Green Banking: The Next Level in Modern Banking

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Abstract

To achieve long-term prosperity through a more sustainable, equitable, and robust economic growth, one must consider the role of one of the most important drivers, financial capital. The financial system (as the main provider of financial capital) needs to adapt by embracing sustainability practices and principles, and integrating them in all its internal processes. Within the EU financial system, the banking sector is undoubtedly the main player. As such, banks also have to join the sustainable development wave. In light of all these, 'green banking' is growing in importance and is becoming an ardent topic in the agenda of many governments, international organizations, enterprises and, last but not least, financial institutions

The aim of this research is to identify the role of financial regulation and regulators in harnessing Green Banking and to determine the involvement of banking institutions in fostering such peculiar banking activities. We begin with unpacking the concept by revealing the most relevant theoretical approaches to date, in order to better grasp and fine-tune its meaning. After critically assessing the most important researches and institutional reports to date, the paper provides the reader with the essential toolkit for moving forward with a more in-depth investigation on Green Banking.

Keywords: green banking, green finance, sustainability, financial regulators, banking institutions.

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1. Introduction

The Nobel Prize in Economic Sciences in 2018 was equally divided between William D. Nordhaus and Paul M. Romer for integrating innovation and climate with economic growth. This clearly emphasises more than never the importance of considering the quality of the ***environment*** and the effects upon it when designing and implementing policies that target economic growth. The growing number of researches that look into the quality of the environment clearly stresses the importance of the topic (or at least it should be at all levels of society) and also the growing concern for advanced, as well as developing countries. Although the topic came under the attention of public's concern only after the 1960s, it was the impact of the global financial economic crisis of 2007/2008 which determined policymakers to start looking towards new ways of attaining prosperity through sustainable, equitable and robust economic growth, in both developed and developing countries.

To achieve this desiderate, one of the most important drivers of all economies, ***financial capital***, had to adapt. The *financial system* (as the main provider of financial capital) had to fully embrace sustainability practices and principles and integrate them in all its internal processes. The drivers that continuously push the financial system in doing so, stem from the need to better tackle the increasing climate change risks for the system and from the necessity to efficiently integrate the system into a transition towards a green and sustainable economy.

Within the financial system, the ***banking sector*** is undoubtedly the main player. As such, banks also had to join the sustainable development wave and seriously consider the assimilation of environmental and social risk issues into their way of doing business. Hence, **Green Banking** (GB) began to take shape and to occupy a central focus point for many researchers and practitioners.

The aim of this paper is to unpack the 'green banking' concept by revealing the most relevant (from a theoretical standpoint) and practical (considering its applicability in the real economy, at policy and sectorial level) approaches to date, in order to better grasp and fine-tune its meaning. After analysing qualitatively and critically the most important research papers and institutional reports to date, the paper provides the reader with the essential toolkit for moving forward with a more in-depth investigation on GB (as intended by the author).

The remaining of the paper is structured as follows: Section 2 provides the milestones which stand out in most of the GB definitions; Section 3 looks into the role of financial regulation and regulators (mostly, Central Banks) in harnessing Green Banking; Section 4 reveals the involvement of the banking institutions in fostering Green Banking; the final Section is reserved for conclusions and brief recommendations.

2. Definitions of Green Baking

A survey of the scientific literature on the topic of Green Banking (GB) reveals a wide panel of definitions and interpretations, making it more difficult for the concept to be implemented in practice. As such, GB is tackled differently by various central banks and other financial regulators and obviously implemented subjectively from one bank to another (if not merely mentioned in a formal/ declarative manner). In this section, a brief literature review is provided where the most important definitions and interpretations of GB are brought forward and analysed.

The concept of GB was first employed in 1980 by a bank of Dutch origin. The name of the bank itself, Triodos bank (2018), is derived from the Greek "tri hodos" or "three-way approach" (people, planet, profit). The idea of such an initiative originated in 1968 from a

study group (consisting of Adriaan Deking Dura, Dieter Brüll, Lex Bos and Rudolf Mees) who aimed at searching how money can be managed sustainably. Hence, at the foundation of this bank lies the root of today's GB concept.

One notable source is the Green Banking Report which mentions that GB refers to the implementation, support and promotion of environmentally friendly practices and reduction of the carbon footprint in the internal and external operations of banks (Green Banking Report, 2016). As one can see, the approach assumes a change in the way banks do their business and takes into consideration not only the **direct** involvement of banks in alleviating its pressure on the environment (by adopting environmentally friendly practices like online banking, buildings with low carbon footprint, reduction in the usage of paper etc.), but also their **indirect** contribution in connexion with their clients and business partners (by promoting environmentally friendly products and services such as green loans, green mortgages, green credit cards, opening up of CDs, financing greener projects etc.). Also, the definition implies that banking institutions, when adopting green principles, should take action on two fronts: **positively** by adopting or encouraging environmentally friendly practices, and **negatively** by eliminating or discouraging any activities that are harmful for the environment, either from **within** the bank, or from **outside it**. Other viewpoints that are in line (to some point or totally) with this holistic interpretation of the concept are:

- Schultz (2010): GB implies promoting *environment-friendly practices* and *reducing carbon footprint* from banking activities.
- Bai (2011): GB resides from the banks' *environmental accountability* and *environmental performances* in business operations.
- Bihari (2011): GB includes *promoting social responsibility* where banks consider, before financing a project, whether it is environment-friendly and has any future environmental implications.
- Singh and Singh (2012): GB signifies encouraging *environment-friendly practices* and *plummeting carbon footprint* by banking activities through various environment-friendly acts.
- Bahl (2012): GB is a kind of *banking conducted* in selected area and technique that helps in reduction of internal carbon footprint and external carbon emissions.
- Azam (2012): GB means *eco-friendly* or *environment friendly banking* to stop environmental degradation to make this planet more habitable.
- Verma (2012): GB involves pursuing of *financial and business policies* that are not hazardous to environment and help to protect the environment.

There are also opinions that focus exclusively on the impact that banking and other financial institutions have on the environment through the other business. Bhardwaj and Maholtra (2013) consider that GB is an effort by the banks to make the industries grow green and, in the process, restore the natural environment. According to Biswas (2011), GB ensures the greening of industries and also facilitates the improving in asset quality in the future.

Other studies look carefully into the manner that banks do their business and pinpoint here the GB concept. Thombre (2011) considers that GB is the practice that normally a bank should assume with the aim to *protect the environment* and *conserve natural resources* (by considering all the social and environmental/ecological factors). Moreover, encouraging environmentally responsible investments and careful lending should be one of the responsibilities of the banking sector. Lalon (2015) specifies that GB is any form of banking from that the country and nation gets environmentally benefits. Chowdhury and Dey (2016) define GB as the operation of banking activities while giving special attention to social, ecological and environmental factors with the aim of the conservation of nature and natural resources.

There are also some viewpoints expressed by international bodies as to what GB represents. The Organisation for Economic Co-operation and Development (OECD) defines a Green Bank as a public, quasi-public or non-profit entity established specifically to facilitate private investment into domestic low-carbon, climate-resilient infrastructure (OECD, 2018). The Sustainable Banking Network (SBN) is a group of banking regulators and associations from 24 emerging markets which propose frameworks for environmentally and socially sustainable lending. SBN considers that GB includes three optional components (SBN & IFC, 2016):

- environmental & social (E&S) risk management in investment and lending processes;
- lending and investment to green projects and seeking positive E&S impact; and
- how banks manage their own E&S footprints, such as greening their facilities and undertaking corporate social responsibility initiatives.

The main idea that stands out when analysing the literature is that GB must not and should not stem from central banks and other regulators alone (policy level), but also from banks and other financial institutions (industry level). Therefore, the following two sections focus on such entities.

3. The role of financial regulation and regulators in harnessing Green Banking

Kern (2014) strongly believes that “the regulatory framework that governs today’s banking system is not being used to its full capacity; with some notable exceptions, systemic environmental risks appear to be in the collective blind spot of bank supervisors”. In the author’s opinion, financial regulators (such as Central Banks) have not yet developed a *firm regulatory framework* which could properly integrate the environmental and sustainability risks into banking regulations. Once this shortcoming will be solved and the regulation moves past the existing voluntary codes (which lack enforcement and accountability mechanisms), sector-wide policies could be advanced to standardize practices with regard to the environment and society. On the other hand, there are authors like Tauringana and Chithambo (2015) who consider that substantial progress has been made in recent years in relation to policy formulation and implementation to address the environmental responsibilities of firms towards greenhouse gas (GHG) emissions irrespective of the industry and the country.

One cannot deny that some progresses are still being made (depending on a country’s development level). Although they are not as advanced as the early promoters of GB (in ***developed economies***), regulators from ***emerging*** and ***developing countries*** strive to develop various regulatory-driven green banking principles. As Zadek and Robins (2015) note, “a growing number of developing country regulators and central banks are supplementing this dynamic system with their own guidelines and requirements to ensure that core banking functions such as credit approval are aligned with their country’s social and environmental priorities so that financial risks and negative environmental externalities are reduced.” One cannot hold the same argument when dealing with industrialized countries (which are real laggers in terms of incorporating GB principles into their regulatory framework).

The integration of environmental and sustainability issues into financial regulations is an ongoing process mainly in developing and emerging countries. In fact ***emerging markets*** are the leaders in GB principles on which all eyes look upon (Oyegunle & Weber, 2015). Here, GB is established through a financial regulatory approach, not only because it creates a level playing field for all players, but it also helps collaboration and capacity development. In their absence, banks lack the motivation to adopt systems that effectively manage E&S risks and opportunities (Poser, 2014).

Speth and Haas (2007) consider that countries vary in their ability to formulate and enforce environmental policies (*voluntary vs. regulative approach*). While developed countries are, in generally, more open to international environmental treaty obligations (US being the most common exception from this rule given its withdrawal from the Paris Agreement), developing countries, react less to awareness and capacity and more to enforcement and accountability. While advanced economies develop and apply voluntary non-compliant codes for sustainable banking management, emerging market economies develop and implement self-drive, self-regulated, collaborative and country-specific sustainable banking systems. Moreover, these latter countries have strong allies in their endeavour: international multilateral organizations and development finance institutions.

But one question still lingers: *what exactly drives regulators to integrate environmental and sustainability issues into financial regulations?* Oyegunle and Weber (2015, p. 9) provide a starting point in identifying the main ***drivers*** for regulatory approaches in some countries:

- *internal pressure*, such as social pressure and environmental pollution (in countries like China, Brazil and Bangladesh). While developed countries may view the financial sector as an intermediary in determining efficient allocations of capital, developing countries may view the sector as a source of governance that justifies a more activist-policy approach.
- *external pressure* from financial (aid) institutions such as the Dutch Development Bank (FMO) and the International Finance Corporation (IFC) (in countries like Nigeria, Bangladesh, Mongolia and Indonesia). While developed countries lack this kind of pressure giving their existing robust environmental regulatory systems, developing countries strongly react to influences that come from international organizations such as UNEP or international financial authorities such as the Basel Committee on Banking Supervision.
- *peer pressure* from regional neighbours (in countries like Colombia and Peru). The adoption of sustainable finance regulations within a country may drive other neighbouring countries to feel a pressure or see the opportunity to undertake a similar path.

Among the most well-known international regulations which implies taking into consideration E&S risks in their businesses, we include:

- the best practices but at the same time voluntary standards and codes of conduct under the Equator Principles (Weber & Acheta, 2014), with 91 Signatories in 2018.
- the United Nations Principles for Responsible Investing, with 1,874 Signatories in 2018.
- the Sustainable Stock Exchanges (SSE) initiative with 66 partner exchanges in 2018, with the aim to voluntary promote improved ESG disclosure and performance among listed companies.
- the UNEP Statement of Commitment by Financial Institutions on Sustainable Development, with 214 global signatories.
- the Green Bank Act introduced in March 2009, by Congressman Chris Van Hollen from USA, with the aim of establishing a green bank under the ownership of the US government. This bank was to offer financial support to any projects which would imply the increase of efficient energy usage, reduce carbon emissions and reduce environmental pollution resulting from energy creation.

Central Banks are among the most important stakeholders in the banking business that exert an important influence on credit institutions to carry out their business in an

environmentally friendly manner. As such, these institutions employ three types of influences, namely, *coercive*, *mimetic* and *normative* influences. Along with other institutions (like parent companies or other powerful financial actors), Central Banks have the necessary leverage to coerce/impose various influences on commercial banks and other financial institutions in order to conform to certain prescribed rules and regulations.

4. The involvement of Commercial Banks in fostering Green Banking

Until recent decades, financial institutions (such as commercial banks) were not so open with regard to the integration of environmental and social risks considerations into their business and their relationship with their clients, mainly because they considered themselves to be in a more environmentally friendly industry, when compared to other more polluting sectors (Oyegunle & Weber, 2015). As such, their financial, environmental and social sustainability was seen as separated. The medium to long-term effect of that was the decoupling of sustainable development form the financial sector. Nevertheless, if the small direct impact of banks on the environment (especially when compared to the production industry) can be overlooked, the major indirect impact of banks should not be underestimated.

One cannot deny that there were ***some initiatives*** that banks took and which were in the direction of fostering green and sustainable development. Nonetheless, these were limited to offering some environmentally friendly niche products and to reducing internal activities with direct impact on the environment. Most of the banks have limited themselves to the (if) existing legal requirements, while some of adopted voluntary principles and codes of conduct, such as the Equator Principles (Weber & Acheta, 2014). Some other banks have initiated activities through which they direct their investment, resources and lending power to decrease ecological degradation and to promote sustainable banking practices (UNEP FI & BEI, 2014). Furrer, Hamprecht, and Hoffmann (2012), after analysing 114 listed banks around the world, they found that:

a. a large group of financial companies symbolically implement climate-change-related measures in processes that have little effect on value creation;
b. a small group of financial institutions take some hybrid forms of climate-change-related actions, combining symbolism and substance;
c. only few banking institutions take substantive action when they implement their climate strategy (deflective decoupling).

Nevertheless, under the pressure of various factors (which will be discussed later), in recent years, banks ***started to join in the sustainable development drive***. In doing that, these institutions must adopt a long-term approach in order to better tackle the "tragedy of the horizon", as highlighted in an inquiry performed by the United Nations Environment Programme (UNEP): *the short-termism of the financial sector should be addressed and overcome by a longer-term sustainability view*.

The involvement of banks in Green Banking is even more important given their ***key position*** within the financial system (holding over 135 trillion USD in assets globally), as important providers of financial capital for households, private enterprises and the public sector (a position of even greater importance in bank based financial systems, like the ones in Europe especially). This was also underlined by the 2015 World Economic Forum and by the UNEP inquiry for a sustainable financial sector: the banking sector has a responsibility to deliver strong investment returns to its shareholders, but the sector must also ensure that the way it does business and who it conducts business with positively affects the communities and the natural environment in which it operates (Zadek & Robins, 2015).

In line with this is the opinion of Jeucken and Bouma (1999) who assign banks the role of both "quantitative and qualitative" intermediaries; these institutions have the ability "to weigh risks and attach a price to these risks", allowing them to use such "price differentiation" to "foster sustainability". Bowman (2010) also calls on banks to take a leadership role to develop new financial models to foster its long-term well-being, and to promote the welfare of and care for society and the environment. The main idea that derives from here is simple: *banks are proven to be valuable and strategic stakeholder in the transition process towards a greener economy*.

By reallocating credit to more sustainable sectors of the economy and managing credit and market risks, banks contribute, in particular, to (Kern, 2016):

a. reducing environmental sustainability risks,
b. mitigating the impact of these risks when they materialize,
c. adapting to the consequences of environmental change, and
d. supporting recovery when adverse environmental events cause massive disruptions.

When looking into the specific green measures that a bank can undertake, one can group them into two main clusters:

a. *measures and actions which can be assumed* ***within*** *the financial institution* by incorporating environmental factors into bank's core business, across its strategy and governance as well as risk management functions. Moreover, an environmentally friendly attitude can be adopted at a cultural level and within the skills of the employees.
b. *measures and actions which can be assumed* ***outside*** *the financial institution* by channelling financial capital towards green investments/ projects and companies that are environmentally friendly. This includes, among others, the funding through loan origination and credit provision, green retail savings products, as well as intermediation and capital markets activities.

Starting from the findings of Richardson (2006), Bowman (2010) develops a 'trichotomy' through which he explains the roles that finance industries play in relation with climate change:

a. financial institutions are *capital providers* that supply or facilitate finance for GHG intense projects as well as clean technology initiatives;
b. financial institutions act as *valuers* that price risks and predict company profitability and investment preferences in an increasingly carbon-constrained world;
c. financial institutions are *lenders* and shareholders that exercise influence over corporate management and climate-related corporate governance.

As a result of performing the above mentioned activities (focusing on risk assessment, financing and profiteering), financial institutions will impact on climate change either in the form of facilitating reduction of GHG emissions or in the process of assisting their increase.

Among the ***drivers***, which push banks into adopting GB in their activities, are provided by Oyegunle and Weber (2015): the inherent risk of banking business with regards to environmental and social issues, the demands of modern banking, the reality of our present age concerning environmental pollution and climate change, and the rising expectations of diverse stakeholder and pressure groups. Furrer et al. (2012) consider that a significant pressure that has affected banks' environmental risk management behavior originates outside the institutions from central banks, institutional investors, government, communities and NGOs. In UNEP FI and BEI (2014) we found that among the key factors which push banks towards implementing green banking operations, one can include: the lenders' liability, borrowers' ability to meet financial obligations, ecological deficits and business opportunities.

Bose, Khan, Rashid, and Islam (2018) have investigated the influence of regulatory guidance and several corporate governance factors on the green banking disclosure practices of Bangladeshi commercial banks and found that: the issuance of green banking regulatory guidance and corporate governance mechanisms (e.g., board size, institutional ownership) positively influences the level of green banking disclosure.

5. Conclusions

It is now clearer then never (almost as a ‘common sense’) the indisputable link between environmental risks and economic and financial risks. As also expressed in the 11th edition of the World Economic Forum Global Risks Report (2016 (2016)), the ‘cascading’ risks arising from climate change and other environmental sustainability challenges that our world is currently facing have an important impact on various aspects of our everyday lives. Political conflicts, forced migration, food security and economic and financial instability and even crisis are just some of the negative effects that stem from the mismanagement of the environment when excessively focusing on the economic aspects. To tackle these issues, we need to engage a multi-sectorial approach.

In such an endeavour, Regulators can be considered genuine ‘game makers’, but even they may act more slowly and of sync then needed. Hence, a real ‘call to arms’ is addressed to all industries but among these the finance sector has an overreaching influence. Amongst the providers of financial capital, banks are indeed key players which can assume an important role in supporting the economy’s adaptation to environmental changes, mitigation of climate change and building financial resilience to the surrounding environmental risks.

It came to our attention that there are some specific actions which the banking sector – with its regulators (central banks) and banking institutions – can focus on to align its practices to the green banking specific standards. Amongst these, we include: i) from a regulatory perspective, move more from voluntary codes to a regulative approach when awareness and capacity are not effective; ii) regard financial, environmental and social sustainability as intertwined and not separate (a complex web of interconnected relations); iii) banking institutions should view green banking as a strategy and not as tactics (focusing more on long-term E&S benefits, than on short-term financial gains); iv) increase bank investments in low-emission technologies and prioritize the granting of loans to green sectors; v) capitalize on the banks’ key role as value chain partners in attaining sustainable development.

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