

# **Developing a green bond market in Kenya: perspectives from practitioners and lessons from developing markets**

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## **Abstract**

Green bonds have recently emerged as a financing instrument with significant potential for funding of green projects. However, Kenyan issuers have been slow in issuing green bonds despite there being multiplicity of bankable green projects. This paper shifts focus from developed green bond markets to the developing market in Kenya. The paper offers perspectives from practitioners about factors which they consider as enabling and inhibiting the growth of the Kenyan green bond market. Findings from the interviews point to lack of awareness, weak drive for responsible investment, low institutional capacity and limited expertise of practitioners, inadequate risk management tools and significant issuance and monitoring costs as the main barriers to growth of the market. Similarly, a wide pool of investors and strong government support were identified as factors that could enable growth of the market. Lessons drawn from other developing markets that offer insights to the Kenyan market are discussed.

Key words: Green bonds; ESG; Climate finance; Kenya; Developing markets

## **Introduction**

Climate change came into vogue in the 1980s, occasioned by the 1987 Brundtland report and is one of the most pressing global challenges for 21st Century (GOK 2010). Africa accounts for merely 5% of the global carbon emissions and Kenya is one of the most vulnerable countries which experiences vast, interlinked and widely documented effects of climate change (Odhengo et al. 2019, Owino et al. 2016). Tackling climate change is a significant financial undertaking (IPCC 2018) and whereas the scale of investment needs is relatively well known, policymakers need a clearer understanding of how to mobilize

sufficient funds to finance green initiatives. Numerous climate change policies and initiatives unveiled over the years have pointed to the need for finances to realize the desired climate change action. For instance, it is estimated that Kenya will require USD 2.36 billion annually to address vulnerabilities associated with climate change and move the country onto a low-carbon growth path (GOK 2010). The discourse on responsible investing lends itself to the use of carbon-based financing instruments such as green bonds. (Moid 2017) argues that the growth of green bond markets over last few years can partly be attributed to an overarching trend towards incorporating environmental, social and governance (ESG) issues into the investing decisions of institutional investors. Green bonds are differentiated from regular bonds by their 'green' label, which connotes that the funds raised are ring-fenced for low-carbon (green) projects and infrastructure. (Weber and Saravade 2019, Maltais and Nykvist 2020) assert that green bonds play a salient role in driving public and private funds toward climate-aligned investments and in the process enabling institutional investors fulfill their ESG requirements. Further, (Deschryver and de Mariz 2020, Li et al. 2020, Katori 2018, Flammer 2018) assert that green bonds offer an effective tool for signaling investors to the institution's commitment to environmental sustainability.

Despite having a multiplicity of bankable green projects and a published strategic project priority list (Odhengo et al. 2019, OECD 2017), Kenya has been slow in issuing green bonds to raise capital for these projects which is fundamentally reflective of an interplay of a number of factors. The Kenyan green bond market set out in 2019 on the back of an underdeveloped regular bond market which has dictated the trajectory of the market. Many green bond issuances from developing markets, including Kenya, target developed capital markets thereby supporting the development of mature financial markets in regions which experience little environmental impact (Kuna-Marszałek and Marszałek 2017). More than a decade after the advent of green bonds, a total of USD 2.1 billion worth of green bonds have been issued by African issuers, representing merely 0.2% of the global total with Kenya representing just 2% of the green bonds from African issuers. (Banga 2019) highlights that the green bond markets in developing countries is much smaller in terms of overall size and that there are efforts being made in developing countries to expand their markets. The nature of issues which practitioners view as enablers and inhibitors to growth of the nascent green bond market in Kenya is still an open question which this paper will engage.

There is a growing body of literature on the subject of green bonds which has predominantly focused on developed green bond markets in North America, Europe and to a lesser extent Asia. Only a handful of studies have explored the development of green bond markets in the context of the developing world.

Moreover, practitioner's views on the subject has rarely been explored in available literature. This paper aims to build on previous studies done in developing markets by providing further evidence from practitioners in Kenya about of the nature of issues that inhibit and enable growth of developing green bond markets. This paper additionally seeks to build on an earlier study by (Mbewa, Ngugi, and Kithinji 2007) on developing the bond market in Kenya by exploring a more nuanced subset of bonds. To do so, we draw on interviews with seventeen practitioners working in various organizations within the Kenyan capital markets ecosystem. The seventeen practitioners who contributed to this study are middle and senior level managers who have practical knowledge of the investing and regulatory environment in Kenya. Eleven interviewees were purposely sampled owing to their experience and knowledge on the subject while six were sampled through a snowball process. The interviews were semi-structured in nature and were conducted between Mid-2018 and 2019.

Results of this study are discussed under two broad categories – inhibitors and enablers of developing the Kenyan green bond market. Evidence from interviews with practitioners show that lack of awareness along the value chain, weak drive for responsible investment, lack of risk management tools, low capacity of local players and high issuance and monitoring costs stand out as the main inhibitors to development of a Kenyan green bond market. Practitioners also indicate that a wide pool of investors and strong government support could spur development of the market. Lastly, the paper draws connections between the experiences of developing green bond markets in China, India, Brazil, South Africa and Nigeria, and sets out key lessons on how to develop the Kenyan market. Key lessons include credit enhancements, denomination of green bonds, tax and policy incentives for issuers and investors, sovereign and sub-sovereign issuances and means of issuance.

The remainder of this paper is organized as follows; first, the paper gives a brief background and context of the study. The study will then be situated in existing literature. Research methods employed for this study follows. Results of the study will then be discussed and a conclusion of the study presented.

## **Climate change action**

Green bonds should be seen in the context of climate change and other pressing sustainability challenges that have recently emerged (Kuna-Marszałek and Marszałek 2017). From a policy standpoint, there have been steps taken at different levels over the last few decades to coordinate efforts towards climate change action. The 1987 Montreal protocol, the 1997 Kyoto protocol and the 2015 Paris climate agreement are prominent global treaties that were aimed at countering the threat of climate change. Development blueprints such as the Sustainable Development Goals (SDGs), the African Development Bank's strategy 2013-2022, the Africa Union Agenda 2063 underscore the importance of building resilience to climate shocks and providing sustainable infrastructure among other aims. Likewise, The United Nations' Sustainable Stock Exchanges (UN-SSE) initiative and the 2016 Marrakech pledge both call for the development of capital market ecosystems to support green investments. Further, the Kenyan government has churned out several policy documents to guide the transition to a low-carbon economy but with little progress to show for them. These policy documents include the Kenya Vision 2030 strategy, the National Climate Change Response Strategy, the National Adaptation Plan (2015-2030), the National Climate Finance Policy and the Green Economy Strategy and Implementation Plan (GESIP). All these policies and treaties have been confronted with multifarious challenges, the biggest of them being mobilization of finance for climate change action. (UNFCCC 2015, IPCC 2018) stress the need for cooperation in enhancing climate change action and a need to mobilize climate finance in a variety of sources, instruments and channels to give effect to these treaties and policies. Government funds will never be enough to deal with current and future threats posed by climate change and therefore the private sector should be prepared to play their part (Kuna-Marszałek and Marszałek 2017).

There is a range of funds available to Kenya to fund its climate change action. In 2017, the International Finance Corporation (IFC) launched a USD 325 million Green Bond Cornerstone Fund, identifying Kenya as one of the 24 countries that will benefit from this fund through green bonds issued by Banks. Under the United Nations Framework Convention on Climate Change (UNFCCC) framework, there are multilateral funds available to Kenya including the Global Environment Facility (GEF) and the Green Climate Fund (GCF). (Tolliver, Keeley, and Managi 2019) suggest the GCF is crucial in financing Paris Agreement and other green policy outcomes in developing countries. Unfortunately, Kenya, like most of the African countries, is yet to access these funds as envisaged (Odhengo et al. 2019). All this builds on lessons from

the Kyoto Protocol, where more than 80% of international climate funds mobilized through the clean development mechanism went to middle income countries such as China and about 18% to developing regions in South America and Middle East, while low income regions such as Africa received less than one percent (Odhengo et al. 2019).

Adding impetus to the conversation on financing climate change action is the discourse on responsible investing. (Moid 2017) suggests that the recent growth of green bond markets is in-part attributable to an inclination towards institutional investors towards investments that take into account ESG issues. Sustainable Responsible Investing (SRI), responsible investing, and impact investing are terms that are often used interchangeably to refer to investing that in addition to targeting attractive returns also targets some social or environmental aims. (Giamporcaro and Pretorius 2012) define SRI as a generic term covering any type of investment process that combines investors' financial objectives with their concerns for ESG issues. This form of investing recognizes that environmental, social and governance factors are material to risk and return and should be incorporated into investment decisions and strategies. Green bonds offer an impact signaling tool to investors (Deschryver and de Mariz 2020, Li et al. 2020, Katori 2018, Flammer 2018) and allows institutional investors to fulfill their ESG goals and mandates by allowing for climate-aligned investments (Weber and Saravade 2019, Maltais and Nykvist 2020). Globally, the gold standard for responsible investing is the UN-affiliated Principles for Responsible Investing (PRI) which as at end of 2020, had a total of 3,575 institutional signatories mostly drawn from developed countries. PRI signatories from Africa represented roughly 2% of this tally while Kenya did not have any signatories to the PRI, perhaps an indication that the idea of responsible investing has not resonated with institutions in Kenya and indeed the rest of Africa.

### **The emergence of green bonds**

Green bonds were introduced in 2007 when the European Investment Bank (EIB) and World Bank issued the first green bond on the Luxembourg Stock Exchange. The advent of green bonds spawned-off other impact bond categories over the years including social, sustainability and SDG bonds. According to the Climate Bonds Initiative (CBI), the impact bond market had raised approximately USD 1 trillion as at May 2020. Of this, green bonds constitute the largest part having raised USD 876.5 billion as at May 2020.

(Shishlov, Morel, and Cochran 2016) define bonds as debt instruments used to borrow the funds for a defined period of time at a fixed interest rate that can be sold and bought (traded) on capital markets at

any time during its duration. The 'green' component of a green bond is the single most important distinction between a green and a regular (vanilla) bond. There are no explicit standards as to what is considered 'green' (OECD 2015, 2017). Nonetheless, the nature of a green bond is such that it serves the dual purposes of an investment and a sustainability instrument. Green bonds may be issued by governments common as sovereign bonds, by public entities such as state-owned enterprises and municipals or by private entities also referred to as corporate green bonds.

Launched in May 2017, the Green Bond Program Kenya (GBPK) brought together various industry stakeholders with the aim of accelerating the take-up of green bonds in Kenya. The work of the GBPK led to guidelines for issuance of green bonds being unveiled by both the Capital Markets Authority (CMA) and Nairobi Securities Exchange (NSE) in early 2019 to pave way for the maiden green bond issuance in Kenya by Acorn Holdings in October 2019. The bond was cross-listed on the NSE and the London Stock Exchange (LSE), achieving 86% subscription and raising USD 43 million to be used for the development of environmentally-friendly student accommodation. The Acorn issuance was meant to kick-start the Kenyan green bond market by signaling domestic issuers and investors towards this new financing instrument. However, prospects of a vibrant market in Kenya appear bleak with only one green bond issued and a seemingly low appetite for green bonds among issuers and investors.

### **Green bond market development**

The green bond market is modelled on the architecture of the regular bond market. Therefore, while seeking to explore the development of a green bond market in Kenya, it is fundamentally important to pay attention to development of the regular bond market because of the patent link between the two. (Banga 2019) suggests that a potential driver of growth of green bonds in developing countries is the fact that green bonds and regular bonds are similar in structure implying that a vibrant regular bond market should, to a great extent, lead to a vibrant green bond market. The Kenyan bond market like most African bond markets is underdeveloped (Mu, Phelps, and Stotsky 2013, Mbewa, Ngugi, and Kithinji 2007, Essers et al. 2016). (Bae 2012) studies data from 43 developed and emerging bond markets between 1990 and 2009 and conclude that the level of economic developed measured as GDP Per Capita is the most consequential variable, and therefore the main reason, why African bond markets are underdeveloped. While carrying out a situation analysis of the (regular) bond market in Kenya, (Mbewa, Ngugi, and Kithinji 2007) put forward a number of preconditions for a successful bond market in the Kenya namely; an active

money market, effective governance structures, an effective legal and regulatory framework, secure and efficient trading systems, a broad investor base, quality information disclosure, an investor guarantee or sinking fund and tax and policy incentives. There has been a dominance of government securities over corporate bonds in Kenya (see Table I) which is consistent with (Essers et al. 2016, Mu, Phelps, and Stotsky 2013) who observe that with the exception of South Africa, corporate bond markets are still nascent in most sub-Saharan African countries. (Mbewa, Ngugi, and Kithinji 2007) suggest that investors have more trust in government-issued securities than those issued by corporate entities. Mu et al (2013) however argue that it is useful to look at government securities and corporate bond markets in sub-Saharan African countries separately – that in contrast to the government securities market, there are fewer variables that are significantly linked to corporate bond market capitalization.

Few studies have dealt with the question of why corporate bond markets in Africa are underdeveloped. (Bae 2012) finds that low interest rates, a large banking sector, and well-developed government bond markets are critical to corporate bond market development while institutional quality which is an aggregate measure of variables such as law and order, regulation, investor rights protection and transparency does not explain cross country variations in the corporate bond market development. (Mu, Phelps, and Stotsky 2013) observe that corporate bond market development in Africa is directly linked to economic size (GDP), the level of development of the economy (GDP per Capita), better institutions, and interest rate volatility and inversely related to higher interest rate spreads and current account openness.

A number of studies on green bonds have been dedicated to pricing as a key facet of the bond structure and argue that there is no difference in the pricing of green bonds and regular bonds, also referred to as flat pricing. (Chugan, Mungra, and Mehta 2017) assert that the financial structure of green bonds is nonetheless important to investors aside from their environmental impact. The interest rate or price of a bond depends on the credit risk of the issuer, the duration and on the general financial market and is usually not dependent on the type of project that is financed by the bond (Scott-Quinn et al. 2015) as such, green bonds would be expected to have the same interest rate as regular bonds issued by the same issuer for the same duration (Weber and Saravade 2019). (Flammer 2018) using a matched sample of green and regular bonds by the same issuer observes that there is no difference in the pricing of green and regular bonds, consistent with (Larcker and Watts 2019) who found no pricing difference among a similar sample of municipal bonds. (CBI 2019) similarly argues that there is no credit enhancement to explain pricing differences between green bonds and regular bond equivalents because they are both subject to the same market dynamics such as supply, rate expectations, and geo-political issues.

**Table 1.** Value of bonds issued in Kenya.

Value of bonds issued (USD)	2014	2015	2016	2017	2018	2019
Corporate bonds	1.2	1.0	0.9	0.7	0.6	0.0
Government bonds	10.0	10.3	11.7	13.3	14.8	23.2
Proportion of government bonds (%)	89%	91%	93%	95%	96%	100%

Source: Africa Security Exchanges Association (ASEA).

Growing cognizance of the risk that climate change poses to businesses is a major driver of growth of green bonds in developed markets (Banga 2019), so much that investors are willing to sacrifice some return to hold green bonds (Baker et al. 2018). (Maltais and Nykvist 2020, Hachenberg and Schiereck 2018, Ehlers and Packer 2017, Barclays 2015) contends that financial returns alone are not sufficient for green bond investors given they see value in investing in projects that are independently verified as green without taking on any substantial additional risk. (Bachelet, Becchetti, and Manfredonia 2019) equally argue that green bonds may be held at a premium either due to the low risk associated with the green investment and/or investors who are willing to pay for environmental sustainability. (Bachelet, Becchetti, and Manfredonia 2019) conclude that an issuer's credibility and third-party verifications are essential to reduce informational asymmetries and avoid suspicion of greenwashing. (Banga 2019, Kuna-Marszałek and Marszałek 2017) assert that the situation is different in many developing countries given there is lack of awareness on green bonds among policy-makers, bond issuers and investors. (Chugan, Mungra, and Mehta 2017, Weber and Saravade 2020) similarly find that lack of investor awareness amongst the investors is a pressing challenge to development of the Indian green bond market.

As the green bond market grew, several taxonomies and green certification standards emerged which has led to grey areas around green-labelling. Certification schemes differ across a number of dimensions including the use of quantitative tools, degree of granularity and the requirement of continuous monitoring (Chugan, Mungra, and Mehta 2017). The most common taxonomies are Green Bond Principles (GBP) by the International Capital Markets Association (ICMA) which offer voluntary green-labelling guidelines and the CBI scheme which provides sector specific eligibility criteria. Regional bodies such as Association of Southeast Asian Nations (ASEAN) and the European Union (EU) have their own green bond standards in place. Some jurisdictions such as China, France, India and the Netherlands have equally developed their own national taxonomies. Furthermore, external reviewers use different rating metrics. Taking an example of the two biggest reviewers; CICERO uses three shades of green – light green, medium green and dark green - while Sustainalytics give an outright opinion on whether or not the bond complies with the principles of the GBP.

Lack of a harmonized green bond taxonomy, standardized certification methodology and metrics increase the risk of greenwashing and is a threat to growth of green bond markets. (Jeevan 2017) defines greenwashing as an act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service. (Jeevan 2017) attributes the rise in greenwashing to a

growing need for green products along with the fact that companies attempting to respond to this need either lack the ability or the willingness to understand and act on what is expected. Even though (Ceres 2015) stresses that the integrity of the green bonds remains robust, (Shishlov, Morel, and Cochran 2016) argue that greenwashing threatens the very survival of the green bond market and raises reputational and legal risks related to its environmental integrity. Likewise, (Deschryver and de Mariz 2020, OECD 2017) stress that lack of standard definitions and norms along with a harmonized certification system, in comparison with standardized credit ratings in the regular bond market is a significant obstacle to development of the green bond market. (Moid 2017) cautions that for incentives to operate efficiently, grey areas around green-labelling should be addressed and therefore the definition of “green” should be standardized to offer guardrails for a government incentive framework. (Saravade and Weber 2020) further stress the need for greater institutional support and oversight from social actors like government, regulators, industry associations and institutional issuers to allay fears of greenwashing.

Developing markets have a challenge in coming up with suitable projects to attract investment which could spur growth of the market. (Chugan, Mungra, and Mehta 2017) observe that limited bankable green projects has inhibited expansion of the green bond market in India which is partly attributable to suitability and strategic prioritization of projects. (Maltais and Nykvist 2020) similarly observe that whereas there is an appetite for green bonds from institutional investors, limited bankable green projects is a challenge in Sweden. (Banga 2019) argues that green projects in developing markets are typically small in size which fail to meet the minimum issuance size that could appeal to underwriters and attract foreign investment. This however seems to be least of a challenge for Kenya. The Kenyan government has published a strategic project priority list of green projects that spans regional, national and sub-national scales (OECD 2017, Odhengo et al. 2019). Kenya has missed opportunities in funding a number of these projects through green bonds. Examples of fairly recent projects in Kenya’s energy sector which qualify as green under the CBI taxonomy include but are not limited to the USD 5000 MW geothermal energy projects by Kenya’s largest electricity generator, KenGen, with an estimated capital requirement of USD 180 million (Ngugi 2012), the 300 MW Lake Turkana Wind Project which enjoys a 20-year fixed-price power purchasing agreement with the Kenya Power & Lighting Company (KPLC), the 50 MW Garissa Solar Power Plant and the Last Mile Connectivity Project by KPLC. The Kenyan green bond market could be poised to grow if the availability of bankable green projects is complemented by conducive underlying market conditions.

The lack of green bond issuances despite the availability of potential investors is closely linked to the perception of high cost of issuing green bonds. (Banga 2019, Moid 2017, Deschryver and de Mariz 2020, Katori 2018, Yamahaki et al. 2020) argue that additional transaction costs of monitoring and certification of a green bonds inhibit growth of green bonds in developing markets. (Moid 2017) suggest that such incentives not only make green bonds more attractive but are also particularly critical for mobilizing retail savings in developing markets. Long term tax and policy incentives could however counter the challenge of high transaction costs and catalyze growth of the green bond market in developing markets (Ngwenya and Simatele 2020b, Shishlov, Nicol, and Cochran 2018, Maltais and Nykvist 2020, Agliardi and Agliardi 2019).

## **Methods**

Primary data was collected through interviews with seventeen practitioners working in various organizations in the Kenyan capital markets. These organizations include an industry association body, investment management firms, transaction advisory firms, the securities exchange, investment Banks and an international climate finance monitoring organization. The seventeen practitioners who contributed to this study are middle and senior level managers from who have practical knowledge of the investing, regulatory and investor environment in Kenya. Eleven practitioners were purposely sampled owing to their experience and knowledge on the subject while six were sampled through a snowball process.

The interviews were conducted between Mid-2018 and 2019. This period covers the working period of the GBPK leading to the issuance guidance notes by CMA and NSE in early 2019 but before the first green bond in Kenya was issued in October 2019. The interview guideline was semi-structured with some closed questions that required brief responses and open-ended questions which allowed interviewees to give more detailed responses. Other interview questions arose from the interviewers own reflection on the responses and for purposes of clarification. Anonymity was guaranteed to the interviewees, as such, verbatim quotes are not directly attributed to interviewees or their organizations. A pilot interview was done for the study which assisted in structuring interview questions, getting initial thoughts on the topic and the general interview style. Interview recordings and notes were analyzed and organized into themes and sub-themes which formed the basis of findings for the study. Additionally, a wide range of secondary sources were reviewed for this study including but not limited to frameworks, listing prospectus and post-

issuance reports for numerous green bond issuances, institutional reports and green bonds data from the CBI database.

### **Challenges to developing the Kenyan green bond market**

A number of issues stand out for practitioners as inhibiting the development of the Kenyan green bond market. First, practitioners hold that there is a lack awareness along the value chain about green bonds. The GBPK has held a number of engagements with a section of stakeholders, however practitioners note that there is a clear knowledge gap on green bonds among domestic issuers and investors. (Chugan, Mungra, and Mehta 2017, Deschryver and de Mariz 2020, Banga 2019, Maltais and Nykvist 2020, OECD 2017) observe that the main challenge growth of green bond market is a general lack of awareness regarding the benefits of green bonds along with the perception of a high cost associated with a green bond issuance. One practitioner however suggested that awareness is a relative term and that there can never be enough awareness on the subject as it is to evolve over time and therefore this should be a continuous activity.

Secondly, a weak drive for responsible investment in Kenya has inhibited growth the Kenyan green bond market. Practitioners observe that Kenyan investors, whether individual or institutional, are mostly yield-driven and have not fully embraced the idea of responsible investing. In the same way, Kenya does not have institutional signatories to the PRI which is indicative of the poor emphasis on responsible investing in the country. Taking South Africa as a contrasting example, the drive for responsible investment is evident in a number of ways. Along with having numerous signatories to the PRI, the South Africa Pension Funds' Act Regulation 28 requires that pension fund's investment portfolio include ESG considerations. Likewise, the Johannesburg Stock Exchange (JSE), unlike the NSE, introduced ESG reporting on a comply-or-explain basis in 2002 and from 2010 required listed companies to produce integrated reports to document their sustainability efforts. Such efforts have seen South Africa acclaimed as the leading market for green bonds in Africa. (Agliardi and Agliardi 2019) urge that policy-makers should invest in creating awareness among issuers and investors in order to elicit green preferences and stimulate demand for green bonds.

Third, low capacity of institutions and limited expertise of practitioners in the Kenyan capital markets is a challenge to growth of the Kenyan green bond market. In particular, practitioners observe that Kenya has an underdeveloped credit rating market and debt issuers have to rely on international credit rating agencies who are perceptibly more credible. A credit rating agency acts as an intermediary between the investor and the issuer by making the investor aware of underlying risks of the issuer or issued securities

therefore promoting confidence in the market. (Mbewa, Ngugi, and Kithinji 2007) observe that Kenyan credit rating system is underdeveloped because professionals find eligibility requirements to register as a credit rating agency and the infrastructure needed is either too prohibitive to local companies. Likewise, (Mbewa, Ngugi, and Kithinji 2007) point out that limited expertise in packaging debt products is a challenge to the development of the Kenyan (regular) bond and that there is a need to equip local professionals with skills to carry out their various functions. (Odhengo et al. 2019) also note that the lack of technical and institutional capacity that could enhance the writing of competitive proposals and their execution is a major reason why Kenya has been unsuccessful in attracting climate finance. Some practitioners however maintain that there is a good pool of skills in the market which has been increasing over the years but these professionals operate in constrained industry conditions beyond their control. Practitioners observe that there is need to borrow from the international market when it comes to green bonds especially in the area of green certification and credit rating to avoid pitfalls that may further strain development of the market.

Fourth, the lack of risk management tools such as sinking fund provisions, guarantees and underwriting facilities which could enhance the confidence of bond holders is an impediment to growth of the green bond market in Kenya. Practitioners observe that the Kenyan bond market suffers from poor credibility owing to its poor liquidity among other challenges and therefore the lack of risk management tools further impairs its credibility. Practitioners stress that risk management tools are particularly important where payback to investors is dependent on future cash flows that the project is expected to generate. This is consistent with (Weber and Saravade 2019) who observe that developing green bond markets face significant credit risks which deter investment in their markets. (Mbewa, Ngugi, and Kithinji 2007) point out that sinking fund provisions are not currently catered for in the legal framework in Kenya. In contrast, the Bond Exchange of South Africa (BESA) has in place a guarantee fund for the redemption of maturing bonds. Risk management tools will be pivotal in achieving favorable bond credit ratings and building investor confidence in the market.

Likewise, the Kenyan bond market does not have official underwriters, instead, Kenyan investment banks assume the role of underwriters but do not assume the listing risk. The risk of undersubscription is therefore not adequately mitigated given that the issuer is forced to bear the risk of undersubscription and this in turn makes corporates issuers shy away from issuing green bonds. This is consistent with (Ong 2005) who observes that emerging markets have little capacity to underwrite corporate bonds due to either lack of resources or incentives to dedicate their resources to underwriting of bonds. In more

developed exchanges such as Hong Kong, France and Germany underwriters take up any shortfalls if corporate bonds cannot be sold at an agreed minimum price (maximum yield).

Lastly, the relatively high cost of issuing and monitoring green bonds is an impediment to the growth of the Kenyan green bond market. This includes cost of issuing, certification, monitoring and reporting as well as costs associated with obtaining guarantees and credit ratings. This is consistent with (OECD 2017, Banga 2019) who observe that cost of obtaining a second-opinion and third-party assurance is relatively high and can be a barrier to small issuers. While some of these costs apply to both domestic and foreign investors, some costs such as credit ratings and guarantees are mostly associated with foreign investors. (Mbewa, Ngugi, and Kithinji 2007) note that foreign investors are more sensitive to risk than domestic investors. The CMA Act and policy guidance notes for issuance of green bonds from the CMA and NSE do not make it mandatory for either regular and green bonds to carry a credit rating. Practitioners noted that while foreign investors are keen on a bond credit rating, many of the regular bonds that have been issued in Kenya did not have a credit rating and therefore green bonds not having a credit rating should not necessarily be a hindrance to growth of the market. However, while the cost of obtaining a credit rating and/or guarantees may, to some extent, be avoided, the cost of certification and monitoring of green bonds can hardly be avoided and therefore is likely to inhibit growth of the market if not materially reduced.

### **Enablers of the Kenyan green bond market**

Practitioners suggest that there is a wide pool of investors who can invest in green bonds from Kenyan issuers. Aside from various multilateral sources of finance, practitioners identified Banks, pension funds and insurance companies as potentially the biggest domestic investors in green bonds. (Tolliver, Keeley, and Managi 2019) suggest that green bonds are likely to appeal to a broad range of investors who are looking to bolster their portfolios with environmentally-conscious investments. (Baker et al. 2018, Hachenberg and Schiereck 2018, Maltais and Nykvist 2020) observe that investors are becoming increasingly aware of sustainability issues and would be willing to hold green bonds at a premium. As highlighted earlier, Kenyan investors lack awareness about the green bonds and have a weak drive for responsible investing. Realizing investment from multilateral funds, institutional and retail investors will require heightened awareness about responsible investment by government and other market actors.

Secondly, practitioners observe that government has been keen in putting in place measures towards transitioning into a green economy and more importantly collaborating with stakeholders in developing a

domestic green bond market. Such efforts include constituting the GBPK, issuing guidelines for green bonds issuance and publishing a strategic green project list. As practitioner 4 noted;

*We have met parliamentarians for the purpose of a sovereign green bond issuance. One of the major stakeholders in this initiative is the national treasury and the Governor of the Central Bank is the patron of the GBPK, if it were not for this commitment we would not be here.*

Conversely, practitioner 6 and 11 take a dim view of the contribution of government in developing the market and notes that government has missed numerous opportunities to kick-start the market by issuing green bonds for green projects in the country. Nonetheless, practitioners agree that strong government support is fundamental in developing the market. This view is shared by (Shishlov, Morel, and Cochran 2016, Ngwenya and Simatele 2020a, Banga 2019) who suggest that governments should provide targeted public support through tax and policy incentives as well as credit enhancements.

Free movement of capital in and out of the country could enable growth of the Kenyan green bond market. Kenya has had an open capital account and a fairly free-floating exchange rate since the 1990s during the liberalization era. Most foreign currency is readily available from commercial banks and foreign exchange bureaus and can be bought and sold freely by domestic and foreign investors. Practitioners suggest that foreign capital inflows are much needed for investment in green bonds as domestic savings alone will not be substantial enough to sustain a vibrant domestic market. Whereas the CMA regulations do not restrict foreign investor participation in either government or corporate bonds, the Kenyan bond market does not attract foreign participation as compared to foreign investment in equities in the same market. This is mostly attributable to poor liquidity of the regular bond market given only a small portion of bonds trade. (Rajan and Zingales 2003) argue that liberalized financial systems encourage bond market development because established interests may not be able to insist on policies that suppress competing sources of supply when the economy is exposed to international competition. (Sy 2015) similarly urges liberalization of the capital account so as to diversify the investor base for bond markets in sub-Saharan Africa. However, some practitioners suggest that this ought to be looked more broadly, that once the constraints to free movement of capital are removed then the flow of capital in and out of Kenya will be determined by whether the local fundamentals such as the strength of institutions and market volatility are favorable over time to attract resources to an economy, a view shared by (World Bank 2001, Yamahaki et al. 2020).

*If you have some market volatility you won't expect capital to flow into the economy. At that point it won't matter if you have an open capital account or not. You have to look at other contributors to movement of capital on the back of that open capital account. (Practitioner 1)*

(Mbewa, Ngugi, and Kithinji 2007) argue that “foreign investors tend to be relatively more sensitive to risk, and manage their portfolios actively, which means a stable macroeconomic environment and prudent capital account liberalization is essential to maintain a stable and growing participation of foreign investors in debt securities markets”, a view shared by (Yamahaki et al. 2020).

### **Lessons from other developing markets**

This section highlights key lessons which Kenya can draw from the experiences of other developing green bond markets to scale up its own market. These lessons are primarily drawn from the green bond markets in China, Brazil, India, South Africa and Nigeria.

First, credit enhancements for corporate issuances are critical to development of viable green bond markets, more so in developing countries. Typically, sovereign green bond issuances do not require third-party credit enhancements given that they are backed by the state and are thus considered to be risk-free investments. To mitigate credit risk in developing green bond markets, issuers turn to third-party credit enhancements to guarantee coupon payments or the principal amount or both. For instance, India has readily available facilities from donor agencies to provide different forms of credit enhancements for green bonds while in Nigeria, the Infrastructure Credit Guarantee Company (Infracredit) provided credit enhancements for the Access Bank and North South Power Company Limited (NSP) green bonds. Notably, when a green bond issuance is accompanied by a credit enhancement, a higher credit rating is achieved and often, the issuance is oversubscribed. For example, a partial guaranteed for ReNew Power's green bond issuance from the India Infrastructure Finance Company Limited (IIFCL) and the Asian Development Bank (ADB) resulted to an upgrade of its credit rating from BBB to AA+ (TERI 2018). In Nigeria, the NSP green bond achieved a rating of AAA, the highest possible rating for any debt issuer, which was attributable to a credit enhancement from Infracredit. Likewise, a partial credit guarantee from IFC and Development Bank of Southern Africa (DBSA) for the City of Johannesburg green bond led to a credit rating of AA- by FitchRatings three notches above the city's stand-alone rating of A- at the time of issuance, achieving an oversubscription of 2.3 times (IFC 2014). The pioneer green bond in Kenya by Acorn similarly had a B1 rating from Moody's, a step higher than Kenya's sovereign rating of B2 which could be attributed to a partial credit guarantee from GuarantCo. To accelerate development of the

Kenyan green bond market, stakeholders should forge partnerships and establish mechanisms where corporate issuers can obtain credit enhancements for green bond issuances without difficulty.

Second, a substantial number of issuers in developing markets have issued locally-denominated green bonds as a way of mitigating foreign currency risk associated with repaying foreign-denominated debt. In Nigeria, all green bond issuances - two corporate and two sovereign issuances- were locally-denominated. In South Africa, municipal green bond issuances by the Cities of Johannesburg and Cape Town along with majority of subsequent corporate issuances were locally-denominated. In China, more than three-quarters of green bond issuances are locally-denominated (ECLAC 2017) primarily for two reasons. First, green bonds issued in mainland China (onshore green bonds) are typically locally-denominated. Secondly, the demand for green bonds in China is almost entirely domestic and foreign participation accounts for merely 1.6% (CPI 2020). (Essers et al. 2016) observe that locally-denominated bonds are not only an important way to mobilize domestic savings for investment but can also help mitigate external shocks and can have considerable financial, macroeconomic and institutional spill-over effects, a view shared by (Sy 2015, Banga 2019, Kahn 2005). (Moid 2017) and (Banga 2019) argue that high currency hedging costs impedes growth of domestic green bonds in developing markets.

Several green bond issuances in developing markets have been foreign-denominated primarily because locally-denominated green bonds tend to dampen interest from foreign investors to whom the foreign exchange risk is transferred to. For example, in India, the IREDA green bond was locally-denominated, the first Yes Bank green bond was Euro-denominated while the Export-Import (EXIM) Bank and Industrial Development Bank of India (IDBI) bank green bonds were dollar-denominated. Similarly, in Brazil, green bonds issuances were denominated in local and foreign currency in almost equal measure (ECLAC 2017) which (Yamahaki et al. 2020) attributes to the country's unstable macroeconomic environment. Furthermore, a number of green bond issuances in Brazil, India, Nigeria and Kenya have been cross-listed in international markets such as the LSE and Singapore Exchange (SGX) as a way to attract foreign investment and achieve better subscription. (Weber and Saravade 2020, Chiesa and Barua 2019) argue that foreign-denominated green bonds can be valuable in attracting foreign investment in green bonds. Ultimately, denominating green bonds remains a delicate balance between managing foreign currency risk and attracting the much-needed foreign investment.

Third, tax and policy incentives for corporate issuers and investors in developing markets have led to increased green bond issuances and demand for green bonds by investors respectively. For example, Brazil, South Africa and China have implemented a number of tax incentives targeted at their energy

sector. In South Africa this is in the form of capital and accelerated depreciation allowances for specified assets while in Brazil and China this is in the form of exemptions and reductions for Companies Income Tax (CIT) and Value Added Tax (VAT). Additionally, China has a range of financial incentives at provincial and municipal levels which have been useful in increasing issuances (CPI 2020). In Nigeria, the CIT exemption order 2011 allowed for interest-free coupon payments for bondholders while in India, coupon payments on the Indian Renewable Energy Development Agency Limited (IREDA) green bond were tax-exempt resulting to a five times oversubscription on the issuing day (Moid 2017). Consistent with many previous studies, tax and policy incentives from government could be instrumental in scaling up green bond issuances and investment in Kenya.

Fourth, issuing sovereign and sub-sovereign (municipal) green bonds can substantially drive development of a domestic green bond market. A number of developing markets with sizeable green bond issuances have issued either a sovereign or a sub-sovereign green bond. The green bond markets in China, Nigeria and Chile started off with sovereign green bond issuances. Thenceforth, Nigeria has issued a second sovereign green bond while Chile has issued two more. Likewise, Mexico and Argentina have issued a sub-sovereign green bond each while South Africa has issued two. (Bae 2012, World Bank 2001) suggests that developing markets looking to develop needs to start with the government bond market as it is more liquid and can provide a benchmark yield curve for the broader credit market. A well-developed government bond market is positively correlated to a more developed corporate bond market (Bae 2012). Given the dominance of government-issued securities in the Kenya (Table I), a sovereign and/ or a sub-sovereign issuance may lend credence to the market and thereby stimulate demand for green bonds by local and foreign investors.

Lastly, there is need to diversify the investor base for green bonds in developing markets. Private placements has been the go-to means of issuance across developing green bond markets given they are perceptibly cheaper, less administrative and more confidential. For instance, the Acorn green bond issuance in Kenya was structured as restricted public offer and targeted sophisticated (institutional) investors but was unsuccessful in achieving full subscription despite being cross-listed on the NSE and LSE. This signals the need for issuers to look beyond traditional ways of mobilizing investment. Kenya has an advanced mobile money industry which provides an innovative means of mobilizing retail investment for green bonds. Mobilizing investment through mobile money will not be entirely new however, the Government of Kenya in 2017 issued a mobile-based treasury bond named M-Akiba, the first of its kind, which was oversubscribed. M-Akiba was tradeable on the NSE secondary market via mobile phones which

enhanced retail investor participation by bringing the trading platform closer to 300,000 new bond investor who invested as low as USD 30 (KSh 3,000) (FSD 2018). (World Bank 2001) suggests that a narrow investor base can lead to some investor groups taking government hostage. Retail investors are likely to contribute to a stable demand for issued securities, which, in times of volatility, can mitigate the risk and impact of poor subscription by institutional and foreign investors (World Bank 2001). Kenyan issuers should thus explore mobilizing retail investment in green bonds through mobile money.

## **Conclusion**

The discourse on climate change action and responsible investing underpin the need for green bonds. The underdeveloped bond market in Kenya has however cast a shadow over development of the Kenyan green bond market. Further, Kenya has missed numerous opportunities to kick-start its green bond market through numerous bankable projects which qualify as green under the CBI and GBP taxonomies.

The GBPK and other stakeholders should, as a matter of necessity, heighten awareness about green bonds and responsible investing along the value chain as a primer to stimulating domestic demand for green bonds. Weak drive for responsible investing in Kenya has inhibited the development of the Kenyan green bond market seeing as domestic investors are mostly yield-driven as opposed to the idea of responsible investing. Government and other market actors ought to set the tone for responsible investing to drive growth of the Kenyan green bond market.

Whereas Kenyan issuers could benefit from foreign expertise in the interim, the importance of building the capacity of local institutions and expertise of local practitioners to support the market cannot be stressed enough. There is a wide pool of funds and range of investors that Kenyan issuers can attract to fund their green projects. Majority of the practitioners take the view that government has been keen in supporting the development of a domestic green bond market. Practitioners agree that issuing a sovereign green bond may accelerate development of the market given that domestic investors prefer government securities to corporate bonds because of the perception of higher risk with the latter. Government has a strategic role to play in strengthening policy frameworks and offering incentives to catalyze investment in green bonds. Even though the boundaries of "greenness" have barely been tested in Kenya, a shared understanding of what should be considered green will be critical to concretize government incentives and dispel fears of greenwashing.

While Kenya's open capital policy is conducive for attracting foreign investment, it is not an end in itself. Market actors must be cognizant of other push and pull factors that affect flow of capital in order to

preserve investor confidence in the market. The advanced mobile money industry in Kenya not only provides a potentially simpler, more accessible trading platform for green bonds but could also allow retail investors to participate in the market which could be spur growth of the market.

This paper has unpacked practitioners' insights about inhibitors and enablers of growth of the Kenyan green bond market. The paper also draws key lessons from the other developing green bond markets which could be transferred to Kenya. With new green bond issuances in the market, the structure, impact outcomes of green bonds as well as new evidence about inhibitors and enablers of growth of the market will present further research avenues.

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