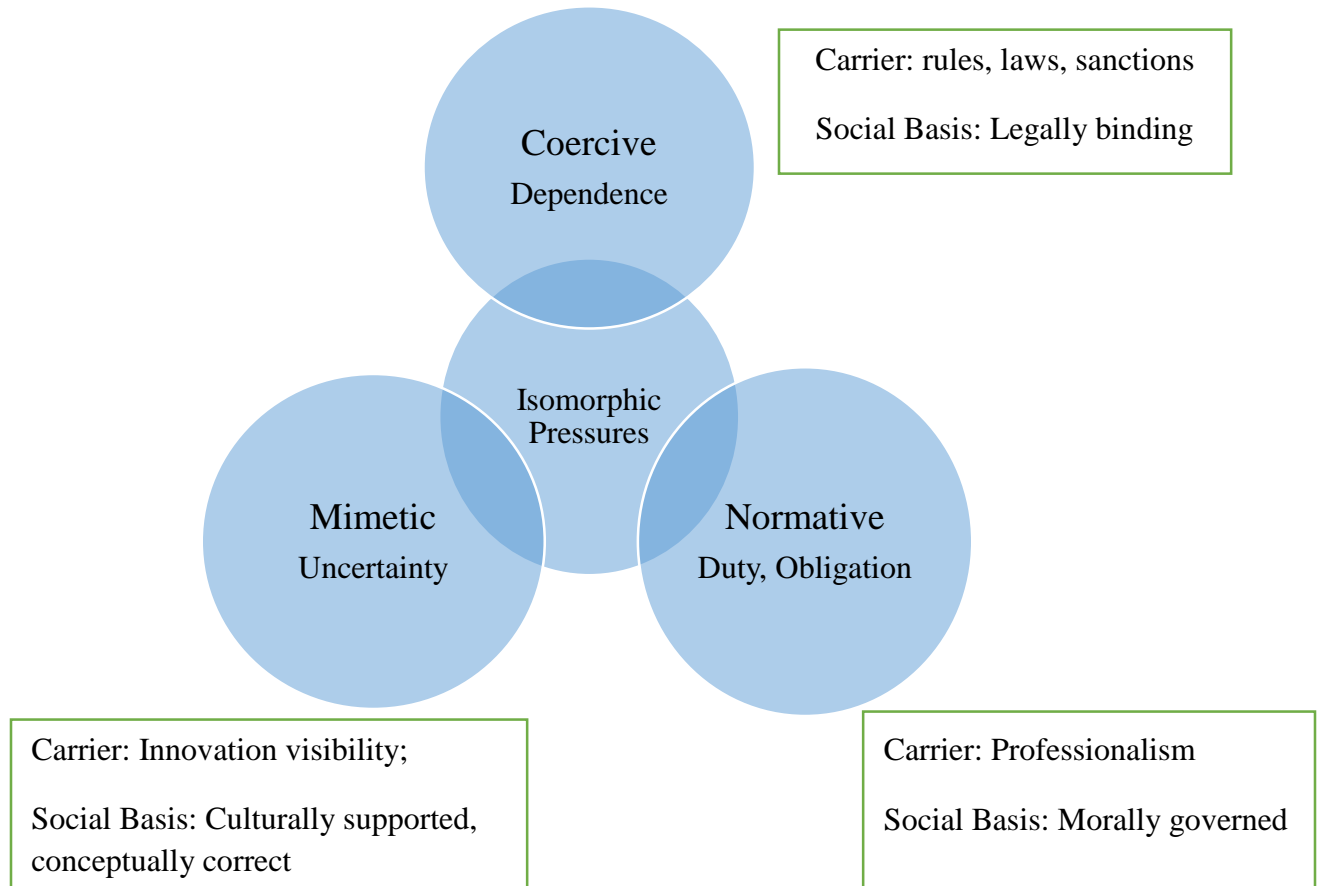
Also, institutional theory stresses institutional isomorphism<sup>10</sup> which is capable of making key actors behave alike as they adhere to rules and belief systems in any prevailing institutional environment (DiMaggio & Powell, 1983; Meyer & Rowan, 1977) thereby earning them legitimacy and aiding their survival.

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<sup>10</sup> Institutional Isomorphism occurs when an institution has to respond to various external pressures

According to DiMaggio & Powell (1983), the isomorphic pressures are illustrated in the figure below:

*Figure 3: Isomorphic Pressures*



**Source:** DiMaggio and Powell (1983)

According to Figure 3, coercive isomorphic pressures explain that actors or institutions behave alike in response to mandates or rules being put in place by organizations or external forces in which they are dependent upon. In other dimensions, while mimetic isomorphic pressures occur when uncertainty within an institutional environment brings about imitation thereby making actors behave similar to one another, normative pressures connote the influence people of same educational backgrounds, professions or inter-hiring between existing industrial firms can have in

making organizations behave similar. However, pertaining to this research, focus lie on coercive processes in which it is believed that institutions should act alike i.e. perform in addressing various sustainability criteria in response to the external influence exerted by regulators through formulation of the regulations.

The institutional theory therefore serves as the theoretical backbone for the financial sector sustainability regulations being researched for the following reasons:

- The institutional theory considers institutionalization of issues which is of value to social actors (Bansal, 2002) and is capable of driving performance as these actors react to the pressure of institutionalization
- Requirements under institutionalization take on a “rule-like” status (Meyer & Rowan, 1977) and so are the financial sector sustainability regulations of China, Nigeria and Bangladesh
- The institutional theory examines the procedures by which structures, including schemes, rules, norms, and routines, become established as authoritative guidelines for social behavior (Scott, 2004). The Chinese GCGs, NSBPs and the Bangladesh ERM Guidelines can be said to be authoritative or coercive in nature so as to produce the institutional pressure needed to influence the institutional environment thereby increasing the homogeneity of financial institutions with respect to better sustainability performance. As stated by Tolbert & Zucker (1983) based on an appraisal of adoption rate of civil service reforms by cities in the United States from 1880-1935, the rate at which a policy or program is embraced is importantly determined by the magnitude to which the measure is institutionalized whether by law or by gradual legitimation.

- Essential institutional principle must be in place before systems of actors can effectively operate (Meyer, 2008)
- Inasmuch as the discuss on sustainability is very essential, it must also be understood that the banking business, just like other businesses, equally thrives on profitability. The institutional approach therefore seems to have the capability of driving this cause better than other theoretical frameworks particularly the stakeholder approach because the interests of all stakeholders are of intrinsic value (Donaldson & Preston, 1995) implying that stakeholders whether community, non-governmental organizations, suppliers, or any other group will mainly consider issues of self-interest rather than those of other equally important stakeholders such as investors whose goals are for maximum return on investments. The institutional approach therefore suggests to be easier for amalgamation and balancing of interests.

As the institutional theory and proponents of regulatory frameworks suggest, having regulations in place should ensure better performance and this presents the gap of this study as the effect of financial sector sustainability regulations on banks and even the financial sector as a whole is yet to be uncovered. The onus is therefore on researchers to proffer answers to the missing link. The need to identify these impacts so as to contribute to research is therefore the basis for the research objective, questions and hypotheses.

### **3.0 Research Objective, Questions and Hypotheses**

#### **3.1 Research Objective**

With the identified gap through literature and the theoretical framework being the absence of how effective financial sector sustainability regulations particularly the Chinese GCGs, NSBPs and ERM guidelines have been over time despite several notions that these regulations should influence performance, the objective of this study is to identify the effects of all these regulations by examining the performance of banks in addressing the various sustainability criteria identified by the regulations and comparing such to that of banks in peer-countries that are not bound by any regulation.

#### **3.2 Research Questions**

Founded on the above discussed objective, this research explores one key question:

- What is the effect of sustainability regulations on the sustainability performance of banks?

This major question of inquiry is examined on the following germane sub-questions as follows:

1. What is the performance over time of banks in regulated countries in addressing the principles of their country-specific regulation and those in non-regulated countries based on the principles adopted by their mandated peers?
2. Do banks in countries with sustainability regulations perform better in addressing sustainability related issues than their peers in similar countries who are not bound by any form of coercive structure?

### **3.3 Research Hypotheses**

In order to provide answers to the research questions and confirm analytical findings, statistical tests were carried out on the following hypothetical statements which are stated as follows:

#### Hypothesis One

After the implementation of a sustainability regulation, banks significantly addressed more sustainability issues than before.

#### Hypothesis Two

Banks under sustainability regulations address more sustainability issues than banks that are not regulated.

While the following “methodology and samples” section defines how investigations were carried out, the “data presentation and analysis” section shows findings which help to answer research questions, make decisions on stated hypotheses and further discussions thereby contributing to research on the impact of financial sector sustainability regulations on banks.



## **4.0 Methodology, Samples and Limitations of Study**

This section details the methodology engaged in this study and includes the presentation of samples.

### **4.1 Research Methodology**

The research adopts a quantitative approach as it centers on the need to confirm and test theory by examining relationships among variables (Creswell, 2013) because it is founded on the need to investigate the relationship between financial sector sustainability regulations and performance of banks in addressing related principles which depicts a deterministic philosophy in which causes (the regulations) probably determine outcomes (performance).

Featured in this section are the underlying fundamentals of this research such as peer-country identification, identification of samples, objects of study, reference period, measure of performance in addressing country-specific financial sector sustainability regulation as well as data collation and analysis.

#### **4.1.1 Peer-Country Identification**

While this research seeks to investigate the performance of banks in countries that have established financial sector sustainability regulations and how its respective principles are addressed, it also examines the performance of banks in similar countries that have no such regulations using the principles of their peer countries that are mandated to comply as indicators for measurement.

The gross domestic product (GDP) was used as the indicator for selecting peer-countries as it is still regarded as the most important measure of the situation and evolution of a national economy (Student, 2014). Although often regarded as non-holistic in measuring economic success, it still represents an essential bottom line: how much a market economy produces, and what it is worth which justifies its special status as an economic indicator of performance (Boyd, 2007). It is on this note that countries in the same geographic region as Bangladesh, China and Nigeria whose GDPs closely follow in numeric order were selected for comparison. Since Bangladesh and China are both Asian countries, further regional classification was carried out for country-selection purpose. This brought about the South Asian region for Bangladesh and the East Asian region for China. According to World Bank GDP ranking (2015), Bangladesh, China and Nigeria have GDPs of approximately USD 0.17 trillion, USD 10.35 trillion and USD 0.57 trillion respectively. In South Asia, Pakistan has GDP closest to that of Bangladesh at USD 0.24 trillion while Japan has GDP of USD 4.60 trillion which is closest to that of China in East Asia.

Although the South African economy with GDP of approximately USD 0.35 trillion is second largest after Nigeria's in the African continent, since March 2010, the Johannesburg Stock Exchange, following a King Report on Governance for South Africa 2009 (King III) to maintain South Africa's leadership in standards and practices for corporate governance has been requiring companies to submit integrated reports which reflects a company's financial and non-financial – environmental, social, and governance (ESG) – performance (Eccles & Saltzman, 2011). Therefore, with such sustainability framework in place in South Africa, Egypt was selected to be compared with Nigeria being next in line as third biggest economy in Africa with GDP of approximately USD 0.29 trillion (World Bank, 2015).

Thus, performance of banks in Pakistan, Japan and Egypt were compared with the performance of their counterparts in Bangladesh, China and Nigeria respectively that had financial sector sustainability regulations in place.

#### **4.1.2 Sample Identification**

For the purpose of this research, the top ten (10) largest banks in terms of total assets from countries with sustainability regulations (Bangladesh, China and Nigeria) and selected peers (Pakistan, Japan and Egypt) respectively were used as samples in this research.

Bank assets as key financial accounting indicator were engaged in identifying samples for this study because as apparent in balance sheets, it constitutes several items particularly loans and advances through which it supports businesses as well as tangible assets such as properties that aid bank expansion and subsequently, its influence on an economy as well as sustainable development.

For Bangladesh, Egypt, Nigeria and Pakistan, banks were identified from their respective Central Bank's list of licensed banks with further ranking by total assets based on last financial year (2014) report to identify the top ten. However, a Banks around the World (2015) ranking of top Chinese and Japanese banks by total assets was used in identifying the top ten banks for both China and Japan.

Therefore, by selecting 10 banks from each country, research was carried out on the performance of sixty (60) banks in addressing various criteria in sustainability regulations.

### **4.1.3 Object of Study**

This research entailed identifying the performance of banks in addressing principles of respective sustainability regulations from banks' published annual reports. Where available, standalone sustainability and corporate social responsibility reports were also consulted.

### **4.1.4 The Reference Period**

The performance of banks is examined over a five-year period from 2010 to 2014. Despite the earlier development of the Chinese Green Credit Guidelines in 2007 and the Bangladeshi Environmental Risk Management (ERM) Guidelines in 2011, both regulations in addition to the Nigerian Sustainable Banking Principles were all made mandatory in 2012. In order to investigate how banks have performed over time in addressing the various principles of their respective sustainability regulation, the research involved a two-year period prior to the guidelines being made mandatory (that is 2010 and 2011) in addition to year of launch as mandatory guidelines to be adhered to (i.e. 2012) and the last two reported financial year ends to date (2013 and 2014). For years 2010 and 2011, performance of banks in regulated countries were determined using the regulatory principles of their country-specific regulations established in 2012 while performance of banks in non-regulated countries for the five-year period were examined based on the regulatory principles of their mandated peers.

#### 4.1.5 Measure of Performance in Addressing Country-Specific FSSR

In identifying the performance of banks with respect to addressing the principles of each FSSR, the regulatory principles were the keywords or key-phrases used as indicators. In situations where the keywords or phrases were inexistent in financial, CSR or sustainability reports, key-words related to sustainability in closely related phrases as stipulated in each guideline were engaged. The performance of banks in addressing these guidelines were identified by reading the specified reports.

##### 4.1.5.1 Performance Indicators for the Chinese GCGs

The following indicators were used in identifying performance of Chinese banks in addressing the Chinese Green Credit Guidelines:

*Table 1: Performance Indicators for the Chinese GCGs*

	<b>Indicators</b>	
	<b>Guidelines (Keywords / Key-phrases)</b>	<b>Closely Related Phrases</b>
1	General Rules	<ul style="list-style-type: none"><li>- Development and promotion of green credit</li><li>- Support to green and low carbon economies</li></ul>

		<ul style="list-style-type: none"> <li>- Identification, measurement, monitoring and controlling environmental and social risks associated with credit activities</li> </ul>
2	Organizational Structure: Roles and Responsibilities	<ul style="list-style-type: none"> <li>- Building green credit concept and strategies including resource efficiency, environmental protection and sustainable development</li> <li>- Monitoring and evaluation of green credit growth strategy implementation</li> <li>- Development of green credit targets, establishment of mechanism and processes, clarification of responsibilities and jurisdictions, providing annual report on green credit performances to the Board or Council, and report to regulators</li> <li>- Assigning a senior manager, department or an established cross-function green credit committee to lead, coordinate and manage green credit related work and provide necessary resources</li> </ul>
3	Policies and Capacity Building	<ul style="list-style-type: none"> <li>- Development and improvement of policies, systems and procedures for E&amp;S risk management</li> </ul>

		<ul style="list-style-type: none"> <li>- Identification of priority sectors for green credit investment in accordance with national environmental laws and regulations, sector guidelines and sector-specific entry policies</li> <li>- Development of client E&amp;S risk rating standard to assess and categorize clients' E&amp;S risks</li> <li>- Development of a list of clients with major E&amp;S risks and requesting such clients to develop and implement action plans for major risks involved, putting in mechanism and measures, for example through a third party sharing of potential environmental risk.</li> </ul>
4	Lending Process Management	<ul style="list-style-type: none"> <li>- Due diligence in granting credit</li> <li>- Examining compliance of clients</li> <li>- Strengthening credit approval management</li> <li>- Definition of reasonable level of credit granting authority and approval process</li> <li>- Restriction or termination of credit to non-compliant clients in E&amp;S performance</li> <li>- Improving contract clauses</li> <li>- Urging clients to strengthen ESRM reporting</li> <li>- Providing remedies for default on E&amp;S risks</li> </ul>

		<ul style="list-style-type: none"> <li>- Enhance credit funds disbursement management using performance of ESRM on part of clients as basis for disbursement</li> <li>- Strengthening post-loan management</li> <li>- Making timely adjustment to asset risk classification</li> <li>- Reservation for provisioning and loss write-off</li> <li>- Establishing/Improving internal reporting and accountability systems</li> <li>- Taking timely relevant responses and report to competent supervisory authorities</li> <li>- Strengthening ESRM for overseas projects</li> </ul>
5	Internal Management and Information Disclosure	<ul style="list-style-type: none"> <li>- Incorporating green credit implementation into the scope of internal compliance examination</li> <li>- Organizing regular audits on green credit</li> <li>- Carrying out investigations on major deficiencies</li> <li>- Holding someone accountable as per applicable regulations</li> <li>- Establishing effective green credit approval and evaluation system and rewards penalty system</li> </ul>



		<ul style="list-style-type: none"> <li>- Having in place incentive and disciplinary measures so as to ensure sustained and effective offering of green credit</li> <li>- Making public green credit strategies and policies</li> <li>- Full disclosure of developments made on green credit business</li> <li>- Disclosure of relevant information according to laws and regulations</li> <li>- Hiring of independent third party to assess or audit performance with regards to environmental or social responsibilities</li> </ul>
6	Supervision and Inspection	<ul style="list-style-type: none"> <li>- Not considered (as it relates to the supervisory role of regulators)</li> </ul>
7	Supplementary provisions	<ul style="list-style-type: none"> <li>- Performance as it relates to implementing the above criteria as at date of promulgation*</li> </ul>

\*This criterion is assumed for years 2010 and 2011 as well such that banks are scored for their sustainability performance during the period.

#### 4.1.5.2 Performance Indicators for the NSBPs

The following indicators were used in identifying performance of Nigerian banks in addressing the Nigerian Sustainable Banking Principles:

*Table 2: Performance Indicators for the NSBPs*

<b>Indicators</b>	
<b>Guidelines (Keywords / Key-Phrases)</b>	<b>Closely Related Phrases</b>
1	<p>Business Activities</p> <ul style="list-style-type: none"> <li>- Development and Implementation of an E&amp;S Policy</li> <li>- Establishment of Sector-specific E&amp;S approaches</li> <li>- Development and implementation of procedures for managing E&amp;S issues</li> <li>- E&amp;S Management System Reporting</li> <li>- Client Engagement</li> </ul>
2	<p>Business Operations</p> <ul style="list-style-type: none"> <li>- Development and Implementation of E&amp;S Footprint Management Program</li> <li>- Community Investment Program</li> <li>- Development and Application of E&amp;S standards for third parties (suppliers, contractors, etc)</li> <li>- E&amp;S Footprint Reporting</li> </ul>

3	Human Rights	<ul style="list-style-type: none"> <li>- Development of human rights policy (promotion of gender equality and diversity in the workplace)</li> <li>- Training on human rights</li> <li>- Adherence to international commitments</li> <li>- Human Rights Reporting</li> </ul>
4	Women's Economic Empowerment	<ul style="list-style-type: none"> <li>- Women's economic empowerment policy</li> <li>- Setting up women's economic empowerment committee</li> <li>- Women's empowerment initiatives</li> <li>- Women's economic empowerment reporting</li> </ul>
5	Financial Inclusion	<ul style="list-style-type: none"> <li>- Development of a financial inclusion policy which will support SME development, promote financial literacy curricula in schools, drive innovation for improved financial system accessibility and usage, promote consumer protection, facilitate development of products and services for middle, low and disadvantaged groups (for example women and youth clients)</li> <li>- Develop financial inclusion reporting criteria for the above parameters including numbers of</li> </ul>

		banked individuals who were previously unbanked
6	E & S Governance	<ul style="list-style-type: none"> <li>- Establishment of a Board-level Sustainable Banking Governance Committee</li> <li>- Integration of E&amp;S governance into risk committee and functions</li> <li>- E&amp;S performance linked incentives</li> <li>- Internal and External E&amp;S Audits</li> </ul>
7	Capacity Building	<ul style="list-style-type: none"> <li>- Development of institutional sustainable banking capacity</li> <li>- Development of sector sustainable banking capacity</li> <li>- Development of Sustainable Banking capacity reporting criteria</li> </ul>
8	Collaborative Partnerships	<ul style="list-style-type: none"> <li>- Sector collaboration</li> <li>- Commitment to international standards and best practice initiatives</li> </ul>
9	Reporting	<ul style="list-style-type: none"> <li>- Development of an overall sustainable banking reporting framework</li> </ul>

		<ul style="list-style-type: none"><li>- Development of clear targets and milestones with articulation of performance indicators for measurement</li><li>- Existence of internal reporting system on performance against principles</li><li>- External reporting to stakeholders such that reports can be standalone or integrated into annual reports and meeting reporting requirements of the GRI Financial Sector Supplement</li><li>- Independent third party review and assurance of internal reporting system and external auditing of reports</li></ul>
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### 4.1.5.3 Performance Indicators for the ERM Guidelines

The following indicators were used in identifying performance of Bangladeshi banks in addressing the Environmental Risk Management Guidelines:

*Table 3: Performance Indicators for the ERM Guidelines*

<b>Indicators</b>			
	<b>Guidelines (Keywords / Key-Phrases)</b>		<b>Closely Related Words</b>
1	Corporate Social Responsibility (CSR)		- Activities relating to CSR
2	Green Banking and ERM Phase-1		<ul style="list-style-type: none"> <li>- Policy and Governance</li> <li>- Incorporation of ERM in CRM</li> <li>- In-house Environmental Management</li> <li>- Green Finance</li> <li>- Climate Risk Fund</li> <li>- Green Marketing</li> <li>- Online Banking</li> <li>- Training</li> <li>- Research and Development</li> </ul>
3	Green Banking and ERM Phase-2		<ul style="list-style-type: none"> <li>- Sector-specific Environmental Policies</li> <li>- Green Strategic Planning</li> </ul>

		<ul style="list-style-type: none"> <li>- Green Branches</li> <li>- Bank Specific Environmental Risk Management Plan</li> </ul>
4	Green Banking and ERM Phase-3	<ul style="list-style-type: none"> <li>- Innovative products</li> <li>- GRI</li> </ul>
5	Financial Inclusion	<ul style="list-style-type: none"> <li>- Inclusive agricultural policy</li> <li>- Small and Medium Enterprise (SME) credit policy and program</li> <li>- Expanding rural bank branches and Agricultural/SME bank branch</li> <li>- Opening of No-Frill bank accounts for the unbanked: farmers, freedom fighters, beneficiaries under social security program, small life insurance policy holder, hard-core poor, city cleaners</li> <li>- Mobile financial services</li> </ul>

**4.1.6 Data Analysis**

In calculating the performance of a bank for a given year, the value “1” was assigned in situations where respective regulatory criterion was addressed. In cases where the principles were not addressed, the value “0” was allocated. Sequel to the allocation of values, the sum of assigned

criteria values was calculated and thereafter this sum was divided by the maximum achievable points (total number of selected principles for analysis) to arrive at a standardized value which shows a bank's sustainability performance for that year.

This process was repeated for all banks in the six identified countries across the reference period of 2010 to 2014.

Finally, the sustainability score attained by a country for a given year was derived by calculating the mean of calculated values for all banks in the country for that year, results of which were deployed for graphical illustrations and statistical tests.

Two major statistical analysis were used in this research – regression analysis and two-group mean-comparison test.

Regression analysis, according to Montgomery, Peck and Vining (2012), involves processes for expressing relationships between a variable of interest (the response) and a set of related predictor variables. The purpose of such statistical process is to construct models which aims to uncover causes by studying relationships between variables and allow for examination and testing of scientific hypotheses (Seber & Lee, 2012). In addition to showing the correlation between variables, regression analyses possess prediction capabilities (Wahl, 2013).

Specifically, the simple ordinary least square linear regression was used as it allowed for outcome projection on the variable of interest (performance of banks) based on addressing sustainability issues over time (the predictor variable). As such, performance of banks in addressing sustainability regulations serves as the dependent variable (DV) while time acts as the independent variable (IV). No control variables were however taken into consideration as this study seeks to



examine the role of regulations as sole influencing factor to performance of banks in addressing sustainability issues.

Since the linear regression allows for hypotheses testing and reveals the coefficient, r-squared and the p-value of the analyses, the results of the analyses were therefore used as the bedrock to either accept or refute the null hypotheses of this research, to further probe the reasons for such outcomes and to make other deductions. Where the coefficient allows for predicting one variable from the other (Stockburger, 1996) and the r-squared measures how close data are to the fitted regression line and shows the percentage of the response variable variation that is explained by a linear model (Frost, 2013), the p-value expresses the probability that extreme results obtained in an analysis of sample data are due to chance (Wahl, 2013). Therefore, as it relates to this research while the coefficient as reflected in the analyses can be used to predict the performance of banks in addressing various sustainability criteria over time, the r-squared indicates whether the model explains none, some or all of the variability of the response data such that the higher the r-squared, the better the model fits the data with lower r-squared implying otherwise. Particularly, in cases where the probability (p-value) of a test is less than 0.05 denoting statistical significance as it implies relationship between predictor value and response variable, the null hypothesis is rejected whereas at instances where p-value is greater than 0.05 ( $p > 0.05$ ), the null hypothesis is accepted because of the statistically insignificant probability which suggests lack of connection between the independent variable (time) and dependent variable (performance of banks in addressing sustainability issues).

On the other hand, average performance of banks in regulated countries and their peers in countries with no FSSR is explained with the two-group mean-comparison test. Using regulations as the independent variable and performance of banks in addressing sustainability issues as dependent

variable, this test reveals the mean of two groups: banks in countries with regulations and banks in countries with no form of guideline, the probability (p-value) which indicates the level of significance of the test outcome between the two groups based on the variance of the two mean values as well as the t-value which is a measure of the size of the difference between the groups relative to the variation in sample data such that the greater the magnitude of t (whether positive or negative), the greater the evidence against the null hypothesis that there is no significant difference in the two groups (Runkel, 2015).

## 4.2 Samples

### 4.2.1 Sample of Chinese and Japanese Banks

The following table presents the top ten Chinese and Japanese banks by total assets being considered for this research and showing the summation of their assets as well as the mean.

*Table 4: Sample of Chinese and Japanese Banks*

<b>S/N</b>	<b>Chinese Banks</b>	<b>2013 Total Assets (US\$ billion)</b>	<b>Japanese Banks</b>	<b>Total Assets US\$ billion as at June 30, 2012</b>
1	Industrial and Commercial Bank of China	3,126.00	Mitsubishi UFJ Financial Group	2,784.51
2	China Construction Bank	2,538.60	Mizuho Financial Group	2,068.02

3	Agricultural Bank of China	2,406.20	Sumitomo Mitsui Financial	1,730.51
4	Bank of China	2,292.60	Resona Holdings	520.93
5	China Development Bank	1,322.10	Sumitomo Mitsui Trust	429.97
6	Bank of Communications	984.99	Bank of Yokohama	160.35
7	China Merchants Bank	663.67	Fukuoka Financial Group	160.22
8	Shanghai Pudong Development Bank	608.10	Chiba Bank	136.82
9	Industrial Bank Co Ltd	607.66	Hokuhoku Financial Group	134.47
10	China Citic Bank Corp	601.67	Shizuoka Bank	118.17
	<b>Total</b>	<b>15,151.59</b>		<b>8,243.96</b>
	<b>Mean</b>	<b>1,515.16</b>		<b>824.40</b>

\*Ranked 7<sup>th</sup> in China is Postal Savings Bank of China (PSBC) with US\$812.21 billion however was omitted owing to language barrier that negatively affected data gathering.

#### 4.2.2 Sample of Nigerian and Egyptian Banks

The following table presents the top ten Nigerian and Egyptian banks by total assets being considered for this research and showing the summation of their assets as well as the mean.

Table 5: *Sample of Nigerian and Egyptian Banks*

S/N	Nigerian Banks	2014 Total Assets (US\$ billion)	Egyptian Banks	2014 Total Assets (US\$ billion)
1	First Bank of Nigeria	20.90	National Bank of Egypt	65.83
2	Zenith Bank	20.50	Banque Misr	38.37
3	United Bank for Africa	14.00	Commercial International Bank (CIB)	20.08
4	Guarantee Trust Bank	12.73	Qatar National Bank Al Ahli	14.29
5	Access Bank	11.86	Arab African International Bank	12.22
6	Diamond Bank	10.48	HSBC Bank Egypt	8.94
7	Ecobank	10.61	Banque du Caire	7.83*
8	Skye Bank	7.24	Faisal Islamic Bank of Egypt	7.00
9	Fidelity Bank	7.10	Bank of Alexandria	6.21
10	First City Monument Bank	6.77	Credit Agricole Egypt	4.36
	<b>Total</b>	<b>122.19</b>		<b>185.13</b>
	<b>Mean</b>	<b>12.22</b>		<b>18.51</b>

\*Figure as at December 2012 (Banque du Caire)

### 4.2.3 Sample of Bangladeshi and Pakistani Banks

The following table presents the top ten Bangladeshi and Pakistani banks by total assets being considered for this research and showing the summation of their assets as well as the mean.

Table 6: *Sample of Bangladeshi and Pakistani Banks*

S/N	Bangladeshi Banks	2014 Total Assets (US\$ billion)	Pakistani Banks	2014 Total Assets (US\$ billion)
1	Sonali Bank Limited	11.98	National Bank of Pakistan	15.35
2	Islami Bank Bangladesh	8.36	Habib Bank Limited	14.75
3	Janata Bank Limited	8.07	United Bank Limited	11.06
4	Agrani Bank Limited	6.34	MCB Bank Limited	9.30
5	Rupali Bank Limited	3.43	Allied Bank Limited	8.38
6	United Commercial Bank Limited	3.41	Bank Alfalah	7.39
7	National Bank Limited	3.29	Bank AL Habib	5.76
8	Prime Bank Ltd	3.27	Askari Bank	4.44
9	AB Bank Limited	3.26	Standard Chartered Pakistan	4.07
10	Pubali Bank Limited	3.18	Habib Metropolitan Bank	3.95
	<b>Total</b>	<b>54.59</b>	<b>Total</b>	<b>84.45</b>
	<b>Mean</b>	<b>5.46</b>		<b>8.45</b>

### **4.3 Limitations of Study**

So far, financial sector sustainability regulations can be said to be operational in three continents: Africa, Asia and South America however language barrier posed a major limitation in investigating how banks in the South American region particularly in Brazil are performing with regards to addressing the sustainability criteria of the Brazilian Green Protocol (Protocol Verde) – the financial sector sustainability regulation of Brazil which has undergone series of development in recent years.

Also, inquiry into impacts of financial sector sustainability regulations is still in a cradle phase hence not much research in this field, which could have acted as guide, has been done however this research is capable of creating the platform through which other investigations can build on.

## 5.0 Results

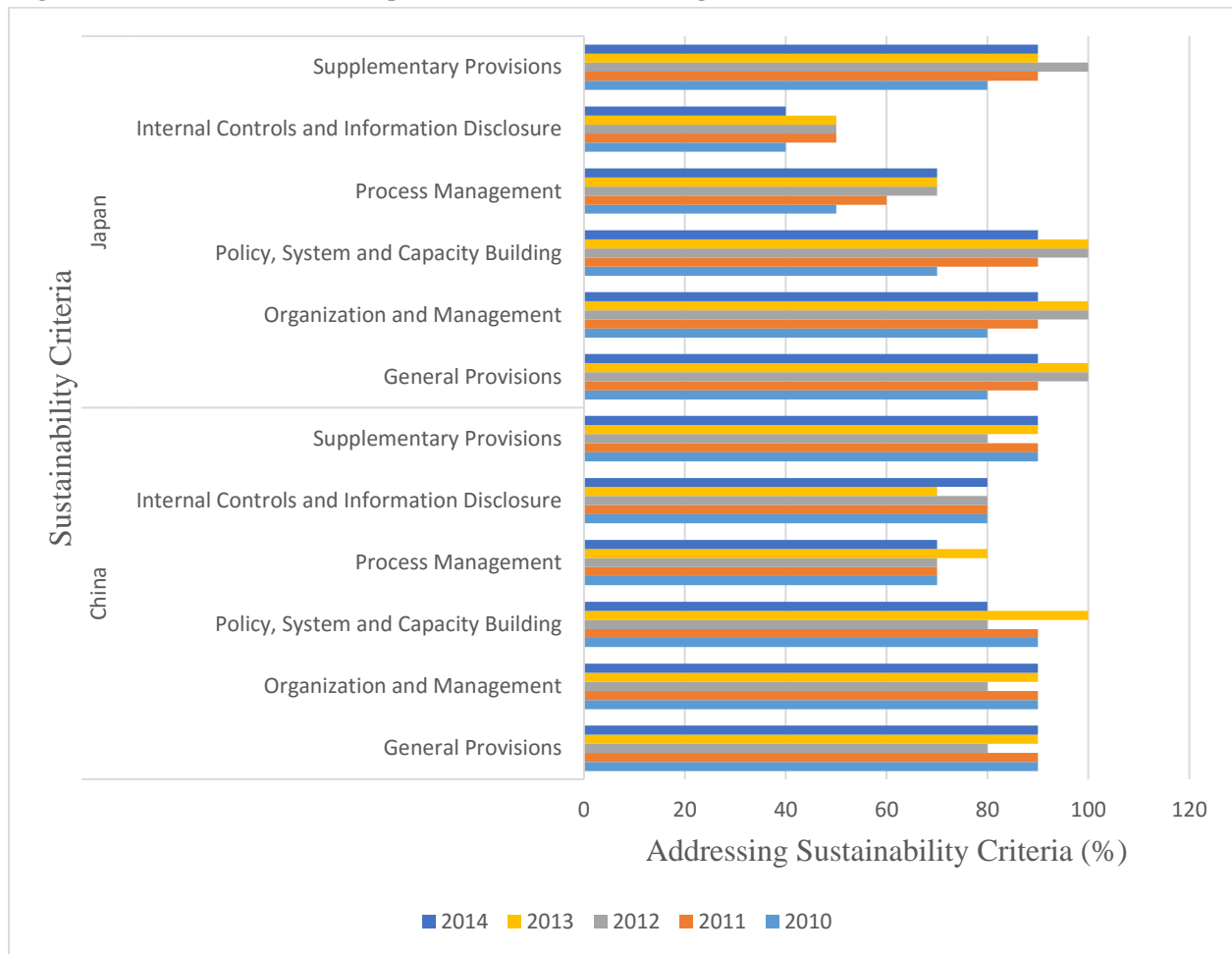
### 5.1 Results from Chinese and Japanese banks

Performance of Chinese and Japanese banks in addressing the GCGs are expressed in the clustered bar chart and line graphs as follows.

#### 5.1.1 Chinese and Japanese Banks Addressing the Various GCGs

The clustered bar chart below shows how Chinese and Japanese banks have addressed each sustainability criteria of the GCGs over the 5-year period.

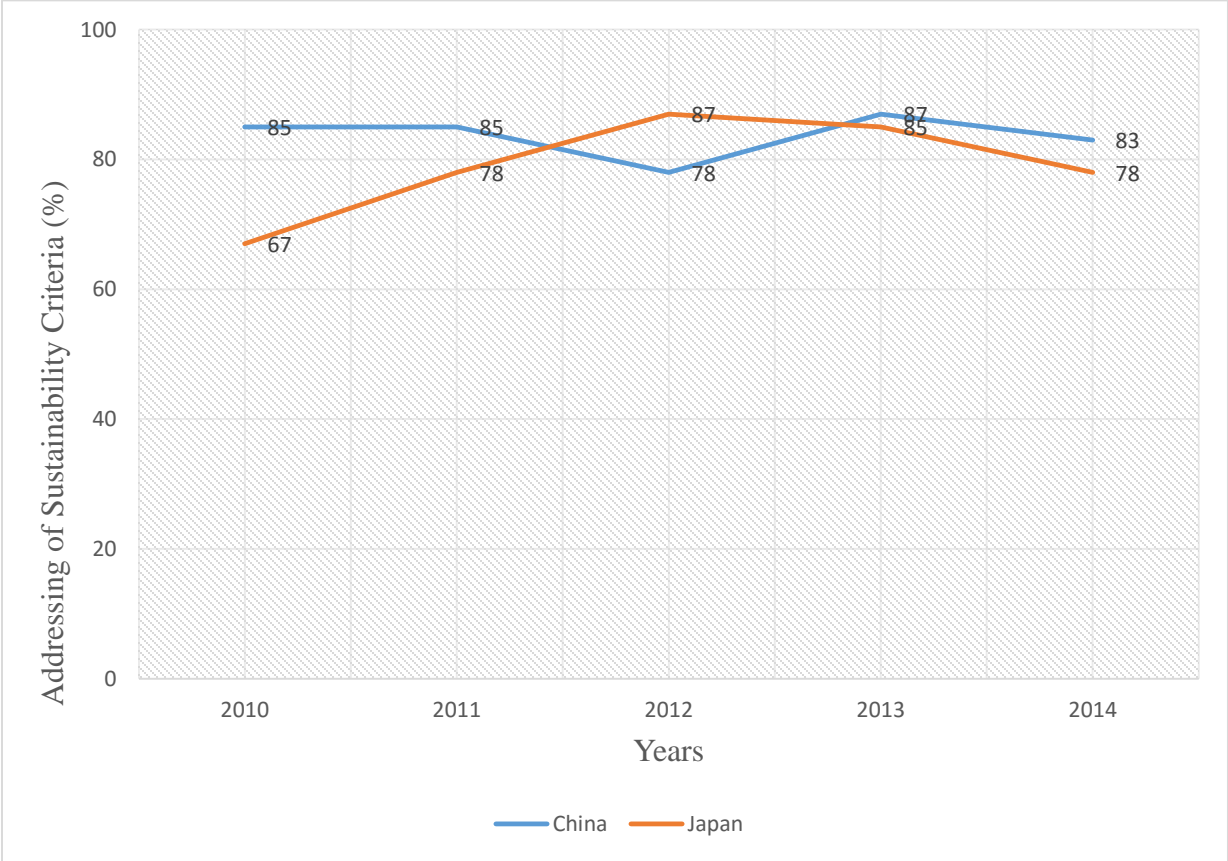
Figure 4: *Chinese and Japanese Banks Addressing the Various GCGs*



**5.1.2 Chinese and Japanese Banks Addressing the GCGs**

The line graph below shows how Chinese and Japanese banks have addressed the GCGs between 2010 and 2014.

*Figure 5: Chinese and Japanese Banks Addressing the GCGs*



As revealed in graphical illustrations (Figures 4 and 5), China’s top ten banks by total assets had been addressing some of the criteria of the subsequently issued Chinese Green Credit Guidelines before the issuance of the mandatory guidelines in 2012. This is revealed by a performance of 85 percent for both years 2010 and 2011 in addressing the various criteria of the guidelines. Although the performance slowed to 78 percent in 2012, better performance of 87 percent was observed in 2013 and 83 percent in 2014.



For Chinese banks, the regression analysis indicates a coefficient of -0.0397 which implies changes to the independent variable (time) does not predict a synonymous change in the dependent variable (performance of banks in addressing sustainability issues) and that they are not positively related. Also, with r-squared of 0.0001, it can be inferred that outcome does not fit into the model and hypothesis that Chinese banks have addressed sustainability issues better over time and with p-value of 0.9553 indicating no significant change between the reference period (2010-2014), the significant performance of Chinese banks may therefore be adduced to the Chinese Green Credit Policy of 2007 as banks can be said to be addressing sustainability issues before the implementation of mandatory guidelines.

While Japanese banks performed lower than Chinese banks for most of the period except in 2012, they have also been addressing various sustainability criteria that have the semblance of the GCGs since 2010 despite absence of regulations in Japan.

This is revealed by a performance of 67 percent in 2010, 78 percent in 2011, 87 percent in 2012 (higher than 78 percent for Chinese peers), 85 percent in 2013 and 78 percent in 2014.

Although the coefficient of 0.7735 from the regression analysis for Japanese banks indicates a slight synonymous effect of performance in addressing sustainability issues to change in time hence positive relationship between IV and DV, r-squared of 0.0232 and in particular, probability (p-value) of 0.2909 reveal no significant change in performance over time.

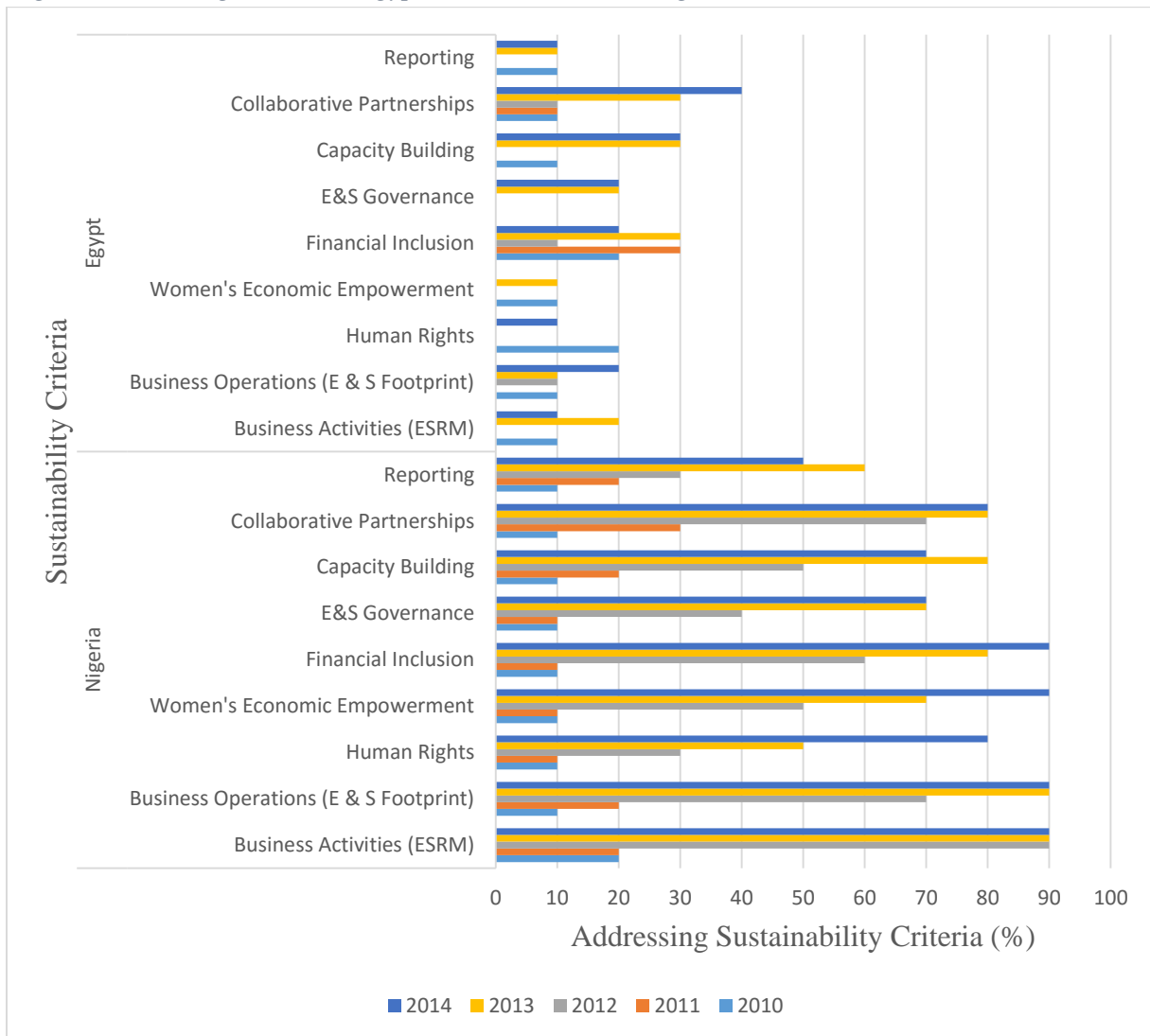
## 5.2 Results from Nigerian and Egyptian Banks

Performance of Nigerian and Egyptian banks in addressing the NSBPs are expressed in the clustered bar chart and line graphs as follows.

### 5.2.1 Nigerian and Egyptian Banks Addressing the Various NSBPs

The clustered bar chart below shows how Nigerian and Egyptian banks have addressed each sustainability criteria of the NSBPs over the 5-year period.

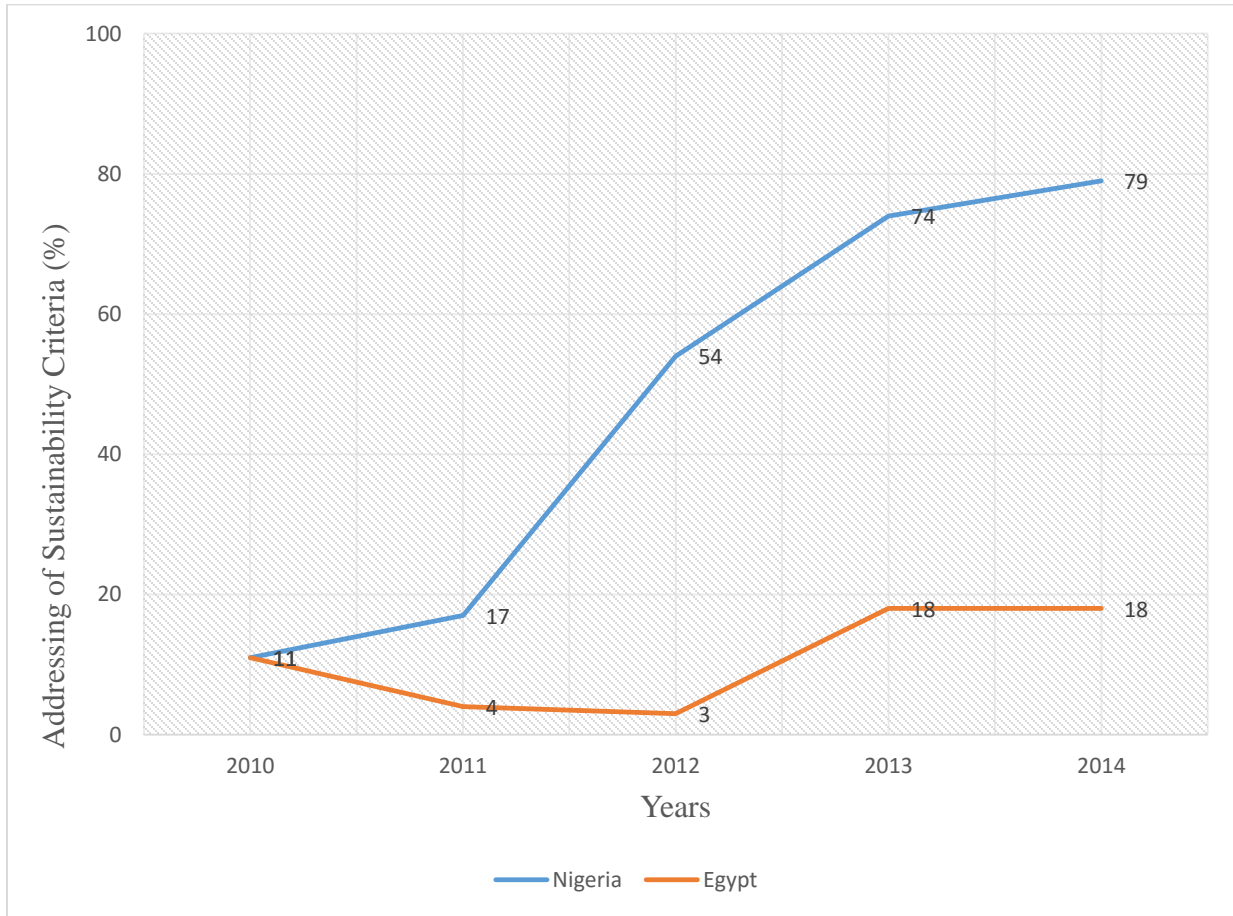
Figure 6: Nigerian and Egyptian Banks Addressing the Various NSBPs



### 5.2.2 Nigerian and Egyptian Banks Addressing the NSBPs

The line graph below shows how Nigerian and Egyptian banks have addressed the NSBPs between 2010 and 2014.

Figure 7: Nigerian and Egyptian Banks Addressing the NSBPs



The graphical illustrations (Figures 6 and 7) reveal that the Nigerian banks sparsely addressed the criteria of the subsequently issued NSBPs before the development of the mandatory guidelines in 2012. This is revealed by performance of 11 percent and 17 percent in addressing the various criteria of the guidelines for years 2010 and 2011 respectively. Upon the development of the NSBPs in 2012 however, findings reveal a performance of 54 percent reflecting an increase of 37

from 2011 performance. In 2013 and 2014, Nigerian banks performed even better in addressing the various sustainability criteria as they attained 74 and 79 percent adoption respectively.

For Nigerian banks, the regression analysis indicates a coefficient of 2.1716 suggesting performance effect of over double per year which implies strong positive relationship between the IV (time) and DV (performance of banks in addressing sustainability issues). With r-squared of 0.4198, it can be inferred that to an extent, the hypothesis that Nigerian banks have addressed sustainability issues better over time fits into the outcome with the model accounting for over 40 percent of the variance. Also, with p-value  $< 0.0001$  indicating significant change over time, it can be concluded that the NSBPs have been instrumental in the performance of Nigerian banks in addressing sustainable issues.

Interestingly, both Nigeria and Egypt were at same levels as at 2010 (11 percent). Performance in years 2011 and 2012 were however very low for Egyptian banks at 4 percent and 3 percent respectively but became better in 2013 and 2014 at 18 percent for both years.

Although the coefficient of 1.1935 from the regression analysis for Egyptian banks indicates a synonymous effect of performance in addressing sustainability issues to change in time hence positive relationship between IV and DV, r-squared of 0.0318 which implies that the regression model accounts for a little over 3 percent of the variance and in particular, probability (p-value) of 0.2151 reveal no significant change in performance over time.

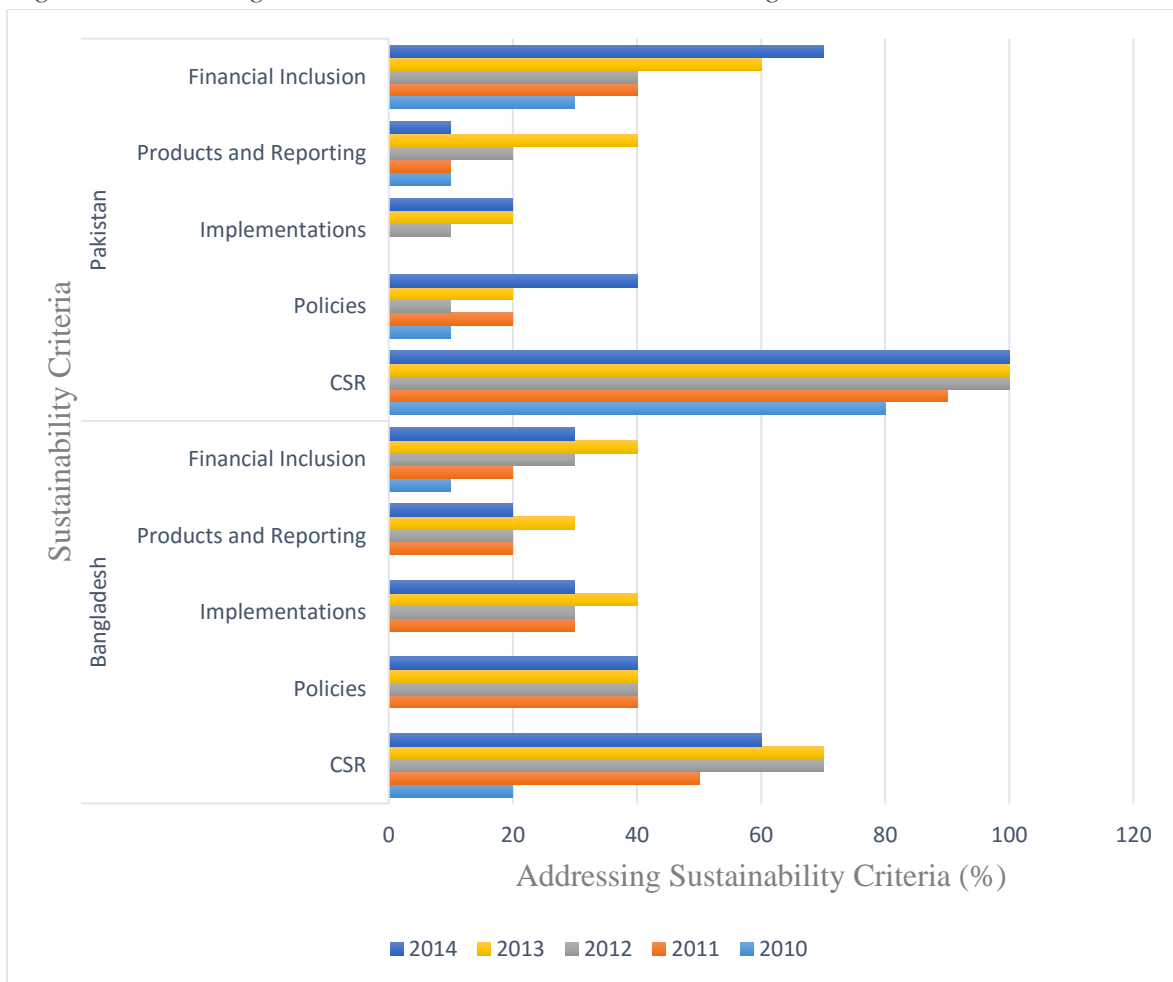
### 5.3 Results from Bangladeshi and Pakistani Banks

Performance of Bangladeshi and Pakistani banks in addressing the ERM Guidelines are expressed in the clustered bar chart and line graphs as follows.

#### 5.3.1 Bangladeshi and Pakistani Banks Addressing the Various ERM Guidelines

The clustered bar chart below shows how Bangladeshi and Pakistani banks have addressed each sustainability criteria of the ERM Guidelines over the 5-year period.

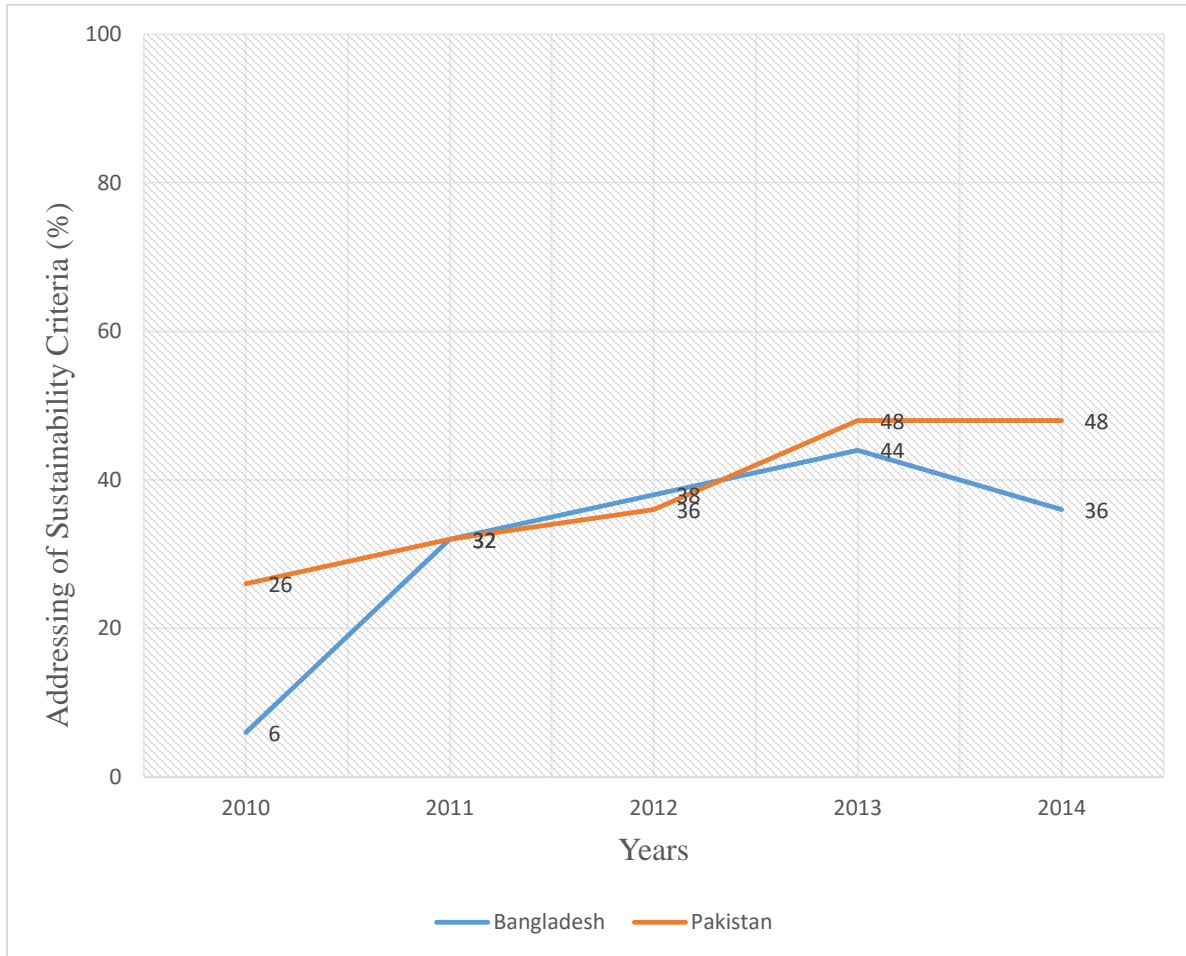
Figure 8: *Bangladeshi and Pakistani Banks Addressing the Various ERM Guidelines*



### 5.3.2 Bangladeshi and Pakistani Banks Addressing the ERM Guidelines

The line graph below shows how Bangladeshi and Pakistani banks have addressed the Bangladeshi ERM Guidelines between 2010 and 2014.

Figure 9: *Bangladeshi and Pakistani Banks Addressing ERM Guidelines*



Two years prior to the issuance of the mandatory ERM guidelines in 2012, the graphical illustration (Figure 9) reveals that the Bangladeshi banks being researched had a single digit percentage (6 percent) performance in addressing issues that had the semblance of the subsequently released guideline. Upon the development of the ERM guidelines in 2011 however, performance more than tripled to 32 percent from 2010 performance. The upward trend continued as performance reached

38 percent in 2012 and 44 percent in 2013. This can be adduced to the ERM guidelines being made mandatory in 2012. Performance however slipped back to 36 percent in 2014.

The coefficient of 1.0094 from the regression analysis for Bangladeshi banks indicates a synonymous effect of performance in addressing sustainability issues to change in time hence positive relationship between IV and DV. However, r-squared of 0.0727 which implies that the regression model accounts for a little over 7 percent of the variance and the probability (p-value) of 0.0583 reveal no significant change in performance over time.

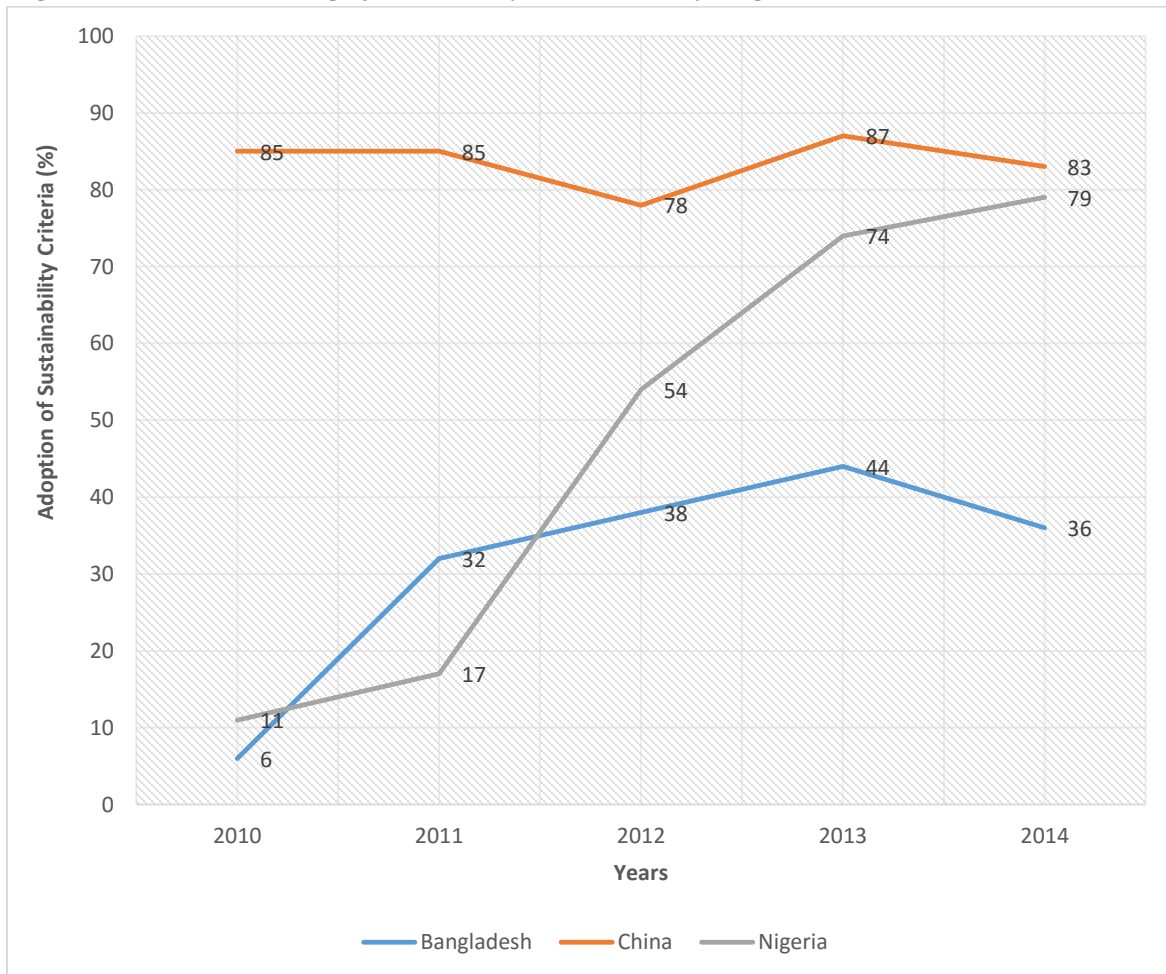
In 2010, performance of the Pakistani banks in addressing any criteria that had the semblance of the ERM guidelines was 26 percent. This performance however increased over time to 32 percent in 2011, 36 percent in 2012 and 48 percent for both 2013 and 2014. In order words, Pakistani banks however appeared to have addressed sustainability issues better for most parts of the reference period except in 2012 – a marginal disparity of two. It was also interesting to discover that Bangladesh and Pakistani banks were at same level of 32 percent in 2011.

The regression coefficient of 2.2556 for Pakistani Banks imply strong positive relationship between IV and DV. Although r-squared of 0.1353 indicates that the regression model accounts for a little over 13 percent of the variance, probability (p-value) of 0.0086 reveals that there was significant performance between 2010 and 2014 for Pakistani banks despite the absence of such regulatory framework over the banks.

## 5.4 Addressing of Mandatory Guidelines by Regulated Banks

The line graph below shows the performance of banks in China, Nigeria and Bangladesh in addressing their country-specific FSSR over the reference period (2010 to 2014). The graph shows that Chinese banks had been addressing sustainability issues before the development of the mandatory guidelines in 2012 and are performing better than Nigerian and Bangladeshi banks in addressing their country-specific guidelines. Performance for Nigerian and Bangladeshi banks increased with the development of regulations albeit with Nigerian banks addressing sustainability issues significantly over the reference period.

Figure 10: Addressing of Mandatory Guidelines by Regulated Banks

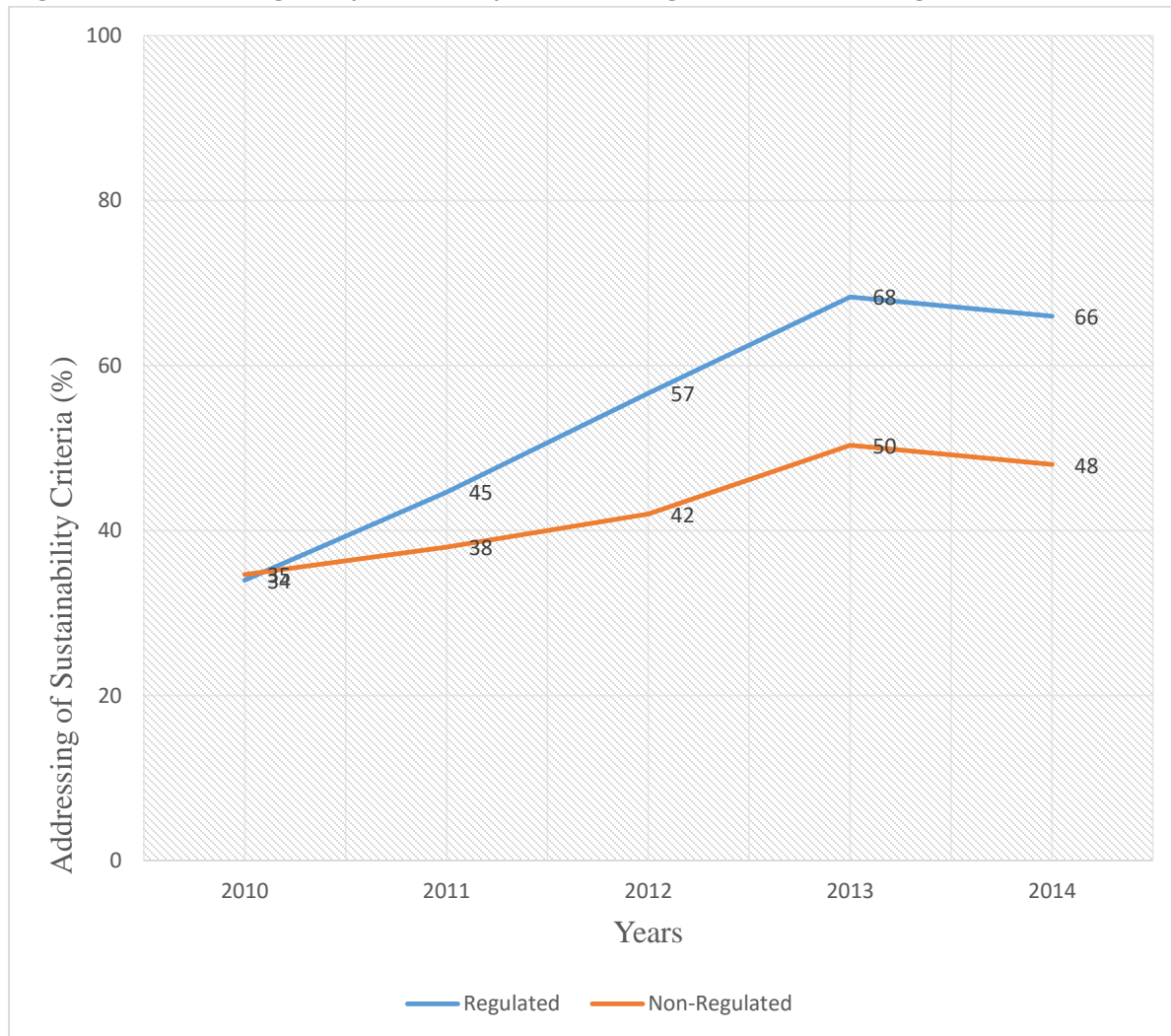




## 5.5 Average Performance of Banks in Regulated and Non-regulated Countries

The following graph shows the average performance of banks in regulated and non-regulated countries in addressing sustainability issues outlined by financial sector sustainability regulations.

Figure 11: Average Performance of Banks in Regulated and Non-regulated Countries



For banks in regulated countries that is China, Bangladesh and Nigeria, average performance in addressing sustainability issues was 34 percent in 2010. This increased over time to approximately 45 percent in 2011, 57 percent in 2012, 68 percent in 2013 and 66 percent in 2014. In countries

with no mandatory sustainability guideline (Japan, Egypt and Pakistan), average performance was approximately 35 percent in 2010, 38 percent in 2011, 42 percent in 2012, approximately 50 percent in 2013 and 48 percent in 2014.

The two-group mean-comparison test shows a higher mean of 0.5399 for banks in regulated countries and 0.4263 for banks in non-regulated countries. It also reveals t-value of -2.4520 and p-value of <0.0001 implying significant difference between the two groups as it relates to performance in addressing sustainability issues.

## **6.0 Conclusions**

### **6.1 Analysis of the Financial Sector Sustainability Regulations**

Parts of analysis for China, Nigeria and Bangladesh were adapted from Weber and Oni (2015).

#### **6.1.1 Impact of the Chinese GCGs (China and Japan)**

This analysis helped to clear a bit of the controversy around the impact of the green credit guidelines on China (Weber and Oni, 2015). On the other hand, performance of Japan's top ten banks by total assets with respect to addressing the criteria of the GCGs were also analyzed.

It is observed that Chinese banks have been addressing sustainability issues before the mandatory guidelines of 2012 hence it can be concluded that there have been no significant changes in the performance of Chinese banks over time (the reference period). One thing, however, could be the reason behind this finding. The foundation of the 21<sup>st</sup> century sustainable banking move in China through policy was not laid in 2012 but in 2007 when the Green Credit Policy was introduced. As earlier noted, the purpose of integrating environmental issues into financial decision making (Bai et al., 2014) resulted in the introduction of environmental policies (Chan-Fishel, 2007), strategies and assessment systems to evaluate credit clients (Weber and Oni, 2015) hence the development of the Green Credit Policy which later developed and became mandatory guidelines.

As stated by Weber and Oni (2015) in the earlier introductory research that focused on the impact of financial sector sustainability regulations on banks which involved a pre-2010 reference period (2009) to 2013 for forty-six Chinese banks and credit unions, it was concluded that sustainability performance of Chinese banks has improved based on significant differences in environmental,

social and sustainability score over time since the introduction of the green credit policy. This is probably the reason why the linear regression analysis showed no significant impact between 2010 and 2014. On this note, it can be established that the introduction of the green credit policy which later developed to be a mandatory guideline has generated a strong institutional impact on the country's financial sector.

Nevertheless, the optimum performance expected of Chinese banks with respect to the GCGs are hampered by: issues regarding Chinese banks not considering stakeholder censures as it relates to international projects they finance (Hill, 2014); unawareness of connection between sustainability performance to financial indicators and financial success (Jiguang & Zhiqun, 2011); some regional and provincial interest in polluting industries as catalysts for economic growth; and paucity of environmental information provided by the Ministry of Environmental Protection (Zhang et al., 2011) which can be said to be the reasons for the imperfect implementation of the guidelines.

While Japanese banks performed lower than Chinese banks for most of the period except in 2012, they have also been addressing various sustainability criteria that had the semblance of the GCGs since 2010. A striking observation is the slight marginal difference between the performance of Japanese banks and their Chinese counterparts despite absence of a financial sector sustainability regulation in Japan. In some cases, particularly in criteria such as general provisions in 2012 and 2013, organization and management in 2012 and 2013 and policy, systems and capacity building in 2012, Japanese banks even performed better (see Figure 4). A reason for this finding can be connected with the country-specific economic and developmental status.

Often categorised as a developed economy and among the Global North with human development index (HDI) of 0.891<sup>11</sup>, Japan ranks 20<sup>th</sup> in the world and among the forty-nine countries with very high human development. Also, with gross national income per capita (GNP per capita - 2011 purchasing power parity (PPP)) of US\$ 36,927<sup>12</sup>, the East Asian island nation ranks 27<sup>th</sup> among 188 countries. Hence, one can attribute the country's relatively fair sustainability performance to the quest for maintaining the good human, social and economic development which it is known for and which the country can possibly afford.

Also, Japan has played a key role in influencing global sustainability particularly as it relates to the discuss on climate change, evidence of which is based on the adoption of the Kyoto Protocol on December 11, 1997 in Kyoto, Japan (UNFCCC, 2014). One can therefore argue that an event which has led to the adoption of a policy issue that has been of much global magnitude since its embrace would have played a key role in creating the necessary awareness needed for the country's economic sectors particularly the financial sector in aligning with the goals of sustainable development.

Furthermore, when considering affiliations or membership with the UNEP FI and Equator Principles (EP) which are the two earliest voluntary codes of conduct governing financial sectors (Weber and Adeniyi, 2015), three of the researched ten biggest banks in Japan (Mizuho Financial

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<sup>11</sup> Human Development Index (HDI): A composite index measuring average achievement in three basic dimensions of human development—a long and healthy life, knowledge and a decent standard of living. Data retrieved from [http://hdr.undp.org/sites/default/files/hdr\\_2015\\_statistical\\_annex.pdf](http://hdr.undp.org/sites/default/files/hdr_2015_statistical_annex.pdf)

<sup>12</sup> Gross national income (GNI) per capita: Aggregate income of an economy generated by its production and its ownership of factors of production, less the incomes paid for the use of factors of production owned by the rest of the world, converted to international dollars using purchasing power parity (PPP) rates, divided by midyear population. Data retrieved from [http://hdr.undp.org/sites/default/files/hdr\\_2015\\_statistical\\_annex.pdf](http://hdr.undp.org/sites/default/files/hdr_2015_statistical_annex.pdf)

Group, Sumitomo Mitsui Financial and Sumitomo Mitsui Trust) with two other banks totalling five banks in all from Japan were UNEP FI member institutions before 2010 (UNEP FI, 2016) while total of number of signatories to the EPs for the entire Japanese financial sector also prior to 2010 stood at three banks (Bank of Tokyo-Mitsubishi UFJ, Mizuho Bank and Sumitomo Mitsui Banking Corporation of the Sumitomo Mitsui Financial Group) (Equator Principles, 2011) which are among the top ten researched banks. This could also be a reason for the performance in addressing various sustainability criteria despite no regulation in place.

Further research however shows that so far, only 6 banks in Japan are currently members of the UNEP FI, i.e. an increase by just one bank (Mitsubishi UFJ Financial Group) which happens to be among the top ten researched banks. The EPs however have not had any other signatory from Japan except the 3 banks that had signed up prior to 2010. In the situation where Japanese Bankers Association has 120 full members (Japanese Bankers Association, 2016).

On the other hand, as at 2007 when the green credit policy was developed, only two Chinese banks (China Merchant Bank Co. Ltd and Industrial Bank) which are among the top ten by total assets were members of the UNEP FI while no Chinese bank was a signatory to the Equator Principles. Although Industrial Bank is now the sole signatory to the EPs from China, the number of banks from China that are currently members of UNEP FI have tripled. Could this imply that presence of regulations enables adoption of voluntary codes of conducts? These findings may therefore present a case for regulations over voluntary codes of conduct as there appears to be no significant increase in the number of banks subscribing to any voluntary code in Japan despite the fact that these voluntary codes of conduct are easy to adopt (Weber and Adeniyi, 2015). Hence banks may not fall in line except being coerced through regulation. The subsequent singular incremental performance of Japanese banks can therefore be attributed to certain policy initiatives or other

factors of which the earlier reasons of maintaining the country's human development status and climate change awareness caused by the Kyoto Protocol may have played a key role.

By and large, despite being insignificant and marginal, graphical illustrations (Figures 4 and 5) based on findings suggest that China has performed better than Japan for most of the period between 2010 and 2014.

### **6.1.2 Impact of the NSBPs (Nigeria and Egypt)**

The following analysis explains the impact of the Nigerian Sustainable Banking Principles (NSBPs) developed in 2012 on the top ten banks by total assets in Nigeria. Performance of Egypt's top ten banks by total assets with respect to addressing the criteria of the NSBPs is also analyzed for comparison.

As the graphical illustration (Figure 7) depicts and as the statistical test confirms, it is obvious that sustainability issues were majorly considered in and after the year 2012 upon development of the NSBPs. It should also be noted that Nigeria has had no sort of financial sector sustainability policy or regulation in place before 2012 unlike what obtains in China. It can therefore be established that the sustainability regulation (NSBP) has had a substantial impact on Nigerian banks based on the significant change over time in their performance in addressing the regulatory principles.

In graphical illustrations (figures 6 and 7) and the regression analysis, it is revealed that there have been no significant changes over time in the performance of Egyptian banks in addressing various sustainability criteria as identified by the NSBP.

While Nigerian banks frequently addressed criteria such as environmental and social risk management in business activities, environmental and social footprint of business operations, financial inclusion, women's economic empowerment and collaborative partnerships which gives an idea of a triple bottom performance (Figure 6), the poor performance of researched Egyptian banks was majorly centered around collaborative partnerships, capacity building and financial inclusion, all of which appear disconnected to the essentials of the environmental spectrum of sustainable development.

Prior to 2012 when the NSBPs were launched, three of the top ten Nigerian banks by total assets had been signatories to the UNEP FI while the Equator Principles had membership of only one of the banks. This perhaps was the reason behind the 2010 and 2011 performance. However, among the top ten banks, two others and another not among the top ten banks have become signatories to the UNEP FI totaling six banks from Nigeria and an additional signatory to the Equator Principles totaling two banks. Although these figures still serve as a huge departure from the 34 banks in the country (Weber and Oni, 2015), it can be argued that the sustainability regulation era could have facilitated the latter adoptions and memberships of the voluntary codes of conduct.

It is worthy of note that no Egyptian bank is a signatory to the UNEP FI and only one of the researched top ten banks by total assets (Arab African International Bank) had adopted the Equator Principles prior to 2010. This bank has since 2009 remained the only adoptee of the Equator Principles from Egypt (Equator Principles, 2011).

While research reveals that no other Egyptian bank has adopted any of these well known voluntary codes of conduct (UNEP FI and Equator Principles), the development of sustainability regulations



for the Egyptian financial sector could be the needed push for a much better performance for the sector in dealing with a wide range of sustainability issues plaguing the country.

It can therefore be concluded based on graphical illustrations (Figures 6 and 7) that regulations have had a significant impact on Nigerian banks and such regulatory development for the Egyptian financial sector could be a step in the right direction for the birthplace of civilisation.

### **6.1.3 Impact of the Bangladeshi ERM Guidelines (Bangladesh and Pakistan)**

Investigations were also carried out to identify how the ten biggest banks by total assets in Bangladesh and Pakistan have performed in addressing the criteria of the Environmental Risk Management (ERM) Guidelines that were made mandatory for Bangladeshi banks in 2012.

Bangladeshi banks began addressing sustainability issues better sequel to the development of the ERM guidelines however the change over the reference period has not been significantly different. Unlike the Chinese and Nigerian guidelines, the Bangladeshi guidelines include a green refinance scheme that is provided for financing projects addressing environmental issues and climate change. The total amount of the scheme has been US\$25 million. These funds enable Bangladeshi banks to lend to green projects and enterprises. Islam and Das (2013) found that US\$10 million was being used to finance projects such as solar systems, biogas plants and effluent treatment plants in 2012. However, reporting of environmental, social and sustainability performance has been underdeveloped in the Bangladeshi financial sector (Khan, Halabi, & Samy, 2009) as research findings also suggest. Also to buttress this point, only about half of the indicators listed by the Global Reporting Initiative framework — a global standard for sustainability reporting — have

been addressed by Bangladeshi banks (Khan et al. 2011). Because of this lack of transparency, many sustainability projects of Bangladeshi banks are not disclosed and, consequently, are not considered by stakeholders and regulators (Kamruzzaman, 2012). In addition to a lack of transparency in reporting, there is no focus on the consequences of corporate environmental and social performance and they are not well understood by stakeholders, this can also be attributed to lack of proper awareness about the impact of banking on the environment and society, as well as about the connection between environmental and social performance on the one side and financial performance on the other side.

Analysis however indicates that Pakistani banks have performed well in addressing sustainability issues over time. This may not be unconnected to the presence of a strategic framework for Sustainable Microfinance in Pakistan which was set-up with the vision statement that reads:

*“To transform microfinance into a dynamic industry, integrated with the overall financial system, which provides inclusive financial services to the underserved economic and geographic segments through self-sustaining business models and demand driven products, while maintaining high standards of governance and service delivery, supported by agile regulatory environment”.*

- (State Bank of Pakistan, 2011).

This is probably the reason behind their better performance with respect to financial inclusion wherein Pakistani banks outperformed their Bangladeshi peers. As depicted in Figure 8, Pakistani banks also performed better than Bangladeshi banks in issues relating to corporate social responsibility hence the skewed performance in favor of Pakistani banks. As deduced through Pakistani banks’ annual reports, the CSR performance can be majorly credited to the private sector

support in alleviating the sufferings of millions of Pakistani people from the terrible floods which started July 2010 and was referred to as the worst floods in Pakistani history (Singapore Red Cross, 2010) ravaging about one fifth of the land, and causing loss of lives, livelihoods, properties, and amenities. It should however be noted that Bangladeshi banks performed relatively better in the remaining three criteria which were divided into different phases: policies, implementations as well as products and reporting as shown in Figure 8.

It should also be noted that no Bangladeshi or Pakistani bank is a signatory to any of the two earliest voluntary codes of conduct (UNEP FI and Equator Principles).

## **6.2 Challenges With Enforcement – A Deductive Finding**

It is important to note that it is one thing to have regulations in place and another thing for these regulations to be properly enforced. By observing the performance curves of the graphical illustrations that show the performance of the top ten banks by total assets in all researched countries with financial sector sustainability regulations (i.e. China, Nigeria and Bangladesh in Figure 10), it appears there are issues with enforcement or monitoring of performances as it relates to addressing these sustainability regulations. This is specifically the case for China and Bangladesh with lower performances in 2014 than in 2013 as seen explicitly in Figure 10. Although to a lesser degree, the same also goes for Nigeria despite the better performance in 2014 than in 2013. This is because the rate of performance witnessed between 2013 and 2014 (5) was lower than that of 2012 and 2013 (20). One would assume that the rate of performance from 2013 to 2014 will be higher or at least same rate as seen from 2012 to 2013.

A somewhat low interest in dealing with sustainability issues was also discovered in countries with no financial sector sustainability regulation in the last year of the reference period. While Pakistan and Egypt maintained their 2013 levels (48 percent and 18 percent respectively) in 2014, performance of Japanese banks in 2014 (78 percent) slipped back from 2013 performance (85 percent).

Hence, a vital addition to regulatory mechanisms and even the institutional theory that helps explain the development of these regulatory frameworks for better performance with respect to sustainable development is the input of strong enforcements that will guarantee compliance.

### **6.3 Conclusion**

This paper focused on a comparative study between countries with financial sector sustainability regulations and their peers with no mandatory guideline. While impact of the Chinese Green Credit Guidelines, Nigerian Sustainability Banking Principles and the Bangladeshi Environmental Risk Management Guidelines on top ten Chinese, Nigerian and Bangladeshi banks by total assets were analyzed respectively, performance in addressing various sustainability criteria of these guidelines by top ten banks in peer-countries such as Japan, Egypt and Pakistan were also analyzed.

Although we accept the null hypothesis that after the implementation of a sustainability regulation, banks did not significantly address more sustainability issues than before because only Nigerian banks showed otherwise, analysis establishes that average performance of banks in all countries with mandatory financial sector sustainability guidelines which exceeds that of their peers without any form of regulatory mechanism helps to concluded that the mandatory guidelines have been

influential as banks in regulated countries now seem to be addressing sustainability issues more than their non-regulated peers hence rejecting the null hypothesis that banks under sustainability regulations did not address more sustainability issues than banks that are not regulated. While the banks are working on making internal operations more sustainable, they are also fostering transition to a green economy through adequate financing for projects and influencing clients' activities through adequate environmental and social risk management.

However, while findings and analyses suggest insignificant change in addressing sustainability issues over time in China and Bangladesh, the analysis of Nigerian banks in addressing various sustainability criteria revealed significant impact of the mandatory principles on the banks. This can be adduced to the fact that the guidelines were formulated by the banking sector itself and later transferred to the central bank for enforcement and compliance which suggests that the inclusion of the banking sector in the development of financial sector sustainability regulations increases the success of the regulation (Weber and Oni, 2015).

Nonetheless, in an attempt to ensure better performance of banks with respect to adherence to these mandatory guidelines, key performance indicators for implementing green credit have been developed for Chinese banks (see Appendix 2) (CBRC, 2014). Also, the Bangladesh Bank in 2015, developed the Guidelines on Environmental and Social Risk Management (ESRM) for Banks and Financial Institutions to serve as an update to the ERM Guidelines and allow for further integration of the guidelines with credit risk management as well as use of numerical risk rating methods (Bangladesh Bank, 2015). Just like the ERM Guidelines, the ESRM Guidelines also has four parts – part 1 - introduction, part 2 - organizational requirements, part 3 - technical manual and part 4 - technical annexes with a very important addition to the part 2 being the introduction of an organizational flow chart to show lines of responsibility of different bank functions as it pertains

to E&S risk assessment and the decision-making process based on E&S risk rating. While the part 3 provides a detailed description of germane national regulations and international treaties that banks and financial institutions need to understand, part 4 expands the scope of the general environmental due diligence checklist in the ERM guidelines to include a number of social parameters (Bangladesh Bank, 2015). These indicate dedicated efforts on the part of both Chinese and Bangladeshi regulators to better sustainability performance of banks and other financial institutions under their supervision.

Perhaps, it can also be inferred that presence of financial sector sustainability regulations could also influence peer-countries in establishing such for the sustainability performance of banks and financial institutions under their jurisdiction. Indicating that environmental and social parameters are significant sources of credit, liability and or reputational risks which may adversely affect economic performance and long term sustainability of a financial institution if not managed effectively and timely, the deputy governor of the State Bank of Pakistan chaired a meeting to initiate Baseline Survey on Environmental and Social Risk Management (ESRM) in Pakistan being conducted by International Finance Corporation in alliance with Pakistan's apex bank (State Bank of Pakistan, 2015). This appears a good step in the right direction for a country with no form of sustainability regulation governing the activities of its banks as better sustainability performance from the country also contributes to global efforts in achieving sustainable development. It should also be noted that the country stands to gain enormously from better global sustainability performance as its geography implies potential negative impacts from sustainability issues chiefly climate change which is capable of causing serious floods and affecting agriculture – a sector that accounts for 24 percent of the country's gross domestic product and serves as means of livelihood for 47 percent of the population (Amir, n.d.).

Also, it appears there seems to be a relationship between mandatory and voluntary guidelines as observed through memberships of Chinese and Nigerian banks. Sequel to the development of their mandatory guidelines, the number of Chinese and Nigerian signatories to the two earliest voluntary guidelines (UNEP FI and EPs) doubled and even tripled like in the case of China with the UNEP FI. Such finding was not observed in countries with no mandatory guideline however more research can be carried out to substantiate this hypothesis.

Also, as evidenced through this research, one can say the institutional theory indeed helps to explain the role of institutional structures for yielding particular similar outcomes on the part of institutions. This is because as asserted by Scott (2004), the theory considers processes for putting structures in place as authoritative guidelines to influence social behavior. In this regard, these influences have emanated through institutionalizing sustainability issues in the financial sector thereby leading to the development of financial sector sustainability regulations that have mounted the institutional pressure and made banks more responsible as they are now seen to be taking sustainability issues seriously. Another interesting school of thought as affirmed by Tolbert and Zucker (1983) based on civil service reforms in the United States is that where regulations are in place, adoption of processes are more rapid while procedures are adopted gradually when no state-level legitimation is in place or when they are not so legitimated. This assertion indeed confirms the observations of the gradual performance of banks in Japan, Egypt and Pakistan that have no financial sector sustainability regulation in place in addressing sustainability issues. It can however be established from graphical illustrations that without the mandatory guidelines, banks in regulated countries may have not attained such performance as it relates to addressing sustainability issues. Adoption of the guidelines in China and therefore performance of Chinese banks can be attributed to the Green Credit Policy of 2007. Earlier studies of Weber and Oni (2015)

showed that indeed the development of the green credit policy has been impactful on Chinese banks. Similarly, performance of Nigerian banks in addressing the NSBP appeared to be highly impactful with the level of significance discovered. In both circumstances, the institutional mechanism is also supported by financial benefits that could accrue to compliant financial institutions. In China, the government supports green or environmentally friendly industries with better access to funds and at lesser rates compared to polluting industries and in Nigeria, access to funds from development finance institutions which was the reason for the development of the NSBP serve as incentives for addressing sustainability issues in both countries. In the case of Bangladeshi banks, it can be said that the ERM Guidelines are not so legitimated or are not properly enforced resulting in the low performance of Bangladeshi banks in addressing sustainability issues. Therefore, most important for the institutional theory is that apart from the institutionalization of issues which is capable of making things work, the element of monitoring and enforcements for better performance of the regulated through deliberate efforts on the part of regulators must not be neglected.

In conclusion, with several sustainability issues staring mankind in the face today, Mark Carney - the governor of the Bank of England asserts that the window of opportunity appears to be finite and shrinking (Elliott, 2015). This observation is probably the reason why there have been global events aimed at addressing concerns that have impact on sustainable development.

In the year 2015, the UN Sustainable Development Summit adopted the sustainable development goals – a 17-point strategy to eradicate poverty, fight inequality and injustice as well as fix climate change together with the 21<sup>st</sup> Conference of Parties (COP21) to the United Nations Framework Convention on Climate Change (UNFCCC) to ensure commitment of countries in achieving the target of limiting global temperature rise to 2 degrees Celsius (3.6 degrees Fahrenheit) by the end



of this century. These events both reflect global efforts aimed at addressing these diverse sustainability issues which has far reaching consequences on the environment, societies and economies.

The role of banks and indeed the financial sector as a whole cannot be underestimated as financial institutions can develop products and services for positive impacts on financial inclusion and on the other hand help to channel funds to green economies in order to achieve the goal of protecting the earth from climate change and its devastating consequences on man. Therefore, there seems to be no better time for financial institutions particularly banks to be more responsible and act as change agents in charting a sustainable path for world economies. On one hand, risks to financial instability are eliminated and on the other, lasting well-being is guaranteed. The urgency needed for actions to be taken does not seem to give room for convenient efforts hence implementation of well-developed, structured, deliberate regulations which will be adequately enforced and monitored for compliance is essential for financial sectors' contribution in achieving sustainable development.

#### **6.4 Recommendations**

Based on the structure of social systems, certain things ought to be in place for an optimum system performance. As it pertains to the issue of financial sector sustainability regulations, one major ingredient is enforcement. These enforcements are to ensure compliance and can be in the form of requesting regular reports, carrying out audits and effecting appropriate disciplinary measures

when the regulated falls short of expectations. Adequate enforcements will also prevent greenwashing as banks may not be adequately addressing the sustainability issues as claimed.

Undoubtedly, these enforcements will come at costs to both the institutional regulator and the regulated. This is because significant resources are required to engage in sustainability activities (Orlitzky, Siegel, & Waldman, 2011) as well as implement management systems and to build expertise in the relatively current field of sustainable banking (Jin & Mengqi, 2011; Zeng, Xu, Dong, & Tam, 2010).

On the part of the regulator, this cost may be in form of building the necessary human capital needed for carrying out periodic inspections and audits and resources in time and money associated with monitoring and inspections for compliance, as well as costs required to internalize such regulations – that is “lead by examples” in the form of its operations and provision of services as regulators themselves. Similarly, cost to the regulated will encompass acquiring competent human capital, capacity building and implementing the regulations. Loss of businesses which they would ordinarily engage in also serves as an indirect cost albeit to the benefit of the environment and the society.

These costs may pose a setback to the push for better performance and this is probably the point at which the business case for sustainability as well as the sustainability case for business needs to be emphasized so that irrespective of the costs, banks can adhere to these principles such that they will be able to operate and act responsibly. The business case may be related to the reduced operational cost owing to decrease in resource consumption on one hand and on the other hand prevented costs that may have been borne as a result of sustainability issues related to business activities of bank clients thereby affecting their ability to meet their obligation for loan repayment

invariably affecting bank assets. These sustainability issues may range from social issues such as human right, gender or slave labor or environment related to all forms of pollutions and emissions. The effect could even be harder on banks when assets pledged as collaterals have been degraded or have lost value as a result of pollutions.. Banks and indeed the financial sector as a whole must be made to understand that they constitute part of the society hence they equally stand to gain or lose from their responsible acts or otherwise which has an effect on sustainability issues chiefly climate change. As emphasized by Mark Carney, impacts of climate change pose physical<sup>13</sup>, liability<sup>14</sup> and transition<sup>15</sup> risk to the financial sector causing instability with suggestion that “*once climate change becomes a defining issue for financial stability, it may already be too late*” (Elliot, 2015).

The second strategy which is putting forth the sustainability case for business particularly involves emphasizing how business can itself contribute to environmental, societal and economic development by positively influencing sustainability through business operations and activities as well as engagement with clients. This in itself is capable of generating another business case because while the society benefits from a green and just economy which can be characterized by cleanliness, safety from disasters and equitability, banks can enjoy good word-of-mouth advertisement that can boost reputation with potential positive impact on bottom-lines.

Another approach can be through the provision of incentives. According to Elliot (2015) the catastrophic impacts of climate change will impose a cost on future generations that the current

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<sup>13</sup> Physical risk such as claims from disasters: floods, storms, etc.

<sup>14</sup> Liability risk such as could emerge when those suffering from losses caused by climate change seek compensation from those they hold responsible

<sup>15</sup> Transition risk which pertains to revaluation of assets caused by the adjustment to a lower-carbon economy

generation has no incentive to fix. It is therefore essential for financial sector regulators to create the much needed incentive for businesses to be more sustainable. While government through financial sector regulators can provide tax incentives to financial institutions for beefing up sustainability performance, clients of financial institutions who engage in green businesses or are non-polluters can also be incentivized with reduced interest rates on loans as applicable in China.

Also, adequate awareness of these regulations must be made even outside the purview of the financial sector. If these sustainability regulations are made public with issues frequently revisited, better performance on the part of financial institutions is likely to ensue. On the other hand, for clients who see themselves as “responsible” or “ethical”, such public awareness can spur up a new level of demand for environmentally and socially friendly products such as carbon finance, microfinance, socially responsible investments and other similar products for the purpose of investing in such or benefiting in the form of loans. Although the awareness would have been carried out by financial sector regulators, the demand from clients that will ensue from such awareness gives an idea of a bottom-top approach to foster sustainability.

However, for countries with no regulations, it is crucial for the sector regulators to develop guidelines for all aspects of country-specific and global sustainability challenges while putting up structures to guarantee compliance. Financial institutions under these regulators should also be made to understand both the business case of sustainability as well as the sustainability case of business. There should also be clearly stated incentives for both financial institutions and their customers with adequate public awareness of such sustainability regulations to stimulate responsible product and service demand from clients.

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## **Appendix 1: The Green Credit Guidelines**

### Chapter 1: General Provisions

Article 1 For the purpose of encouraging banking institutions to develop green credit, these Guidelines are formulated pursuant to the Law of the People's Republic of China on Banking Regulation and Supervision and the Law of the People's Republic of China on Commercial Banks.

Article 2 Banking Institutions mentioned herein include policy banks, commercial banks, rural cooperative banks and rural credit cooperatives lawfully incorporated within the territory of the People's Republic of China.

Article 3 Banking institutions shall promote green credit from a strategic height, increase the support to green, lowcarbon and recycling economy, fend off environmental and social risks, and improve their own environmental and social performance, thus optimizing their credit structure, improving the quality of services, and facilitating the transformation of development mode.

Article 4 Banking institutions shall effectively identify, measure, monitor and control environmental and social risks associated with their credit activities, establish environmental and social risk management system, and improve relevant credit policies and process management. The environmental and social risks mentioned herein refer to the hazards and risks on the environment and society that may be brought about by the construction, production and operating activities of banking institutions' clients and key affiliated parties thereof, including environmental and social issues related to energy consumption, pollution, land, health, safety, resettlement of people, ecological protection, climate change, etc.

Article 5 The CBRC is responsible for, in accordance with applicable laws, regulating and supervising banking institutions' green credit business and their environmental and social risk management.

## Chapter 2: Organization and Management

Article 6 The board of directors or supervisory board of a banking institution shall build and promote green credit concepts concerning energy saving, environmental protection and sustainable development, be committed to giving play to the functions of facilitating holistic, coordinated and sustainable economic and social development, and establish a sustainable development model that will benefit the society at the same time.

Article 7 The board of directors or supervisory board of a banking institution is responsible for developing green credit development strategy, approving the green credit objectives developed by and the green credit report submitted by senior management, and monitoring and assessing the implementation of green credit development strategy.

Article 8 The senior management of a banking institution shall, pursuant to the resolutions of the board of directors or supervisory board, develop the green credit objectives, have in place relevant mechanisms and processes, define clearly the roles and responsibilities, conduct internal checks and appraisal, annually provide report to the board of directors or supervisory board on the development of green credit, and timely submit relevant reports to competent supervisory authorities.

Article 9 The senior management of a banking institution shall assign a senior officer and a department and configure them with necessary resources to organize and manage green credit

activities. Where necessary, a crossdepartmental green credit committee can be set up to coordinate relevant activities.

### Chapter 3: Policy, System and Capacity Building

Article 10 Banking institutions shall, as per national environmental protection laws and regulations, industrial policies, sector entry policies, and other applicable regulations, establish and constantly improve the policies, systems and processes for environmental and social risk management and identify the directions and priority areas for green credit support. As for industries falling within the national “restricted” category and industries associated with major environmental and social risks, they shall customize credit granting guidelines, adopt differentiated and dynamic credit granting policies, and implement the risk exposure management system.

Article 11 Banking institutions shall develop client environmental and social risk assessment criteria, dynamically assess and classify client environmental and social risks, and consider the results as important basis for credit rating, access, management and exit. They shall adopt differentiated risks management measures concerning loan investigation, review and inspection, loan pricing, and economic capital allocation. Banking institutions shall prepare a list of clients currently faced with major environmental and social risks, and require these clients to take risk mitigation actions, including developing and having in place major risk action plans, establishing sufficient, effective stakeholder communication mechanisms, and finding a third party to share such risks.

Article 12 Banking institutions shall establish working mechanisms conducive to green credit innovation to boost innovation of green credit processes, products and services while effectively curbing risks and ensuring commercial viability.

Article 13 Banking institutions shall give priority to their own environmental and social performance, set up appropriate systems, step up the publicity and education on green credit concepts, standardize their operational behaviors, promote green office, and improve the level of intensive management.

Article 14 Banking institutions shall strengthen green credit capacity building, establish and improve green credit labeling and statistics system, improve relevant credit management systems, enhance green credit training, develop and employ related professionals. Where necessary, they can hire an eligible, independent third party to assess environmental and social risks or acquire related professional services by means of outsourcing.

#### Chapter 4: Process Management

Article 15 Banking institutions shall strengthen due diligence in credit granting. The scope of due diligence on environmental and social risks shall be defined according to the characteristics of the sector and region in which the client and its project is located, so as to ensure the due diligence is complete, thorough and detailed. Where necessary, the banking institutions can seek for support from an eligible, independent third party and competent authorities.

Article 16 Banking institutions shall examine the compliance of clients to whom credit will be granted. As for environmental and social performance, compliance checklist and compliance risk checklist shall be developed according to the characteristics of different sectors, so as to ensure compliance, effectiveness and completeness of the documents submitted by the clients, and make sure they have paid enough attention to related risk points, performed effective dynamic control, and satisfied the requirements on substantial compliance.

Article 17 Banking institutions shall strengthen credit approval management, and define reasonable level of credit granting authority and approval process according to the nature and severity of environmental and social risks faced by the clients. Credits may not be granted to clients whose environmental and social performance fails to meet compliance requirements.

Article 18 Banking institutions shall, by improving contract clauses, urge their clients to strengthen environmental and social risk management. As for clients involving major environmental and social risks, the contract shall provide for clauses that require them to submit environmental and social risk report, state and avow that they will strengthen environmental and social risk management, and promise that they are willing to be supervised by the lender; the contract shall also provide for clauses concerning the remedies banking institutions can resort to in the event of default on environmental and social risks made by the clients.

Article 19 Banking institutions shall enhance credit funds disbursement management and regard how well clients have managed environmental and social risks as important basis for credit funds disbursement. As for projects to which credit is granted, all stages, including design, preparation, construction, completion, operation and shutdown shall be subjected to environmental and social risk assessment. Where major risks or hazards are identified, credit funds appropriation can be suspended or even terminated.

Article 20 Banking institutions shall strengthen post-loan management. As for clients involving potential major environmental and social risks, relevant and pertinent post-loan management actions shall be developed and implemented. They shall watch closely the impact of national policies on the clients' operation, step up dynamic analysis, and make timely adjustment to asset risk classification, reserve provisioning and loss writeoff. They shall establish and improve internal

reporting system and accountability system concerning major environmental and social risks faced by the clients. Where major environmental or social risk event occurs to the client, the banking institution concerned shall timely take relevant risk responses and report to competent supervisory authorities on potential impact of said event on itself.

Article 21 Banking institutions shall strengthen the environmental and social risk management for overseas projects to which credit will be granted and make sure project sponsors abide by applicable laws and regulations on environmental protection, land, health, safety, etc. of the country or jurisdiction where the project is located. The banking institutions shall make promise in public that appropriate international practices or international norms will be followed as far as such overseas projects are concerned, so as to ensure alignment with good international practices.

#### Chapter 5: Internal Controls and Information Disclosure

Article 22 Banking institutions shall incorporate green credit implementation into the scope of internal compliance examination, and regularly organize and carry out internal auditing on green credit. Where major deficiencies are identified, investigation shall be conducted to determine whom to be held accountable as per applicable regulations.

Article 23 Banking institutions shall establish effective green credit appraisal and evaluation system and reward and penalty system, and have in place incentive and disciplinary measures, so as to ensure sustained and effective offering of green credit.

Article 24 Banking institutions shall make public their green credit strategies and policies, and fully disclose developments of their green credit business. As for credit involving major environmental and social risks, the banking institutions shall disclose relevant information according to laws and regulations, and be subjected to the oversight by the market and

stakeholders. Where necessary, an eligible, independent third party can be hired to assess or audit the activities of banking institutions in performing their environmental and social responsibilities.

## Chapter 6: Monitoring and Examination

Article 25 Banking supervisory authorities at all levels shall strengthen the coordination with competent authorities, establish and improve information sharing mechanism, improve information services, and remind banking institutions of related environmental and social risks.

Article 26 Banking supervisory authorities at all levels shall strengthen off-site surveillance, improve off-site supervisory indicator system, enhance the monitoring and analysis of environmental and social risks faced by banking institutions, timely guide them to strengthen risk management and adjust credit orientation. Banking institutions shall, pursuant to the provisions hereof, perform overall green credit evaluation at least once every two year, and submit the self-evaluation report to competent banking supervisory authorities.

Article 27 When organizing and conducting on-site examination, banking supervisory authorities shall take into full account the environmental and social risks faced by banking institutions, and make clear the scope and requirements of examination. As for regions or banking institutions involving prominent environmental and social risks, ad hoc examination shall be conducted and urge said institutions to improve in light of examination results.

Article 28 Banking supervisory authorities shall provide more guidance to banking institutions on green credit self-evaluation, and, in conjunction with the results of off-site surveillance and on-site examination, holistically assess the green credit performance of banking institutions, and treat the assessment results, as per applicable laws and regulations, as important basis for supervisory rating, institution licensing, business licensing, and senior officer performance evaluation.



## Chapter 7: Supplementary Provisions

Article 29 These Guidelines become effective as of the date of promulgation. Village banks, lending firms, rural mutual cooperatives and non-banking financial institutions shall enforce actions in reference to these Guidelines.

Article 30 These Guidelines are subject to interpretations by the CBRC.

Source: CBRC (2012).

## Appendix 2: Key Performance Indicators

### Suggested Contents of Environmental and Social Risk Management Contract

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#### **1. Borrower's Statement and Warranties of Environmental and Social Risks. For example:**

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1.1 Announce and guarantee that borrower's internal documents on environmental and social risks management meet compliance requirements and are well implemented.

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1.2 Announce and guarantee that borrower has not been involved in any significant lawsuits concerning environmental and social risks.

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#### **2. Restricted Clause requiring borrower to be subject to lenders' supervision and strengthen environmental and social risk management. For example:**

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2.1 Make commitment that behaviors and performance related to the environmental and social risk meet compliance requirements;

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2.2 Make commitment that it establish internal management system of environmental and social risk and well define the responsibilities, duties, penalty of borrowers' related people.

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2.3 Make commitment to establish and improve emergency mechanism and measures in response to the environmental and social risk accidents

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2.4 Make commitment to establish dedicated department or appoint dedicated professionals to be responsible for environmental and social risk issues;

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2.5 Make commitment to cooperate with the lenders or qualified third-party to conduct environment and social risk assessment and examination;

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2.6 Make commitment to offer appropriate feedback or take other necessary action to the public or other stakeholders who are critically suspicious over borrower's environmental and social risk management;

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2.7 Make commitment to urge borrowers to strengthen management to their relevant stakeholders and fend off borrowers' risks generated by stakeholders' environmental and social performance.

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2.8 Make commitment that the borrower implement measures to manage other environmental and social risk lender consider necessary.

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**3. Identify borrower's reporting requirements of the environmental and social risk. For example, borrower shall report to lender relevant information timely and sufficiently.**

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3.1 All kinds of permission, review and approval related to the environmental and social risk management during the process of start-up, construction, operation and shutdown;

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3.2 Borrower's assessment and examination of environmental and social risks conducted by related regulators or other authorized agencies;

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3.3 The corresponding construction and operation of environmental infrastructure;

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3.4 Pollutant emission and meeting standard;

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3.5 The safety and health of the employees;

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3.6 The communities' significant claim and protest against the lender;

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3.7 Significant environmental and social loss claim requirements;

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3.8 Other significant issues relevant to environmental and social risks

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**4. Define the violation accidents of managing environmental and social risks, for example:**

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4.1 The borrowers fail to implement relevant statements, warranty, commitment on environmental and social risk management;

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4.2 The borrowers were awarded penalty by relevant government agencies for poor management of environmental and social risks;

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4.3 The borrowers were criticized by the public or media for poor management of environmental and social risks;

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4.4 Other accidents violating environmental and social risk management clause agreed up by the institution and the borrowers, including crossing agreement violation.

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**5. Stipulate institution's measures taken against borrowers who violate the contract clause(s), for example:**

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5.1 Revoke commitment already made to grant credit;

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5.2 Suspend loan disbursement until the borrowers take remedy measures satisfied institution's requirements;

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5.3 Recall loans disbursed before pre-determined time;

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5.4 Exercise the right on relevant collaterals when the loans can not been paid back;

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5.5 Other penalty measures agreed upon by the institution and the borrowers.

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