Financial Sector Deepening (FSD) Africa West African Economic and Monetary Union (WAEMU) Green Bond Scoping Report

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ACRONYMS LIST

Acronym	Definition
CBI	Climate Bonds Initiative
DCM	Debt Capital Market
EGP	Eligible Green Projects under the GBP taxonomy
GBP	ICMA Green Bond Principles
GDP	Gross Domestic Product
GHG	Greenhouse Gas
ICMA	International Capital Market Association
IFC	International Finance Corporation
LULUCF	Land Use, Land-Use Change and Forestry
NDC	Nationally Determined Contribution
SBG	ICMA Sustainability Bond Guidelines
SBP	ICMA Social Bond Principles
SDG	Sustainable Development Goals
SPO	Second Party Opinion
TA	Technical Assistance
WAEMU	West African Economic and Monetary Union

Executive Summary

Overview

The Member States of the West African Economic and Monetary Union (WAEMU) face the triple challenge of addressing the consequences of climate change, developing infrastructure in light of strong anticipated demographic growth, and rebounding from the impacts of recent global shocks such as the COVID-19 pandemic (hereafter "COVID") and the war in Ukraine. These challenges need to be met in the context of sizable long-term financing gaps in several economic sectors, and within the fiscal constraints imposed by sovereign debt burdens which, for some Member States, are significant – especially in the context of tightening global credit markets and rising interest rates. Faced with these challenges, Member States need to ensure the development of their economy, while integrating the commitments developed within their Nationally Determined Contribution[1] (NDC), which aim to combat climate change as part of broader national development plans. In this regard, private sector actors are required to contribute alongside public sector actors to the achievement of climate change mitigation and adaptation objectives, particularly in sectors whose expected contribution has been defined as relatively important.

"Green Bonds" are financial instruments whose proceeds are utilised to finance eligible projects and activities designed to foster sustainable, resilient and inclusive growth. In this sense, Green Bonds fit into the list of alternative financing mechanisms that can be used to solicit some of the capital needed for national objectives, potentially allowing access to a broader and more diverse investor base, some of whose investment mandates include positive environmental and social impact requirements.

This Study focuses on the feasibility of developing an active market for Green Bonds in the WAEMU region and aims to assess the potential for sovereign and corporate Green Bond issuance. The Study highlights multiple deficiencies that may impede the development of such a market, and provides recommendations to overcome them. Initiatives and interventions that should be taken to foster the emergence of such a market are also presented, as well as opportunities to develop a pipeline of green projects and activities eligible for Green Bond financing. Given the regional, multi-country scope of the Study, a desktop review and stakeholder consultation was undertaken to identify common barriers, which are primarily related to three themes:

- The underdevelopment of the regional financial market relative to international standards.
- The lack of Green Bond and general climate initiatives from national governments, institutions and industries.
- The generally low level of familiarity among key market stakeholders with the international standards and requirements associated with Green Bonds, and consequent low capacity to meet such standards.

For each barrier identified, actionable recommendations are drawn from the lessons learned from more successful Green Bond programmes in other Sub-Saharan African countries, whilst giving due consideration to the specific nuances of the WAEMU region to assess their applicability. The findings from the desktop research were then supplemented and validated during additional interviews and in a stakeholder engagement workshop to ensure the recommendations are context appropriate.

The desktop review covers the following key determinants of market development potential:

- Regional debt capital market (structure, regulation, depth, liquidity, stakeholders, etc.)
- Historic context and current trends regarding sovereign and corporate bond issuance (issuance features, context and objectives, subscription rate, credit, etc.)
- Regional and national advances in climate integration and related initiatives.
- Stakeholders' capabilities with regard to international standards and requirements for Green Bonds
- Investor appetite (investor awareness, investment trends, incentives, obstacles, etc.).

1 NDCs are at the heart of the Paris Agreement and embody efforts by each country to reduce national emissions and adapt to the impacts of climate change.

Barriers to issuing Green Bonds in WAEMU

Lack of Government focus on addressing mitigation and adaptation objectives

There is a lack of strong focus by individual WAEMU governments on climate change risks, and where climate change objectives are defined, there are no conducive regulatory frameworks to support the climate resilience objectives that could effectively decarbonises their economies. Setting mitigation, adaptation and resilience goals at the national level – as well as putting in place the necessary policies, regulations, standards, and plans (including clearly defined responsibilities for different actors) – will create an enabling environment for the private sector to participate in funding mitigation projects (energy, energy efficiency, clean transport, green building, etc.) and adaptation projects (agriculture, afforestation, clean water, etc.).

Recognising the opportunities for including Green Bonds in financing the government's climate agenda would be a key additional step in kick-starting market development.

Recommendations:

- Governments should identify climate mitigation and adaptation budget priorities/needs at the national level. To this end, it is necessary to build capacity at ministry level to integrate climate risks indicators into sectoral plans and strategies so that appropriate solutions and budgets can be designed and implemented. This requires a series of high-level engagements with key stakeholders in various ministries to clearly define and outline mitigation and adaptation objectives at the national level, as well as policies, laws, and implementation plans related to responsibilities and outcomes to attract private sector support.
- Governments should support the potential contributions of Green Bonds in meeting their mitigation and adaptation goals by working to develop an eligible pipeline of green projects, while providing financial incentives such as tax breaks on dividends from Green Bond investments. Should a Green Bond programme be launched, it will be key for technical assistance providers to engage - and gain the support of - key policymakers early in the programme.
- Issuing sovereign Green Bonds on the domestic market (rather than foreign-currency denominated Eurobonds) is also likely to contribute to the development of the capital market in WAEMU.

Green Bonds compete with concessional finance

While concessional finance[2] is particularly useful to support nascent markets, Green Bonds have generally been used to refinance mature projects where the "Use of Proceeds" meet the eligibility criteria of global green guidelines and taxonomies[3]. Projects in the renewable energy sector have typically benefited from favourable interventions (grants and/or concessional loans) from international donors seeking to develop the industry. Too often, challenges related to obtaining reliable information on project risks, yields/returns, and related issues push investors to demand disproportionately high prices from Corporates seeking issuances on Exchanges in developing markets. Meanwhile DFIs, due to having a higher risk tolerance given their experience, expertise, and mandate – coupled with ability to provide cheaper or concessionary loans through blended structures – can negatively impact the economic risk-return of pricing the public issuance of Green Bonds for issuers. In addition to potential higher interest rates, issuing Green Bonds is generally more time-consuming than negotiating over grants and concessional loans. Typically, the whole issuance process can take from 2-3 weeks to several months depending on the complexity of their internal structure and the processes of the issuer, as well as the projects/assets being financed.

Recommendations:

- Providers of technical assistance should make the development of market structures for local Bond markets a key priority. Specifically, international donors providing financial assistance should consider the inadvertent impact of their interventions on the establishment of Green Bond markets.

2 Concessional finance is below market rate finance provided by major financial institutions, such as development banks and multilateral funds, to accelerate development objectives.

3 Global green guidelines and taxonomies include the Climate Bonds Standard and Certification Scheme, the International Capital Market Association's Green Bonds Principles (GBP) and the EU Green Bonds Standard

Capabilities to implement the climate risk agenda

Lack of capacity in some areas and limited technical expertise within regulatory agencies, stock exchanges and domestic banks also constrains the development of a Green Bond market. Even where financial institutions such as Banque Agricole have expressed a desire to lead a Green Bonds issuance, WAEMU states have no common framework or transparent practices when it comes to, for instance, reporting the impacts of projects in line with international standards – and so it is challenging to identify and clearly demonstrate the actual contribution of each project to mitigation and adaptation objectives.

Recommendations:

- Providing technical assistance to implement capacity building activities to train key stakeholders groups, including regulators, issuers, investors, financial intermediaries and verifiers will go some way to addressing the capacity gaps.
- Adopt appropriate regulations or guidelines, which should allow for harmonization of eligibility criteria for green investments and pre- and post-issuance practices in the WAEMU zone, as well as convergence of these practices towards international standards
- Data paucity and quality issues for climate risk measurement / management

Current international regulatory trends favour more comprehensive disclosure obligations, particularly related to project impact disclosure which requires more advanced methods for data collection, monitoring and reporting.

Data for climate risk measurement and management is currently mostly sourced via manual interrogation and review from public sources, external data packages, and client data. This results in fragmented, standalone data pools, with the potential for human error. This can sometimes make the issuance process challenging due to difficulties in gathering credible evidence to defend the environmental and climatic impact of existing projects that could have been refinanced using Green Bonds.

Automation has the potential to alleviate some of these challenges. However, automation has to be implemented by credible data architects to reduce the occurrence of errors and to reduce the percentage margin of error also.

Recommendations:

- Providing effective systems and tools to mine, analyse, manage, and present data in decision-useful formats will enable board-level stakeholders to make informed decisions that support the sustainability objectives of issuers.

Lack of identified bankable and standardised Green projects

Despite the potential for green issuance in the WAEMU region in sectors such as Energy, Agriculture, Water and Waste, there is little evidence of a developed green project pipeline in the region due to limited understanding or practical implementation experience of green eligibility criteria to identify, evaluate and select projects consistently and effectively. This is likely to require significant external support which may not be readily available currently within the region.

Recommendations:

- Investment in developing technical capacity that focuses on improving the basic understanding of sector and sub-sectoral green eligibility criteria and impact reporting requirements for issuers.
- Investment in technical capacity should be complemented with investments in tools and technology for collating and analysing the climate data that is necessary to enable investors to develop a strong climate case for projects seeking green finance.

Limited knowledge of Green Bonds

There is limited knowledge amongst market participants on eligibility criteria for green projects, the associated issuance and verification processes, and the potential benefits associated with Green Bonds. In general, investors would like to gain a pricing benefit over the issuance of a vanilla bond. This has hindered the development of the Green Bond market and green issuance in WAEMU. However, this challenge is not insurmountable as the necessary steps to engage the market on capacity building initiatives have already begun.

Recommendations:

- Providing technical assistance activities with a focus on increasing basic understanding of sector and sub-sectoral green eligibility criteria and impact reporting requirements targeted at various stakeholders, including issuers, investors, financial intermediaries and verifiers.

Barriers Outside Scope of Study

Four other factors are likely to affect the development of the market, for which recommendations are beyond the scope of this study:

Underdeveloped primary and secondary sovereign security markets

The market for sovereign securities in WAEMU remains relatively underdeveloped by international standards, largely due to its fragmentation[4]. While sovereign funding raised on the regional security market, as a share of total debt, remains low by international standards, it also remains much lower in the WAEMU region than in comparable Sub-Saharan markets such as Ghana, Kenya and Nigeria[5].

The secondary market for sovereign securities is also relatively shallow, lacking depth and liquidity. The bulk of secondary trading occurs between national subsidiaries of banking groups operating in several WAEMU countries[6].

Limited and undifferentiated investor base for sovereign securities

The WAEMU investor base is shallow and dominated by the banking sector – mostly domestic banks (unlike in developed markets where insurance and pension funds are key investors) – which makes it difficult for governments and companies to raise affordable long-term financing. This is problematic as Green Bonds typically involve long-term investment horizons.

Sovereigns crowd out corporates

Bonds issued by National Treasuries dominate on the regional conventional bond market. One reason is the perceived risks associated with corporate bonds in the region, which means that investors are more likely to invest long-term patient money in sovereign securities, while other factors such as the eligibility of sovereign securities for refinancing by the Central Bank (BCEAO) make corporate bonds less attractive to investors.
In this context, and given the relatively limited investment capacity of domestic investors, companies with a sound risk profile may have difficulties accessing affordable financing – this makes it even more challenging for them to successfully issue a Green Bond.

Political instability

The WAEMU region experienced significant episodes of violent conflict over the past two decades. During the 2000s, these mainly stemmed from political instability, particularly in Côte d'Ivoire, the region's economic hub. Niger also suffered from political instability during the same decade culminating in a military coup in 2010.

The restoration of peace in Côte d'Ivoire and the election of a democratic government in Niger in 2011 ushered in an era of stronger economic growth throughout the WAEMU until the COVID crisis in early 2020. However, this progress is now coming under threat from the mushrooming conflict in the Sahel, which first emerged in Mali in 2012, grew in intensity there, spread to Burkina Faso from 2014, and exposes Niger to increasingly serious cross-border attacks.

In the context of pervasive corruption, widespread poverty, and high rates of youth unemployment and underemployment, observers fear that, absent stronger actions to stem the violence and address its root causes, the Sahel conflict could spread all the way to the coastal countries of West Africa. Political stability also encompasses corruption, the strength of institutions and the rule of law, which might be additional obstacles for international investors when considering investing in WAEMU.

4 The segmentation by mode of issuance of the primary sovereign security market critically constrains its development (« Developing the WAEMU's sovereign security market », IMF)
5 « Developing the WAEMU's sovereign security market », IMF
6 Ibid, to find out other key factors contributing to the low level of secondary market liquidity in WAEMU

Potential Enablers to Issuing Green Bonds in WAEMU

Beyond the barriers mentioned above, market development would benefit from the enabling initiatives and support outlined below.

Strengthening climate risk regulation in the domestic financial sector

In some countries, national industry initiatives are catalysts for the integration of adequate climate risk practices (the Kenya Bankers Association Sustainable Finance Initiative provides one example), primarily through capacity-building programmes and knowledge exchange.

Aligning project pipelines with international standards and common methodologies would promote harmonisation, and help issuers clearly identify what is "green" in order to avoid potential accusations associated with 'greenwashing'[7].

Political engagement

Green Bonds introduce a potential new risk for debt managers: the risk of non-compliance with the framework or official guidelines. Non-compliance may take many forms, ranging from inadequate disclosure of the use or impact of proceeds to more blatant non-compliance with the bond prospectuses, such as using revenues for alternative purposes not related to the framework or guidelines of the bonds.

Strong political commitment and regulation can support the ability to mitigate compliance risk, including by:

- Ensuring cooperation among key ministries and agencies
- Effectively communicating environmentally friendly policies and commitments to investors in issuance prospectuses and related documentation will set the tone for the government's green ambitions
- Mitigating potential legal concerns of the debt management unit about the proper use of invested funds through the use of optimal processes, skilled personal and effective reporting of use of proceeds and impact.

Approved body for independent review and audit

To enhance the legitimacy and credibility of a Green Bond with investors, good market practice requires that the issuer obtain independent review and verification of the utilisation of proceeds and management of the overall bond framework and governance structures.

The verification process is typically conducted by an external impartial reviewer who evaluates the project listing using the Climate Bond Certification Standard or the Green Bond Principles (GBP) in the case of a Second-Party Opinion (SPO). The West African Rating Agency (WARA) is a credit rating agency approved by CREPMF. WARA assigns management quality rating [8]to assets including a green bond rating but does not currently provide SPO. Whilst a green rating may suffice for some investors depending on the credit rating of the issuer, most investors require second party opinions from independent verifiers, who typically are not based in Africa, thus adding to the cost of the issuance.

Whilst the additional costs attributed to the use of external reviewers may deter some Corporates from issuing a Green Bond, this has not always proven to be the case in Africa. Some international development agencies offer issuers technical assistance to cover the cost of verifying the eligibility of bonds as part of their market development efforts. Though the Green Bond issued by Emergence Plaza in Côte d'Ivoire followed a more private placement structure, the issuer benefited from IFC support in obtaining an independent second party verified EDGE Green Building Certification. Other issuers of corporate bonds like North South Power Limited in Nigeria and ACORN Holding in Kenya have benefited from such interventions.

7 Greenwashing – making false or misleading claims about the green credentials of a company or financial product.
8 The management quality assessment incorporates an analysis of the investment management activities and other management characteristics including, as applicable, the performance of its product offerings, its financial profile and client servicing performance. Unlike the credit ratings, a management quality assessment does not indicate a company's ability to repay a fixed-financial obligation, or satisfy contractual financial obligations either in its own right or any that may have been entered into through actively managed portfolios.

Obtaining risk transfer instruments

Bond issuers can obtain guarantees to enhance the credit quality of local currency debt instruments issued to finance eligible green infrastructure-related assets by tapping into facilities such as the Green Guarantee Facility set up by the African Guarantee Fund [9](AGF), which is designed to unlock financing for SMEs that invest in low-carbon technologies and projects. Based on the credit strength of the guarantor, investors benefit from unconditional and irrevocable guarantees, which helps de-risk projects and makes investments more attractive. However, unlike other DFI-backed risk guarantee providers such as GuarantCo or InfraCredit, the AGF only provides guarantees to financial institutions, thus limiting the types of institutions that can benefit from their products. While InfraCredit's product offering is limited to Nigeria, GuarantCo provides credit solutions to finance infrastructure across Africa.

Priority Sectors with Potential for Green Bond Issuance

Energy is the first sector we assess as a potential candidate for financing through Green Bonds, given the following characteristics:

- Key sector for economic development, making it more likely to attract government support
- Alignment with NDC objectives (climate mitigation) and national strategic plans
- Maturity of the sector and type of actors (governments and long-established state-owned companies)
- Need for financing / Market size (can accommodate significant funding)

In particular, Renewable Energy projects are likely to receive the bulk of financing in this sector for projects related to clean power capitalisation (solar, wind, hydro-power, etc.).

Other sectors we believe are strong candidates for Green Bond financing in WAEMU include:

- Clean Transportation (Sovereign)
- Agriculture (Financial Institutions)
- Low Carbon Real Estate / Green Buildings (Corporate)
- Waste Management (Sovereign)

9 AGF's risk sharing mechanism is offered to financial institutions to increase their lending towards SMEs operating in all sectors that support economic growth.

INTRODUCTION

Africa is one of the most vulnerable continents to climate change and climate variability[10], with average temperatures expected to rise by more than 1.5 times the global average by 2050. The consequences of climate change do not spare the countries of the West African Economic and Monetary Union (WAEMU)[11] which are affected by multiple weather phenomena such as rising temperatures and the increasing frequency of droughts and floods. Coastal erosion is another phenomenon that affects all the countries of the Gulf of Guinea, including all the coastal states of the WAEMU (Senegal, Guinea Bissau, Côte d'Ivoire, Togo and Benin), and threatens to wipe out a large part of the West African coastline. Climate-related impacts are diverse and have various environmental, social and economic implications. While the food security of many is at stake, several sectors essential to the countries' economies are also likely to be negatively impacted with consequences for peoples' lives and livelihoods.

From 2012 up until the onset of the COVID pandemic in early 2020, WAEMU Member States recorded sustained economic growth rates supported by broadly sound policies. The Union's annual real Gross Domestic Product (GDP) growth rates of between 6 and 7 percent[12] exceeded those of the sub-Saharan region over the 2015 to 2019 period.

COVID halted the WAEMU's strong growth dynamics and led national and regional authorities to become more accommodative through fiscal and monetary policy tools. Despite these efforts, the negative impacts of the pandemic on the economies of WAEMU countries, although different in nature from country to country, were largely significant[13]. The sharp slowdown in economic activity during Q2 2020 combined with the implementation of containment measures (global lockdowns and border closures) contributed to a contraction of the regional economy, particularly in sectors associated with construction, commerce, transportation, tourism and hospitality – leading to a major fall in budget revenues which undoubtedly exposed the Member States to additional economic challenges related to the increased debt burden. The consequences of this external shock were felt most keenly in Burkina Faso, Guinea Bissau, Mali and Senegal where GDP contracted 2.8%, 2.4%, 2.0% and 0.7% respectively, with the other WAEMU countries recording moderately positive GDP growth.

As was the case for other developing economies, some sources of international capital became more difficult to access for the Member States as a result of COVID. Sovereign issuers in WAEMU that had previously issued bonds in the international financial markets, such as Benin, Côte d'Ivoire, and Senegal, experienced a significant widening of spreads on Eurobonds due to the repricing of risks caused by the pandemic. More recently, the energy/commodity crisis and inflationary spiral sparked by the war in Ukraine have prompted a tightening of monetary policy and rising interest rates in the US and globally; this, in turn, has worsened the outlook for access by WAEMU states and corporates to global capital markets.

It is clear that the consequences of climate change and global shocks such as COVID have amplified the challenges for economic development faced by the Union Member States. Other factors such as an intense demographic pressure, high energy costs, inefficient transport networks and debt financing constraints all weigh on regional competitiveness and, despite their vast natural resources (significant levels of renewable energy sources, arable land, etc.), the Member States have struggled in their quest to reduce poverty.

Over the past 20 years, WAEMU financial markets have mobilised the equivalent of circa EUR 15 billion to support the region's economy. While large infrastructure investments are a priority in order to progress towards the Union governments' development objectives, it is important to highlight the role that an active and deep Green Bond market could play – subject to specific investment criteria which shall be examined further below – in helping to finance more sustained, resilient and inclusive growth in the WAEMU region, while contributing to the objectives of the countries' Nationally Determined Contribution (NDC).

10 IPCC
11 Members of the West African Economic and Monetary Union (also known by its French acronym, UEMOA) are Benin, Burkina Faso, Côte D'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, and Togo
12 AFDB socio-economic database, 1960-2019
13 Covid 19 Pandemic: impact of restriction measures in West Africa, Dec 2020

IDENTIFYING A PIPELINE OF GREEN ACTIVITIES AND PROJECTS

Insight into Member States' NDC and National Strategic Plans

Overview

In line with the Paris Agreement of 2015, Member States have submitted NDCs, in which each country describes the measures to be taken to reduce national emissions and adapt to the effects of climate change. The implementation of the Member States' NDCs and associated national development strategies are largely dependent on the capacity of each country to raise additional financing, for example to fund the development of innovative and adequate infrastructure and/or technologies.

We provide insights below into four countries' NDCs, namely Côte d'Ivoire, Senegal, Benin and Mali, along with specific examples of initiatives and projects that aim to contribute to NDC implementation, and where Green Bonds can be part of the set of alternative financing solutions for developing those projects.

Côte d'Ivoire

Côte d'Ivoire submitted its Intended NDC (INDC) to the United Nations Framework Convention on Climate Change (UNFCCC) in September 2015, and has not updated or converted the INDC into an NDC since. Under the INDC, the Ivorian Government pledges to reduce greenhouse gas (GHG) emissions by 28% from business-as-usual (BAU) levels by 2030.

The country currently has very little renewable energy capacity beyond large hydro, but has set targets in its NDC to incorporate 42% of renewables into its total energy mix by 2030.

Côte d'Ivoire has also made strong commitments to decouple agricultural production from deforestation and to restore forest cover to 20% of the territory by 2030 from the current 11%. These commitments were first integrated into the country's National REDD+ Strategy, adopted in 2017, which articulates the country's multisectoral response to boost forest restoration and zero-deforestation agriculture. In this regard, and given the potential of climate-smart/sustainable agriculture projects in Côte d'Ivoire (the country is also a major producer of some of the world's most desired food products, namely cocoa, coffee, and sugar), agriculture should be included among the priority sectors for diversification of its sources of green funding.

Senegal

Senegal's NDC was submitted on December 28, 2020 and is part of the national development strategy (the Plan Sénégal Emergent - PSE). It includes unconditional targets (5% reduction of emissions in 2025 and 7% in 2030, as well as adaptation policies in the eight most vulnerable target sectors including agriculture, livestock, fisheries, coastal zone, water resources, biodiversity, health and floods) and others conditioned on external support (23.7% reduction of emissions in 2025 and 29.5% in 2030). An estimate of the financial needs for the realisation of these commitments is also presented in the NDC for a cost of about 13 billion dollars over the period 2020-2030. It is completed by other documents (Second and Third National Communications to the UNFCCC, PSE, Plan de Gestion Durable des Terres, etc.) confirming that such an effort could not be achieved without external support, which reflects the need to use all available climate financing levers to ensure maximum possible funding mobilisation as well as optimal use of funds.

Important reforms have been carried out in the energy sector and with regard to utilities. The government adopted a new electricity code whose provisions include raising awareness of regional electricity markets with third-party access to the grid, promoting renewables and increasing the energy mix using natural gas, improving energy efficiency and the development of off-grid rural electrification. According to the code, the government will set up a national electricity holding with subsidiaries in each step of the electricity value chain, including

generation, transmission, and distribution in addition to further regulation related to third-party access to the grid. Accordingly, the key investment opportunity is going to be Independent Power Producer (IPP) projects for solar energy, battery storage and wind energy[14].

The government also adopted a gas code in 2020, following a National Strategy Plan called "Gas to Power". The main objective of this strategic plan is to produce electricity from natural gas and to increase public access to electricity in Senegal. In accordance with this strategy – and given that gas could qualify for Green Finance under a national transition strategy – the key investment opportunities in the energy and natural resources sectors are (i) activities regarding the generation of electricity from natural gas, and (2) development of infrastructure to obtain and transport natural gas[15].

Finally, we note the revision of the 2008-2025 Dakar Urban Mobility Plan, initiated by the Dakar Urban Transport Executive Council, whose objectives include (i) enabling changes towards a more inclusive, liveable and efficient city, (ii) reducing transport-related GHG emissions, (iii) helping meet Senegal's NDC commitments, and (iv) contributing to the achievement of specific SDGs. The pursuit of these four broad objectives should provide a wealth of green financing opportunities around which public and private sector actors can mobilise the issuance of green debt.

Benin

Benin's NDC commitments are ambitious given that its reduction targets focus on sectors essential to its economic development, including the Energy and Agriculture sectors, whose emissions account for 92% of the country's overall carbon emissions[16]. Benin's aspirations for economic development and high demographic pressures[17] will naturally lead the country to increase its production of energy and food products. Benin's major challenge is therefore to finance the development and adoption of low-carbon solutions for both sectors in order to keep on track with its NDC objectives, while simultaneously delivering robust economic growth. The implementation of adaptation plans, on the other hand, will concern a mix of areas and sectors, namely Agriculture, Water resources, Forestry, Coastal zones, Energy, Health, Urban development and Infrastructure.

Mali

Mali's revised NDC, which focuses on managing its natural resources sustainably and maximising the synergies between adaptation and mitigation measures, was submitted in October 2021. Given its geographical location, Mali's objectives are to maintain the country's important role as a carbon sink by limiting emissions in key sectors of the economy. Mali has committed to reducing its greenhouse gas emissions by 31% for energy, 25% for agriculture, 31% for waste, and 39% for land use and forestry sectors by 2030 compared to business-as-usual. Though Mali's economy is beginning to show nascent signs of recovery following the recession in 2020 (caused by the combined effects of the pandemic, poor agricultural performance and the socio-political crisis), it is still relatively undiversified and therefore vulnerable to commodity price fluctuations, while climate change remains a major threat to its agriculture sector and food security.

Whilst the World Bank has allocated $1.5 billion to support the implementation of 30 programs that should directly help improve Mali's infrastructure, agriculture and financial sectors, the UNDP through the "Climate Promise"[18] initiative has also committed to provide capacity-building support for the implementation of the NDC.

14 "Africa Energy Futures: Senegal", Ismael Itoua Mahamat Atteib, Nov. 2021
15 Ibid
16 Energy for 63%, Agriculture for 24%, Climate Watch data, Benin
17 Under the no-migration scenario, Benin's population would increase from 12.1m in 2020 to 24.3m in 2050 (101% increase)
18 The Climate Promise is part of UNDP's broader corporate initiative, which supports over 110 countries to enhance their NDCs

Complementary information from the NDCs

A more in-depth analysis reveals that while the NDCs reflect the need for accelerating investment in the Energy, Agriculture, Land Use, Land-Use Change and Forestry (LULUCF), Waste and Transportation sectors, they also highlight the synergies between mitigation and adaptation in sectors such as Energy, Agriculture and LULUCF, meaning that investments in these sectors would benefit both NDC components.

Green Bond Taxonomy

Overview

Green Bonds are broadly defined as "Use of Proceeds" bonds where the proceeds will be exclusively applied to finance or re-finance, in part or in full, new and/or existing Eligible Green Projects (EGPs).

To assist potential issuers to identify EGPs, the CREPMF (Conseil Regional De l'Epargne Publique et des Marches Financiers)[19] issued guidelines[20], prepared in accordance with ICMA Green Bonds Principles (GBP) framework.

The Green Bonds Principles

The GBP are a set of guiding principles that explain which criteria a bond must meet to be labelled green. They guide on eligible uses of proceeds – though at a relatively high level – as well as on processes that the issuer must have in place to achieve a green label. These include:

- The process for the evaluation and selection of projects or activities to be financed through the Green Bond – e.g., is there a committee that screens projects against the Use of Proceeds criteria for eligibility?
- The process for management of the proceeds and tracking the proceeds through the treasury functions of the issuer – e.g., can proceeds be reliably allocated to eligible activities?
- The process of reporting on the allocation of the proceeds to investors and on the impact that is being achieved through the activities financed – for example, the carbon emissions abated through the generation of renewable energy.

Additionally, the GBP encourage issuers to obtain a Second Party Opinion (SPO) on their frameworks and issuance in order to provide independent assurance to investors that the bond is in line with the principles.

The GBP explicitly recognise several broad categories of eligibility for Green Projects, which contribute to environmental objectives such as climate change mitigation, climate change adaptation, natural resource conservation, biodiversity conservation, and pollution prevention and control.

The GBP list the types of projects by category that are most likely to be, or are expected to be, supported by the Green Bond market:

- Renewable energy (including production, transmission, appliances and products)
- Energy efficiency (such as in new and refurbished buildings, energy storage, district heating, smart grids, appliances and products)
- Pollution prevention and control (including reduction of air emissions, greenhouse gas control, soil remediation, waste prevention, waste reduction, waste recycling and energy/emission-efficient waste to energy)
- Environmentally sustainable management of living natural resources and land use (including environmentally sustainable agriculture; environmentally sustainable animal husbandry; climate smart farm inputs such as biological crop protection or drip-irrigation; environmentally sustainable fishery and aquaculture; environmentally sustainable forestry, including afforestation or reforestation, and preservation or restoration of natural landscapes)

19 Regional Council for Public Savings and Financial Markets

20 Guide for the issuance of green, socially responsible, and sustainable bonds in WAEMU (2019) http://www.crepmf.org/Wwwcrepmf/Consultations/pdf/JCAP_WAEMU_GSS_guidelines.pdf

- Terrestrial and aquatic biodiversity conservation (including the protection of coastal, marine and watershed environments)
- Clean transportation (such as electric, hybrid, public, rail, non-motorised, or multi-modal transportation, infrastructure for clean energy vehicles, and reduction of harmful emissions)
- Sustainable water and wastewater management (including sustainable infrastructure for clean and/or drinking water, wastewater treatment, sustainable urban drainage systems and river training and other forms of flooding mitigation)
- Climate change adaptation (including efforts to make infrastructure more resilient to the impacts of climate change, as well as information support systems, such as climate observation and early warning systems)
- Circular economy adapted products, production technologies and processes (such as the design and introduction of reusable, recyclable and refurbished materials, components and products; circular tools and services); and/or certified eco-efficient products
- Green buildings that meet regional, national or internationally recognised standards or certifications for environmental performance.

Linking EGP with NDCs' priority sectors

By crossing the categories of EGP with the NDCs' priority sectors, a shortlist of projects can be highlighted.

Table 1: NDC Sectors and Green Bond Eligible Activities per NDC component

Mitigation	Adaptation
Energy: Clean power generation (Solar, wind, hydro-power, etc.), clean cooking	Agriculture: Climate smart farm inputs such as biological crop protection or drip-irrigation, environmentally sustainable fishery and aquaculture
Energy Efficiency: telecoms, data-driven solutions, ICT, energy usage	Water resources: wastewater treatment installations
Waste: Urban solid waste management	Industry: Circular economy adapted products, production technologies and processes
Clean Transport: Mass Transportation (railways, BRT, light rail systems, etc.), e-Bikes, EVs.	LULUCF: Land Conservation & Restoration, environmentally sustainable afforestation, reforestation, preservation or restoration of natural landscapes
Green Buildings: Residential Real estate, Commercial buildings	Resilient Infrastructure: Flood defences and natural infrastructure such as wetlands and other nature-based solutions

It is important to note that "Infrastructure" is an implicit category here, as it includes several sub-sectors relevant to mitigation and adaptation – for example Transport, Energy, Water, Waste, and Real-Estate development and management. The eligible projects and activities from the perspective of infrastructure are presented in Table 2.

Table 2: NDC Sectors and Eligible Activities related to Infrastructure

Infrastructure	Eligible Projects / Activities
Transportation	Transportation modes and ancillary infrastructure that produce low or zero direct carbon emissions. This can include national and urban passenger rail and freight rail networks; Bus Rapid Transit (BRT) systems; electric vehicles; and bicycle transport systems.
Energy	Energy generation, transmission or storage technology that has low or zero carbon emissions. This can include solar energy, wind energy, bioenergy, hydropower, geothermal energy, marine energy or any other renewable energy source.
Real-Estate	Green Building and Sustainable architecture that seeks to minimise the negative environmental impact of buildings through improved efficiency and moderation in the use of materials, energy, development space and the ecosystem at large. The activities apply to either the development and retrofitting of buildings, local 'green' standards for buildings or tourism activities.
Water	Sustainable water management concerning assets that do not increase greenhouse gas emissions or that aim at emission reductions over the operational lifetime of the asset, address adaptation, and increase the resilience of surrounding environments. This covers built as well as nature-based water infrastructure. Water management projects could include water capture and collection, water storage, water treatment (with methane emissions treatment), flood defence, drought defence, storm water management, and ecological restoration/management.
Waste management	Sustainable waste management activities that promote the efficient use of resources to cut down on waste production, coupled with collection and disposal systems that promote reuse and recycling, thereby minimising residual waste going into waste to energy facilities.

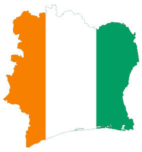
When assessed against the ICMA GBP taxonomy, natural capital and ecosystem services (NC & ES) can also be seen as an area for cross-sectoral investment for adaptation purposes. While the opportunities for investment in NC & ES in the WAEMU are substantial, we present below three examples of labelled bonds from outside of the WAEMU region that have been issued for adaptation purposes.

Table 3: Labelled Bonds issued for financing natural capital and ecosystem services

Projects	NC & ES Activities
Seychelles Blue Bonds	
Debt-for-nature conversion to protect oceans	In 2016, the Seychelles completed an innovative debt-for-nature conversion project with The Nature Conservancy. This deal to refinance Seychelles' sovereign debt raised $21 million under more favourable terms, and then directed a portion of repayments to fund climate change adaptation, sustainable fisheries, and marine conservation projects—as well as to create an endowment for the benefit of future generations of Seychellois. As part of the deal, the Seychelles committed to a comprehensive Marine Spatial Plan (MSP) to ensure the long-term sustainable health of the nation's entire marine area of almost 1.4 million square kilometres.
IFC Forest Bond	
Preventing deforestation of the Kasigau corridor in East Kenya	An innovative $152 million bond issued by the IFC in October 2016 is helping prevent deforestation of the Kasigau Corridor in East Kenya. Buyers included US teachers' pension fund giants CalSTRS and TIAA-CREF, QBE Insurance and emerging markets investor Treehouse Investments. A novel feature of the bond is that investors can choose to be paid in cash or in carbon credits, or a combination of the two. All the credits have been approved by the Verified Carbon Standard and the Climate, Community & Biodiversity Alliance. The transaction also benefits from a 'price support mechanism' from mining giant BHP Billiton. In addition to helping curb GHG emissions from deforestation, the project protects an important migration corridor for endangered elephants.
Green Bonds	
Peatlands restoration in the Netherlands	Almost 10 percent of The Netherlands is low-lying peatland and much of it is drying out because of intensive farming practices. This is causing GHG emissions to rise and buildings to subside. The Netherlands Enterprise Agency and IUCN have suggested that a Green Bond could be used to finance re-wetting of this peatland.

POTENTIAL GREEN BOND ISSUERS

Country Review



Côte d'Ivoire

Sovereign

Several factors indicate that the Ivorian Government could be a relevant candidate for Green Bond issuance, in particular

:

- The bill of the National Development Plan (PND) 2021-2025 of Côte d'Ivoire has been approved (on December 17, 2021). The public financing requirement for the 2021-2025 PND stands at CFAF 21,110.3 billion. The Government plans to have recourse to the financial market to the tune of CFAF 11,775 billion, of which CFAF 5,191 billion is to be mobilised on the external market and CFAF 6,583 billion on the regional market. Several projects could be subject to financing via Green Bonds and provide contributions to the NDC and PND objectives, in particular in the agriculture, energy, water resources, transport, waste, livestock and fisheries sectors, or more broadly address some of the climate-related effects that threaten coastal zones and ecosystems.
- The Government has shown a willingness to diversify its investor base, in particular via Eurobonds (the latest being a USD 1.03 billion Eurobond in February 2021 which was three times oversubscribed) and Sukuk[21] issuances. The government has also highlighted the need for facilitation of Sovereign Green Bonds issuance for financing low-carbon development projects.
- Côte d'Ivoire has been recently upgraded by all three international ratings agencies (Moody's confirmed the sovereign at Ba3, while S&P rated it at BB-). This provides a positive outlook for future Green Bond issuance.
- The success of the Emergence Plaza Green issuance (2021), although a private placement, is a positive signal for the Green Bond market. 80 investors such as Africa Re in Lagos, Ecobank Asset Management in Côte d'Ivoire and French insurer Axa's Cameroon business participated in the transaction, with the majority of them being insurance companies based in the WAEMU region. The Government has worked with the United Nations Development System (UNSDG), as part of the United Nations Cooperation Framework for Sustainable Development (CCDD), to explore the establishment of a multi-stakeholder CCSD trust fund and other green funding mechanisms[22].

Corporates

Referencing the private sector, a recent study[23] highlights that only a minority of Ivorian companies make specific reference to the fight against climate change in their policies. These include companies operating in the Agriculture sector (SIFCA, OLAM and their subsidiaries), the Energy sector (CI Energies, Eranove Group and its subsidiaries in the energy sector), and the Abidjan Airport (AERIA) concessionaire, all of which have strong interactions with major international operators.

Like the Emergence Plaza Group whose issuance of a bond labelled as "Green" was made possible by the EDGE green building certification, the Abidjan airport concessionaire could build on the progress made on the airport's environmental impact and relevant certification[24] obtained to further explore its eligibility to raise green debt.

Nevertheless, to date in the Ivorian private sector, a large majority of mitigation actions are financed with equity[25], while the other sources of financing are bilateral and multilateral public funds, along with grants and concessional loans.

Furthermore, two state-owned companies, the Société

21 Sharia-compliant Impact Investing instruments
22 Côte d'Ivoire United Nations Cooperation Framework for Sustainable Development 2021-2025
23 «Strengthening the integration of climate change adaptation into development planning in CI», UNDP/RFP/2020/040, Jan.2021
24 AERIA has successfully renewed for the third time its level 3+ carbon accreditation under the ACA (Airport Carbon Accreditation) process. The optimization level (3) requires the reduction of CO2 emissions by airport stakeholders, and the level 3+ deals with the compensation of residual CO2 emissions.
25 « Strengthening the integration of climate change adaptation into development planning in CI », UNDP/RFP/2020/040, Jan.2021

de développement des forêts (Sodefor), and the Office Nationale de l'Eau Potable (Onep), and the farmer's organisation, Fédération Nationale des Producteurs d'Anacarde de Côte d'Ivoire (Fenapaci)[26] are amongst the institutions in Cote d'Ivoire that claim to have a real strategy for adapting to climate change. Sodefor, its main mission being reforestation, has been added to the Ministry of Water and Forests' list for technical supervision. As agro-forestry is the main axis of its reforestation actions and also the pillar of the new Policy for the Preservation, Rehabilitation and Extension of the Forests of Côte d'Ivoire, Sodefor's activities makes it a potential candidate for raising a Green Bond.

Senegal Sovereign

Several factors indicate that the Senegalese Government may be a viable candidate for Green Bond issuance, in particular:

- The existence of a wide variety of initiatives and interventions needed in priority economic sectors, consistent with the objectives of its NDC, the realisation of which is largely dependent on government action. These sectors potentially have many underlying projects and assets that would be eligible for Green Bonds.
- The State has set up a financial support system through several organisations that can assist the government and the private sector in the decision-making process, and help channel finance toward eligible green projects. These include:
  - The Centre de Suivi Ecologique (CSE) which has been a public utility association since 1993[27]. It supports public authorities and the private sector in the decision-making process by producing and disseminating knowledge in areas such as coastal management, agricultural production and carbon sequestration. The CSE has greatly contributed to building Senegal's credibility on environmental issues and was the first African entity to benefit from direct access to the Adaptation Fund (AF - since 2010) and the Green Climate Fund (GCF - since 2015). A Climate Finance Unit was recently created to rigorously manage these allocations, as well as a Climate Change Reference Office to strengthen knowledge generation and the implementation of mitigation and adaptation strategies.
  - The Fonds Souverain des Investissements Stratégiques (Fonsis) which invests, in partnership with other national or foreign investors, in the realisation of strategic, structuring, profitable and job-creating projects.
  - The Fonds National de Garantie et d'Investissements Prioritaires (Fongip), which focuses on the granting of guarantees for the financing of project holders and economic interest groups, SMEs and other entities for the strengthening of priority sectors. Both
  - Fonsis and Fongip signed a Letter of Intent protocol in 2022 for accreditation to the GCF.

- Senegalese Sovereign Bonds have experienced high subscription rates in recent years, in particular from domestic investors (mainly banks).The Government has shown a willingness to diversify its investor base, in particular via Eurobonds and Sukuk issuances (see Box 1).
- A Sovereign Green Bond issuance will send a strong message about the Government's commitment to improving environmental and social outcomes. This could be advantageous for Senegal which currently has a relatively low ESG score[28] but wishes to attract investors seeking to support sustainability objectives (through not only loan or portfolio flows, but also FDI and private capital), while exploitation of recently discovered hydrocarbon deposits may affect the ESG score of the country.

26 Ibid
27 https://www.expertisefrance.fr/documents/20182/703453/Histoires+de+CDN+en+Afrique+de+l%27Ouest+-N%C2%B001-2021+-Financement+climat+au+S%C3%A9n%C3%A9gal/6ce84f1e-27a0-4c1d-9396-879e7abb030a
28 ESG score are environmental, social and governance scores that assess an entity's exposure to the categories of ESG that are regarded as the most material to credit by the investors' community.

Box 1: Financial Innovation – the case of Green Sukuks

Green Sukuks

Green Sukuks[29] have recently emerged as a unique example of a Sharia-compliant Impact Investing instrument with strong growth prospects to fund environment-friendly endeavours.

Eligible assets for Green Sukuk are defined by the Climate Bond Standards and include:

- Solar parks
- Biogas plants
- Wind energy
- Ambitious energy efficiency
- Renewable transmission and infrastructure
- Electric vehicles and infrastructure, light rail
- Financing of a government green payment/subsidy

While to date in WAEMU four Member States have successfully adopted and utilised the conventional Sukuk market – namely Senegal, Côte d'Ivoire, Togo and Mali (whereby all of them solicited regional savings in CFAF – no Green Sukuk has been issued in the Union. However, judging by the volume of investor demand for conventional Sukuk debt in the region, the potential for market development cannot be underestimated, and we expect that with the appropriate level of intervention, some West African nations, in particular Senegal[30], will lead in the issuance of Sukuk Green Bonds.

The Government of Senegal is poised to become the leader in Islamic finance in WAEMU, as evidenced by its efforts to advocate for acceptance of Islamic finance within the economic bloc and its strong engagement with the Islamic Development Bank.

As Senegal's private sector has also begun to slowly accept Islamic financing, several institutions and mechanisms have emerged: the first Islamic common investment fund was established by CGF Bourse in 2017; other examples include an Islamic mutual fund (FCP Al Baraka), an Islamic Bank of Senegal, an Islamic window at Coris Bank International Senegal, as well as in Pamecas (a microfinance institution), and SENTAKAFUL which is the specialised agency of the Senegalese Life Insurance Company dedicated entirely and exclusively to Islamic insurance.

Corporates

The Agriculture Bank of Senegal (La Banque Agricole – LBA) is a bank primarily dedicated to the financing of agricultural value chains in relation to the sub-sectors of Agriculture, Livestock, Fishing, Forestry and Environment. One of its missions is the adaptation of financing to the climate change context. The bank mainly looks to (i) promote climate-friendly private investment to effectively contribute to the implementation of Senegal's climate commitments, (ii) develop and finance low carbon and climate change resilient projects/activities; and (iii) diversify climate funds through direct accreditation to the GCF or through Green Bonds.

To achieve universal access to electricity by 2030, Senegal must double its electrification rate, according to the UN. According to the IEA Africa Energy Outlook 2019, Senegal's electrification rate is 69 percent, with a 92 percent rate in urban areas and only 42 percent in rural areas. Achieving universal access to electricity will require greater investment in diversified generation sources and delivery modes, which includes both grid connections and independent microgrids. The Agence Sénégalaise d'Electrification Rurale has proposed a portfolio of rural electrification projects for medium voltage grid extension, mini-grids, and solar home systems.

In 2018, 83% of Senegal's installed energy capacity came from thermal energy, with solar providing 11%

29 Green sukuk are sukuk used for financing environmentally sustainable initiatives.

30 https://www.moodys.com/research/Moodys-Africas-vast-financing-needs-will-drive-Islamic-Finance-growth--PBC_1252105

and hydro 6%. Yet Senegal has significant renewable energy potential, particularly from solar sources due to the country's approximately 3,000 hours of sunshine per year.

In 2021, Senegal inaugurated its first utility-scale wind power project, the 158 MW Taiba N'Diaye wind farm, the largest wind farm in West Africa, with the potential to produce about 48 million kWh of electricity per year. Senegal has several solar projects either under construction or completed, and the state-owned electricity company, Senelec, has issued a call for contractors to develop an additional 100 MW of new solar projects. One of these projects includes a 15 MW grid-connected solar facility in the city of Thies.

On the back of the reforms mentioned in section 2.1.3, Senelec signed several power purchase agreements (PPAs) to buy capacity from independent power producers (IPPs) for injection into the public grid, while the company will also buy the surplus of renewable energy generated by individual producers. Senelec was created to ensure the production, transmission, distribution and sale of electricity in Senegal. Though a public limited company in name, Senelec is fully controlled and regulated by the State of Senegal, due to its public service mission and its strategic position within the country's economy. In addition to supporting the development of renewable IPPs, the company also explores opportunities to upgrade some of its own network infrastructure with renewable energy ones which can be financed using Green Bonds. In 2018, Senelec successfully launched the "Senelec 6.5% 2018-2025" bond issue on the regional financial market of the WAEMU. The operation was subscribed up to 127.5% without any requirement of guarantee from the investors, which reflected the investors' confidence in Senelec's brand.

Benin Sovereign

Following the successful issuance of its Euro 500 million Sustainable (SDG) Bond in 2019, used to fund expenditures in agriculture, water, health, housing, education, low-carbon energy and biodiversity projects, there are several indicators that the Beninese Government would want to repeat this feat, making it a viable candidate for Green Bond issuance. Key attributes include:

- Benin's National Adaptation Plan which defines a clear set of adaptation actions to build resilience to climate change in eight key sectors – agriculture, water resources, health, coastal zones, forest, energy, infrastructure an urban development and tourism – submitted to the UNFCCC in July 2022
- Benin's vision to accelerate the adoption of climate-resilient adaptation techniques in the agriculture sector which is especially vulnerable to climate change and a top priority for protecting livelihoods, as it represents 32% of the GDP and 75% of the country's exports
- Implementing all the measures identified in Benin's National Adaptation Plan is estimated to cost USD 4.2 billion across all sectors. This would need to be mobilised from multiple sources including public, private and international investors.
- Benin's economy has made a steady recovery from the impacts of the pandemic and the border closure with Nigeria in 2021. The sovereign credit rating has also improved from 'B' in 2019 to a stable 'B+' in the second quarter of 2022, which could have potential pricing benefits for a Green issuance

Despite the need for infrastructure development, any immediate plans for another large issuance will be treated with some measure of caution. Though Benin's debt ratio to GDP is relatively low, it suffers from a low revenue base due to having a large informal economy and low income. Benin is a small economy of around USD 16 billion and prior to the Euro 500 million issuance in 2019 (which is yet to be fully allocated), Benin's debt stock had been mostly concessionary at low interest rates.

Furthermore, according to a reliable source from the Caisse Automome d'Amortissement (CCA), the preference is for Sustainable Bonds rather than Green Bonds as the eligibility criteria has a wider sectoral coverage, and is used for financing activities with more social benefits.[31]

31 Sustainability bonds are issues where the proceeds are used to finance or re-finance a combination of green and social projects or activities. These bonds can be issued by companies, governments or municipalities, as well as for assets and projects and follow the Sustainability Bond Guidelines from ICMA, which are aligned with both the GBP and SBP.

Aligning Business Opportunities with Impact Targets: Case Study, Côte d'Ivoire

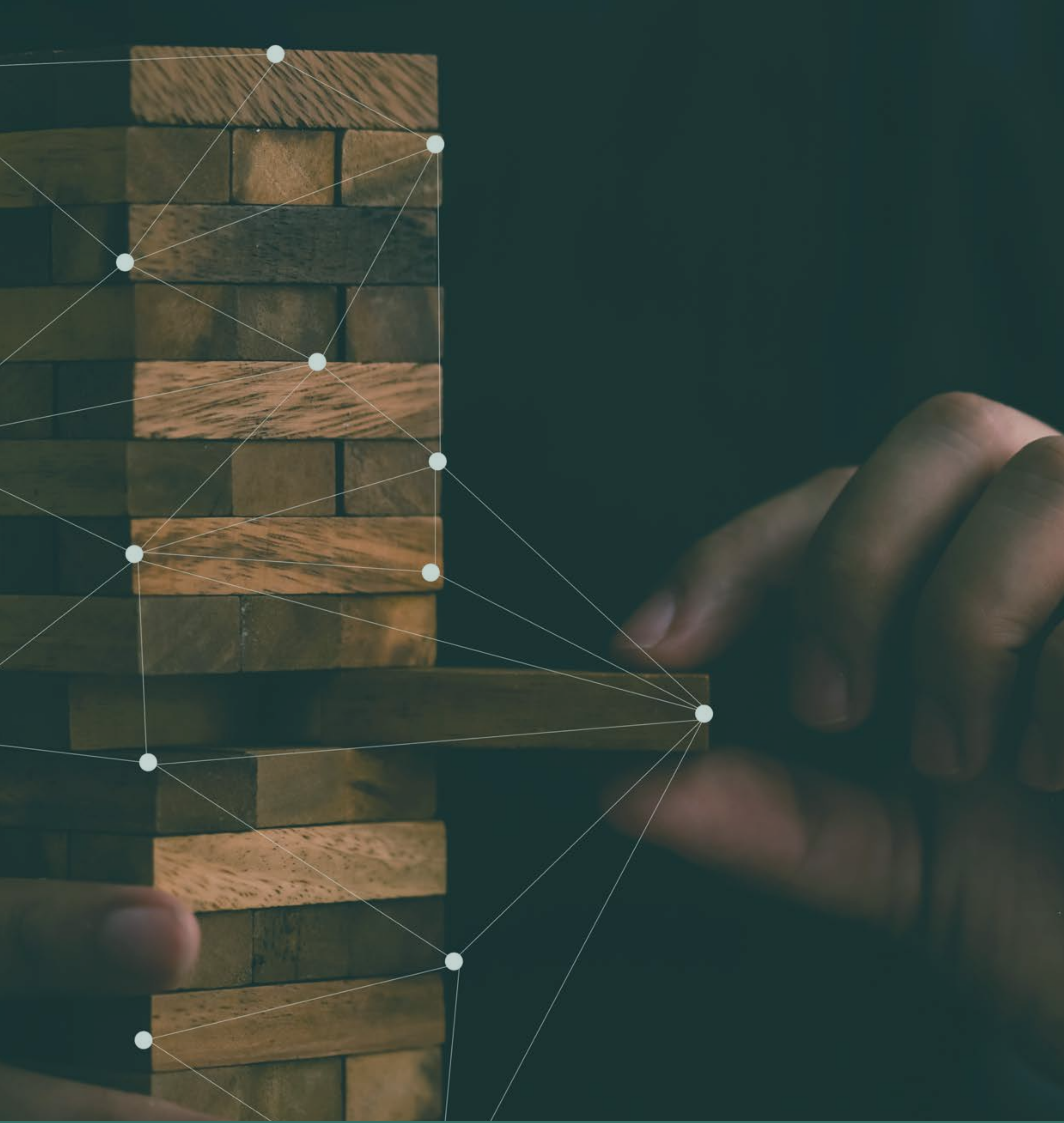
The NDCs can offer the private sector additional business opportunities, but often the private sector is unaware of them. A clear understanding of how reporting frameworks align with NDC actions enables the private sector to leverage actionable initiatives that can be translated into business opportunities. Table 4 presents selected business opportunities linked to Cote d'Ivoire's NDC objectives and SDG targets.

Table 4: Opportunities for the Ivorian Private Sector

Business Opportunity	NDC Targets	SDG contribution
RENEWABLE ENERGY		
Developing on-grid renewable energy power generation plants – independent power producers (IPPs)	• Increase the share of renewable energy to 42 percent in the electricity mix by 2030	3 – Good health & well-being 7 – Affordable & clean energy 13 – Climate action
Providing renewable energy solutions to industries	• Increase the share of renewable energy to 42 percent of the electricity mix by 2030	7 – Affordable & clean energy 9 – Industry, Innovation & Infrastructure 13 – Climate action

Business Opportunity	NDC Targets	SDG contribution
Providing Solar Home System (SHS) solutions to households, Mini Grids and small industries/ SMEs	• Increase the share of renewable energy to 42 percent in the electricity mix by 2030 • Increase the share of the rural population using off grid electricity from renewable energy sources to 2 percent by 2030	1 – No poverty 7 – Affordable & clean energy 9 – Industry, Innovation & Infrastructure 13 – Climate action
Illustrative metrics	• Reduced cost of energy (USD$) • Reduced need for diesel generators (litres of diesel used) • Number and value of deals (USD$) • Number and value of loans (USD$) provided by local financing organisations • Direct carbon reduction achieved through installation of renewable energy capacity • Number of households with a SHS kit in rural areas • Number of households with a SHS kit in urban areas • Average capacity installed by household (W) • Number of SMEs and other productive enterprises with SHS kit	
CLEAN COOKING		
Manufacturing improved cook-stoves Manufacturing Liquefied Petroleum Gas (LPG) cook-stoves Manufacturing efficient fuels Distributing clean cooking solutions	• Increase the share of population using improved cooking solutions to 10 percent by 2030 • Increase the share of charcoal produced by efficient carbonisation technologies to 16 percent by 2030 • Increase the share of population using modern alternative cooking fuels (LPG) to 90 percent by 2030	1 – No poverty 7 – Affordable & clean energy 13 – Climate action 15 – Life on land
Illustrative metrics	• Number of efficient stoves deployed • Number of LPG stoves deployed • Number of households serviced in rural areas for efficient fuel • Volume of wood fuel / efficient charcoal used for cooking decreasing (tons) • Number and value of loans (USD$) – asset financing developed directly by clean cooking solutions providers (households)	
LOW-CARBON TRANSPORTATION SECTOR		
Infrastructure development for Bus Rapid Transit (BRT) lines Operations of BRT lines	• Decrease GHG emissions by 28 percent by 2030 compared to Business as Usual (BAU) scenario	7 – Affordable & clean energy 11- Sustainable cities & communities 13 – Climate action

Business Opportunity	NDC Targets	SDG contribution
Illustrative metrics	• Number of lines • Kms of BRT operational lines • Number of users • Decrease in personal vehicle traffic (No of vehicle movements per day) • Number of best practice standards and obligations implemented for vehicles • Number of incentives implemented for the purchase of low-polluting vehicles • Reduced use of fossil fuels for personal vehicles (litres of diesel used) • Direct carbon reduction achieved through installation of BRT lines	



ASSESSING THE HURDLES AND CHALLENGES

The Backdrop: WAEMU Security Market and the Green Finance Context

This section assesses (1) the strength and weakness of the WAEMU's security market in general, as well as (2) factors that could hinder or create specific opportunities for the growth in Green Bond market.

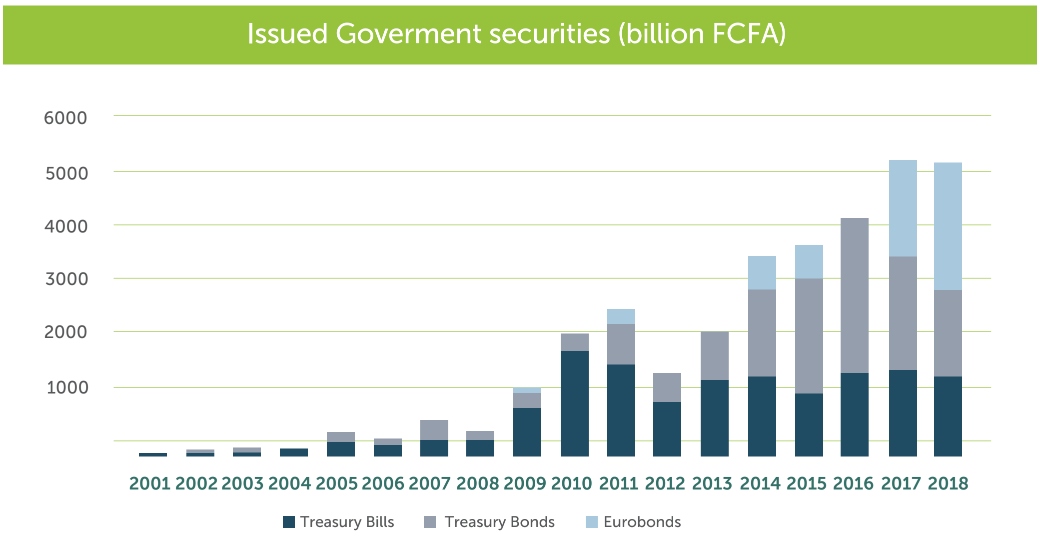
WAEMU Security Market

Overview

The cumulative issuance of bonds and bills across the monetary zone by Member States has been steadily rising in recent years as the regional Debt Capital Market (DCM) has gradually been established as a credible source for mobilising funds to finance the activities of both government and large corporates.

Sovereign issuance

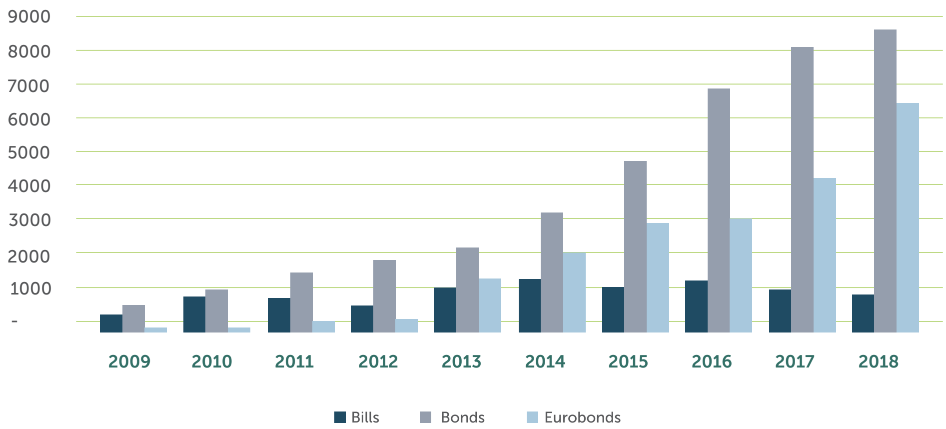
The WAEMU's sovereign security market has grown substantially since the BCEAO ceased to provide direct funding to member governments a decade ago. This market was launched in 1998 but only started to take off after the prohibition of new statutory advances by the BCEAO to member-states in 2010. The sovereign bond market is now the largest and most active segment of the WAEMU financial markets and has played a fundamental role in mobilising the resources needed to finance the region's economic development policies at a reasonable cost.



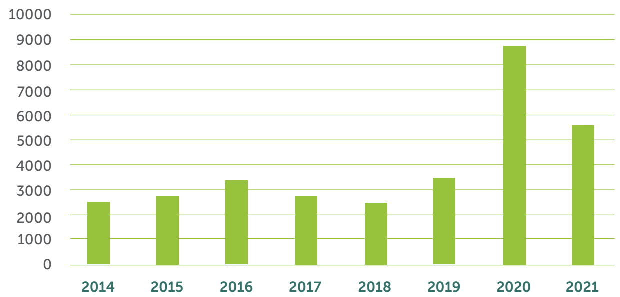
Source: OVERVIEW OF THE SOVEREIGN DEBT REGIONAL MARKET – December 2019

https://www.umoatitres.org/wp-content/uploads/2020/02/Brochure-Marche%CC%81-de-la-dette-souveraine-_-Anglais.pdf

Trends in outstanding debt (billion FCFA)

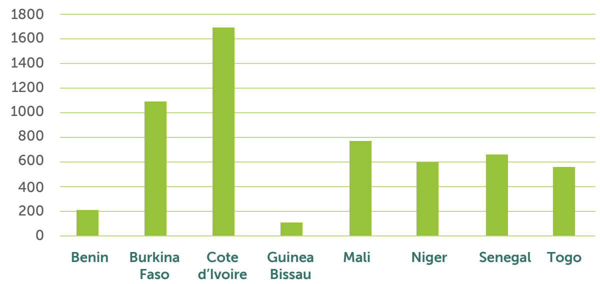


Annual volume of government securities issued in billions of XOF



Source: UMOA-Titres

2021 Volume of government securities issued by country in billions of XOF



Source: UMOA-Titres

Figure 1:Trends in the WAEMU government securities market[32]

Sovereign debt issued on the regional market

The nominal stock of government securities (T-Bills and bonds) issued in CFAF on the regional market (through auctions or syndications) grew on average by about 20 percent a year from 2010 to 2020, from less than 5 percent of GDP to 15 percent of GDP. During the same period, the share of sovereign debt issued on the regional security market more than doubled from 14 percent to close to 30 percent[33]. Nonetheless, the share of sovereign securities issued in the domestic market in WAEMU[34] remains much lower than in sub-Saharan countries such as Ghana, Kenya and Nigeria, where it stood at 35 percent, 48 percent and 75 percent, respectively, at end-2020.

32 XOF is the acronym for the CFC franc currency
33 « Developing the WAEMU's sovereign security market », IMF
34 Local currency stock of debt (i.e. excluding domestic loans and external issuances) as a share of total government debt.

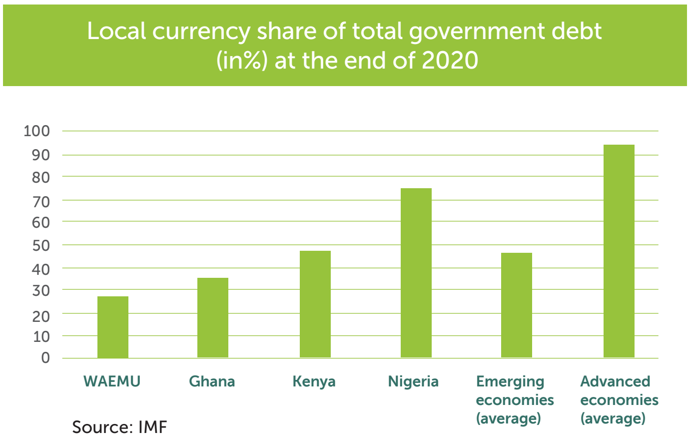


Figure 2: Sovereign debt issued on the regional market

Sovereign debt issued via Eurobonds[35]

While each Member State has already accessed the regional financial market through the issuance of Treasury bills and bonds, only Côte d'Ivoire, Senegal and Benin have managed to tap international capital through the issuance of Eurobonds (these bonds are mainly listed on European financial markets in USD or EUR). In November 2020, Côte d'Ivoire successfully issued a EUR 1 billion Eurobond, marking the reopening of the international bond markets to WAEMU countries since the start of COVID. The country raised an order book five times the amount sought with a coupon of 4.875% for a maturity of 11.2 years, the lowest ever obtained by the country and its peers in sub-Saharan Africa. The success of this Eurobond is also notable as the operation took place less than a month after an early presidential election which temporarily heightened perceived political stability risks. On February 8, 2021, Côte d'Ivoire again went to the international markets to raise EUR 850 million, barely three months after the previous issue. This latest operation is a top-up, i.e. a mobilisation of additional amounts from previously issued Eurobonds, notably the series expiring in 2032 and 2048. The transaction generated an order book of 3.4 times the amount sought, again demonstrating broad success and investor confidence. The financing conditions were largely favourable: an average yield of 4.73% for an average maturity of 14.7 years.

Benin entered the Eurobond market in 2019, issuing the first tranche of a EUR 1 billion bond raise - an 11-year EUR 700m at a rate of 4.875%. This was followed by a second tranche, a 31-year EUR 300m at a rate of 6.875%, in January 2022. The rates obtained are considered competitive given the maturity of the securities and the fact that this is the country's second issue, and the order book recorded a subscription rate of 300%[36].

In June 2021, Senegal raised EUR 775 million in a Eurobond sale that was oversubscribed six times, with a yield of 5.375% for bonds that will mature in 16 years. This can be compared to the recent issues of other sub-Saharan African countries, including Ghana which financed at 6.375% on a 7-year USD-denominated Eurobond in February 2020, and Gabon which financed at 6.625% on an 11-year USD-denominated Eurobond in January 2020.

Shortcomings of the sovereign market

Despite the progress made in recent years, the market for sovereign securities in WAEMU remains relatively underdeveloped by international standards.

While, as noted above, the share of local currency issuance remains relatively low compared to other bond markets, the regional market also lacks depth and

35 A Eurobond is a bond that is denominated in a currency other than the home currency (i.e. XOF) of the country or market in which it is issued.
36 « Brèves Economiques d'Afrique de l'Ouest , Ministère de l'Économie, des Finances et de la Relance - N°386 - 12/02/2021

liquidity. Among the most often cited factors contributing to the low level of secondary market liquidity[37] are the fragmentation of market infrastructures and the dominant role played by banks as the main buyers of sovereign bonds (they hold some 85% of the outstanding stock, with the rest held by pension funds, usually from the public sector, insurance companies and investment funds). Banks often prefer to buy-and-hold government securities rather than reselling bonds in the secondary markets[38].

Corporate issuance

Compared to the Sovereign Bond market, the Corporate Bond segment on the UMOA-Titres is more subdued with about CFAF 700 billion (EUR 1.1 billion) of debt outstanding. This market includes about 50 listed companies, 20 outstanding corporate bonds (Public Offering Operations subject to CREPMF approval) and a few securitisations. It is dominated by issuers from the Financial, Telecoms, Energy and Industrial sectors (see Table 5).

While the number of non-sovereign issuers has been relatively static in recent years, some trends are emerging that may offer an opportunity for growth. SMEs and financial institutions, for example, are looking for ways to raise additional funds through the capital markets, while infrastructure companies, including many public companies/SOEs, are finding it increasingly difficult to raise the long-term, high-volume funds needed to finance their projects, thus making them candidates – in principle – to tap the markets.

That said, the Corporate Bond market faces many obstacles to its development. Factors hindering the development of this market that were often cited in our stakeholder interviews include:

- Lack of transparency in pre- and post- issuance (driven by a lack of disclosure and reporting obligations)
- Relatively high perceived credit risk
- Competition with government securities (the latter offer multiple perceived benefits over corporate bonds, especially for domestic banks, which constitute the bulk of the investor base)
- Underdeveloped secondary market

Key initiatives that would help to address these issues, strengthen investors' confidence and support the development of an active corporate market for conventional and/or Green Bonds include:

- The introduction of strong regulations, policies and processes for managing bond defaults (especially for issuers with a relatively poor credit profile)
- Establishing appropriate structures for managing bond proceeds (ring-fencing[39]), and/or guarantees (first-loss, etc.) to de-risk the issuance.

Key to developing a potential pipeline of Corporate Green Bond issuers is to identify private or semi-public entities[40] that have a track record of successfully raising capital in the WAEMU capital market, coupled with clear strategic objectives that are aligned with their respective NDC, as well as a favourable credit outlook, and the potential to identify eligible green projects. In that regard, some companies (including La Banque Agricole in Senegal, Azito Energie and Ciprel in Cote d'Ivoire) that have inquired about the possibility of issuing bonds to finance potential EGP might not be fully aware of the "green" eligibility criteria, nor of the benefits of issuing a Green Bond.

37 Further information on the factors contributing to the low level of secondary market liquidity in WAEMU is available at: « Developing the WAEMU's sovereign security market », IMF

38 Domestic banks mainly adopt buy-and-hold strategies, in part due to limited lending opportunities and also due to some prudential requirements like liquid asset ratios in some countries that require banks to hold a certain amount of their assets in government securities. Another driver that deters banks from reselling the bonds on the secondary market is the possibility for them to source liquidity through refinancing with the central bank (on attractive terms).

39 Guarantees that (funds allocated for a particular purpose) will not be spent on anything else

40 Parastatals which to some extent are under the controlled influence of government and/or regulated by the government due to them providing a public service mission and/or hold a strategic position within the country's socio-economic ecosystem.

Table 5: Amounts issued by corporate issuers currently listed on the WAEMU financial market

Country	Sector	Value Outstanding (FCFA, billion)
Multiple WAEMU countries		
	Consumer Services / Hotels	12
	Consumer Staples / Food	15
	Financial	262
	Telecom	2
Benin		
	Energy	2
Burkina Faso		
	Consumer Durables & Apparel / Textiles	15.5
	Financial	1.9
	Telecom	13.5
Côte d'Ivoire		
	Construction Materials	15
	Consumer Staples / Food	22.6
	Energy	62.9
	Financial	44.7
	Industrial	3.7
	Materials	1.1
	Real Estate	12
	Telecom	30.5
Mali		
	Energy	3
	Industrial	1
Senegal		
	Electric Utilities	30
	Energy	4
	Industrial	60
	Telecom	100
Togo		
	Financial	3
	Telecom	20.5
TOTAL		**737.9**

*Data as of October 2021, compiled data from CREPMF database

Effects of insecurity and political instability in the Sahel region on WAEMU economies and markets

Security threats and political instability are two factors that weigh heavily on the prospects for economic and social development of any country as these tend to erode investor confidence and negatively impact the flow of FDI (Foreign Direct Investment) critical for long-term infrastructure development. This is no different for countries in the WAEMU region, albeit the Member States have had widely different experiences in attracting investments.

Discounting the impact of COVID, Senegal, Cote d'Ivoire, Togo and Benin have enjoyed relative economic stability. Unfortunately, the same cannot be said for the other countries in the WAEMU region, which have had to contend with the impacts of political instability and threats from terrorist organisations from within the Sahel region.

Mali is one of the poorest countries in the Sahel region. The inevitable consequences of the recent political instability, which has been worsened by COVID, include continuous sub-optimal economic growth and development as potential foreign investors are likely to be more sceptical about investing much needed FDI.

In Guinea, international condemnation of the latest military coup may limit much needed foreign aid to the country and could lead foreign companies and investors to reconsider their presence as political uncertainties and instability increases. The withdrawal of foreign companies could result in a compounded, negative effect on the nation's economy.

Niger is faced with the threat of terrorism on each of its seven borders. Terrorist organisations such as Boko Haram take advantage of the country's extensive border and sparely populated desert region Niger's efforts to combat terrorism are constrained by budget shortfalls and continued instability in some neighbouring countries.

Perceived or actual instability due to political tensions or terrorist threats does have a negative impact on the credit rating of these countries and by inference their competitiveness and economic development prospects. By contrast, the impact of terrorism is localised in Nigeria and has impacted the economy to a lesser extent than the countries mentioned above. Coupled with the fact that Nigeria has a more developed debt market, this makes it easier to initiate market activities that enable the development of a Greens Bond market.

Projections for WAEMU economies and markets (including debt capital markets) must therefore be weighed against the growing political and stability risks, and their implications for regional and national instability.

Green Finance in WAEMU

Overview

The following section presents the progress made at a national level by Member States in the area of Green Finance, reflecting the potential of these countries to establish an enabling environment for development of a Green Bond market.

Côte d'Ivoire

The Green Finance sector in Côte d'Ivoire is still in its infancy, as evidenced, for example, by the lack of interest among financial institutions in joining global initiatives for international disclosure and reporting standards. At present, the Ivoirian market has only one signatory to the UN Principles for Responsible Investment (PRI), and no signatories to the Task Force on Climate-related Financial Disclosures (TCFD), UNEP-FI Principles for Responsible Banking (PRB), UNEP-FI Principles of Sustainable Insurance, or UN Global Compact (UNGC). Other deficiencies include the lack of a Green Fund, Green Lending Facility or Bank, or Green Finance strategy or framework.

However, some climate policies encouraging climate change actions have been set up in the Energy, Agriculture and Forestry sectors, and despite the absence of a national carbon trading system, the country is exploring the potential for a domestic carbon pricing mechanism[41] to help meet its NDC emissions reductions targets.

41 https://www.carbonpricingleadership.org/calendar/2018/7/12/launch-of-the-pmr-project-on-carbon-taxation-in-cte-divoire

Senegal

Senegal has hosted focused green initiatives in an effort to develop and align the finance sector to international disclosure and reporting standards. However, success has been limited with only one financial institution signing up to the UN PRI (United Nations Principles for Responsible Investments), whilst six companies have signed up to the UNGC (United Nations Global Compact). In spite of the efforts being made, Senegal is still some way from greening its financial system. No framework has been developed to harmonise the definition of "green" or sustainable activities nor have any public or private entity in the country issued a Labelled Bond to date. In addition, there is no evidence of any ongoing activities to develop a Green Bonds Market programme, while the existing climate-related policies primarily cover the Energy, Agriculture and Forestry sectors only.

Senegal should focus efforts on building a finance ecosystem around institutions such as the FONSIS[42] whose mandate for green investment has been recently expanded; the FONGIP[43] which aims to improve the financing conditions of economic actors working in priority sectors; and the National Economic and Development Bank (BNDE) which is dedicated to SME financing. Together, these institutions can support interventions and initiatives that contribute to the NDC objectives.

Benin

The Government of Benin has provided a degree of support to Climate Finance initiatives. The existing framework for national development and resilience policies and plans includes the National Strategy for the Implementation of the UNFCCC, the National Action Programme for Adaptation to Climate Change (NAPA), the National Programme for the Sustainable Management of Natural Resources (PNGDRN), the Low-Carbon and Climate-Resilient Development Strategy, the National Strategy and Action Plan for the Sustainable Management of Benin's Mangrove Ecosystems, and the NDC.
Several existing institutions in Benin work on channelling green finance toward projects: these include the National Fund for Environment and Climate (FNEC), the Rural Electrification Agency (ABERME), and leading commercial banks such as Ecobank or Coris Bank. Benin successfully launched a sovereign SDG Bond in 2021.

Togo

Togo's revised NDC project portfolio, estimated at USD 5.5 billion in total investment by 2030 is expected to be funded using a variety of financial instruments, credit lines, subsides and technical assistance mobilised from Development Finance Institutions, foreign agencies and the capital markets.

Togo is seeking a grant from GCF to support it in identifying Climate Finance sources, develop appropriate Climate Finance strategies and improve the National Council of Togo's (CNP-TOGO) knowledge on green transport and green building standards, as well as to develop green policies to engage the private sector on sustainability and environmental management initiatives. Despite these activities, our research found no clear evidence of an enabling market structure to support the issuance of a potential green bond from either the sovereign or the private sector in the near future.

Burkina Faso, Mali, Niger and Guinea Bissau

The effects of COVID, coupled with continuous political instability being experienced by the WAEMU countries in the Sahel region, has negatively impacted GDP and economic development. Governments have had to prioritise economic recovery ahead of other initiatives, making it difficult to develop or formulate policies on Green Finance. At the time of writing, though the Ministry of Finance has made some enquires about Green Bonds, our research found little evidence of any major financial institution being proactively engaged in Climate Finance initiatives in any of these countries, nor was there any tangible evidence to support the existence of a strategy or policy framework for Green Finance from a regulatory working group/steering committee/roadmap for that purpose.

42 Fonds Souverain d'Investissements Strategiques – Sovereign Strategic Investment Fund
43 Fonds de Garantie des investissements Prioritaires – (Priority Investment Guarantee Fund)

Benchmarking against Successful Programs in Sub-Saharan African Markets

This section reviews the issuance of Green Bonds and related programs in other Sub-Saharan African Markets to identify hurdles, challenges and opportunities that could face market stakeholders.

Overview

To date, Labelled Bond issuances have been launched in three West African countries, namely Nigeria (on several occasions from the Government and from non-sovereign entities), Côte d'Ivoire (one Corporate Green Bond in 2021), and Benin (one Sovereign SDG Bond in 2021) – Nigeria being the only country with several successful issuances. Table 6 below highlights some of the pre-existing conditions that have enabled Green Bond market development in Nigeria; we also explore the broader lessons from the Nigerian, Beninese and Ivorian cases in the following section.

Case Study: Green Bonds in Nigeria

The Nigerian Government issued its maiden Green Bond in December 2017, as a demonstration issuance to kick-start the market following a series of bilateral engagements between government agencies (Ministry of Finance, Ministry of Environment) and market participants, with technical support on green eligibility and bond certification provided the Climate Bonds Initiative (CBI).

The relative success of the 5-year, USD 30 million Green Bond, whose proceeds were deployed to finance green projects in Energy and Forestry, prompted the launch (in June 2018) of the 3-year Nigeria Green Bond Market Development Programme, a series of coordinated capacity building training and awareness activities which has included investment seminars, media coverage, and dedicated platforms such as the Nigerian Green Bond Week (preceded by a Cooperation Agreement between FMDQ, FSD Africa and CBI). The Federal Government has subsequently issued a second tranche for USD40 million in 2019 to fund green projects in Energy, Transportation, and Water and Sanitation.

Collaborative efforts by the partners to support the Nigeria Green Bond Market Development Program (NGBMDP)[44], along with extensive capacity building (given to key financial markets stakeholders) and engagement with regulators on topics such as issuance rules and listing guidelines, has led to the development of a relatively active market. This has seen, in addition to multiple sovereign issuances, Green Bonds issued from Access Bank (Financial corporate) and North-South Power (non-financial corporate).

44 https://www.climatebonds.net/files/reports/nigerian-green-bond-market-development-programme-state-of-the-market-final.pdf

Criteria	Benin	Burkina Faso	Cote d'Ivoire	Senegal	Togo	Mali	Niger	Nigeria	Ghana
Labelled (Green, Social and Sustainability) Bond Market									
Amount issued to date	USD 568m	N/A	USD 18.1m	N/A	N/A	N/A	N/A	USD136m	N/A
Multiple Issuance	NO	N/A	N/A	N/A	N/A	N/A	N/A	YES	N/A
Corporate Issuers	NO	N/A	YES	N/A	N/A	N/A	N/A	YES	N/A
Sovereign Issuers	YES	N/A	NO	N/A	N/A	N/A	N/A	YES	N/A
Are there listing requirements specifically for Green Bond on the stock exchange?	YES[45]	YES	YES	YES	YES.	YES	YES	YES.	NO
Is there a Green Segment in the stock exchange?	NO	NO	NO	NO	NO.	NO	NO	YES.	NO
Are market stakeholders receptive to the green bond concept?	YES	N/A	YES	YES	YES	YES	YES	YES	YES
Is the investor base receptive?	YES	N/A	YES	YES	N/A	N/A	N/A	YES	N/A
Have there been widespread efforts to build interest and capacity?	Some	N/A	Some	Some	N/A	N/A	N/A	YES	Some
First Issuance									
Date	Jul – 21	N/A	Aug – 21	N/A	N/A	N/A	N/A	Dec - 17	N/A
First Issuer	Gov't of Benin	N/A	Emergence Plaza	N/A	N/A	N/A	N/A	Federal Gov't of Nigeria	N/A
First Bond Size	USD568m	N/A	USD 18.1m	N/A	N/A	N/A	N/A	USD 30m	N/A
Tenor (Years)	12.5	N/A	8	N/A	N/A	N/A	N/A	5	N/A
Issuance Coupon	4.95%	N/A	7.5	N/A	N/A	N/A	N/A	13.48%	N/A
Was the first green bond supported by Development Finance Institutions (DFIs)	YES	N/A	YES	N/A	N/A	N/A	N/A	YES	N/A

Today, the Nigerian market continues to attract the interest and confidence of both local and international investors, as the number of subscribers has increased and the investor base has diversified to include retail investors. The Nigerian Green Bonds Market Development Programme (NGBMDP) has successfully provided technical support to issuers, as well as training to local verifiers in developing an innovative curriculum with FSD Africa and CBI, further collaborating to produce "The Green Bond Toolkit", a guide and reference for issuing Green Bonds in Africa.

Key lesson learnt:

- Sustained engagement with Regulators, Supervisory Agencies, Government and Ministries, as well as market intermediaries, is key to the development of an active Green Bond market.
- Developing a structured and focused Green Bonds implementation plan with measurable and quantifiable

45 Green Bond Guidelines drawn up by the CREPMF in line with the GBP

outcomes was key to the successful engagement of market participants.
- Actively providing support to issuers on the eligibility criteria and the process for green issuance was also critical to the development of the market.
- Creating enabling market structures and effective regulations is essential for investor confidence and private sector participation.
- Having a relatively active and developed domestic secondary debt market enhances the rate at which green finance is integrated into the capital market.
- The efforts required for a sustained and impactful market engagement should not be understated as this could run for a number of years depending on the size of the project pipeline and the credit rating of the issuers.

Case Study: Sovereign SDG Bond in Benin

In July 2021, Benin became the first country in Africa (and the second globally after Uzbekistan) to issue a Sovereign SDG Bond (EUR 500 million, 12.5 years, 4.95% coupon rate), whose proceeds are aimed to support reforms and investments for eligible activities in the Health, Water, Energy and Waste management sectors.

Feedback from Stakeholder Engagement[46] highlighted that the Government's decision to issue a Eurobond rather than issuing debt on the regional market was justified by the potential "greenium"[47], relying on "a nice combination of the faithful existing emerging market dedicated investor base, plus the additional momentum brought in by the dedicated ESG pockets". On the other hand, the limited understanding of Green Bonds among local investors, along with the lack of depth in the local market, were identified as risk factors by the Government of Benin.

The groundwork for its SDG Bond dates back to 2018, when Benin was one of the five emerging market countries chosen to be a part of an IMF-UN pilot programme (under the oversight of the UNDP) to assess the financial implications of meeting the SDGs.

Key lesson learnt:

- Labelled Bonds are not designed and/or adapted for all countries and require a level of sophistication and transparency that not every developing market is able or perhaps willing to provide. Successful issuance is therefore a matter of building the necessary structures to support the issuance rather than simply being a question of willingness amongst market participants and regulators. These structures include but are not limited to:

  - Appropriate regulatory frameworks to ensure pre and post issuance compliance
  - Capacity building on green eligibility criteria for all market participants
  - Technical assistance to support and alleviate the additional costs of green issuance

46 Interview with Mr Romuald Wadagni, Beninese Government Official in charge of Economy and Finance
47 Suggesting that the borrowing cost is lower than existing conventional debt

<table>
<tr><th>Criteria</th><th>Benin</th><th>Burkina Faso</th><th>CI</th><th>Senegal</th><th>Togo</th><th>Mali</th><th>Niger</th><th>Nigeria</th><th>Ghana</th></tr>
<tr><td colspan="10">Government</td></tr>
<tr><td>Has the government adopted/adapted a green bond/taxonomy?</td><td>YES</td><td>NO</td><td>YES</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>YES</td><td>NO</td></tr>
<tr><td>Has the government issued a green bond?</td><td>YES</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>NO</td><td>YES</td><td>NO</td></tr>
<tr><td colspan="10">General Debt Capital market (DQCM) considerations</td></tr>
<tr><td>Are there credible corporate issuers?</td><td colspan="7">YES</td><td>YES</td><td>YES</td></tr>
<tr><td>Is the DCM well regulated?</td><td colspan="7">YES</td><td>YES</td><td>YES</td></tr>
<tr><td>Is the local DCM active?</td><td colspan="7">NO</td><td>YES</td><td>NO</td></tr>
</table>

The case of non-financial Corporate Green Bonds

Corporate issues in Sub-Saharan Africa have been predominantly from financial institutions. To date, five corporates from outside the financial sector have issued green bonds, raising less than USD 600 million cumulatively, financing projects in two sectors – namely Renewable Energy and Green Buildings (with different denominations depending on the terms of the issue). Whilst the loan portfolio of financial institutions is likely to have been used to finance potentially green projects, corporates from outside the financial sector such as energy, agriculture, green buildings and clean transportation are potential issuers that should be supported as part of efforts to build the green finance landscape in the WAEMU economies.

Table 8: Green Bonds in sub-Saharan Africa

Year	Issuer	Issuer Type	Country	Issuance Type	Currency of Issue	Issuance value (millions, currency of issue)	Issuance value (millions, USD)	Sector(s) of Investment
2021	Republic of Benin	Sovereign	Benin	SDG Bond	EUR	500	566	Several eligible sectors
2021	Emergence Plaza	Non-financial corporate	Côte d'Ivoire	Green Bond	XOF	10,000	17	Green buildings
2021	DBSA	Governmental Financial Institution	South Africa	Green Bond	EUR	200	225	Several eligible sectors
2021	North South Power	Non-financial corporate	Nigeria	Green Bond	NGN	6,190	390	Renewable Energy
2020	Standard Bank Group	Financial Corporate	South Africa	Green Bond / Private Placement	USD	200	200	Water, Energy, Buildings
2019	Acorn Project Limited	Non-financial corporate	Kenya	Certified Climate Bond	KES	4,300	38	Low Carbon Buildings (Residential)

Year	Issuer	Issuer Type	Country	Issuance Type	Currency of Issue	Issuance value (millions, currency of issue)	Issuance value (millions, USD)	Sector(s) of Investment
2019	Federal Government of Nigeria	Sovereign	Nigeria	Green Bond	NGN	15,000	37	Conservation, Renewable Energy, Transportation
2019	Nedbank	Financial Corporate	South Africa	Certified Climate Bond	ZAR	1,662	105	Renewable Energy
2019	North South Power	Non-financial corporate	Nigeria	Green Bond	NGN	8,500	21	Green Infrastructure
2019	Access Bank	Financial Corporate	Nigeria	Certified Corporate green bond	NGN	15,000	37	Flood defence, Agriculture, Energy
2018	Bank of Wind-Hoek	Financial Corporate	Namibia	Sustainability Bond	NAD	66	4	Renewable Energy, Transportation
2018	Republic of Seychelles	Sovereign	Seychelles	Blue Bond	USD	15	15	Conservation / Land Use & Marine Resources
2018	Growthpoint	Non-financial corporate	South Africa	Green Bond	ZAR	1,100	70	Green buildings
2017	Federal Government of Nigeria	Sovereign	Nigeria	Certified Climate Bond	NGN	10,690	26	Renewable Energy
2017	City of Cape Town	Municipal	South Africa	Certified Climate Bond	ZAR	1,000	63	Water, Low Carbon Transport
2014	City of Johannesburg	Municipal	South Africa	Green Bond	ZAR	1,500	95	Renewable Energy, Other energy, Transport
2012	SA IDC	Governmental Financial Institution	South Africa	Green Bond	ZAR	5,200	327	Renewable Energy
						Total	2,251	(FX Rates as of 17/12/2021)

North South Power Company Ltd (NSP), a Nigerian electricity producer, became the first Nigerian company and the second non-financial African corporate to issue a Green Bond in February 2019. The company raised the equivalent of USD 21 million to finance solar implementation and rehabilitation of hydropower plant projects within the region. The Bond was guaranteed by InfraCredit[48] and was anchored by the Local Currency Bond Fund (LCBF)[49]. NSP returned to the market in 2021 to raise a further USD 13.6 million to finance a solar project as part of its USD 100 million issuance programme. The second issue was well received – subscriptions exceeded the initial amount sought – allowing NSP to raise additional funds for the project, all without a guarantee or DFI support.

Key lessons learnt:

- Investor confidence is improved when issuers meet strict pre- and post- issuance disclosure and reporting expectations and obligations. In the case of North South Power, the confidence, knowledge and experience gained from their inaugural issuance made the issuance of the second tranche much easier.
- For more difficult or risky transactions, where the issuer is not well known to the market, having a

48 InfraCredit provides local currency guarantees to enhance the credit quality of debt instruments issued to finance creditworthy infrastructure assets in Nigeria that conform with its eligibility criteria

49 Conceived by KfW, the ALCB Fund promotes primary corporate bond issuances in local currency by working with African issuers, investors and intermediaries to bring new deals to market.

wrapper such as a guarantee does help smooth the issuance. Some potential issuers in the WAEMU region are likely to fall into this category and would benefit from a guarantee structure.
- The Local Currency Bond Fund (LCBF) plays the role of an anchor investor in a local currency issuance to de-risk and crowd in other investors to enhance the success of the issue.

Acorn Holdings (Kenya)'s first issuance of USD 41 million was the first Green Bond out of East Africa (5-year note). The bond's objective was to finance environmental-friendly, low-carbon student accommodation. It received Technical Assistance (TA) from FSD Africa, along with a guarantee from GuarantCo, and was anchored by Emerging Africa Infrastructure Fund (EAIF). In February 2021, Acorn Holdings listed a REIT (for Real Estate Investment Trust) security, raising USD 22 million. However, despite various supportive efforts to grow the Kenyan market, achieving new corporate green bonds issuance remains challenging due structural issues – in particular credit defaults, high yields on government debt, investor focus on yield rather than impact, quality of reporting metrics and transparency, lack of knowledge among issuers, and pricing.

Key lessons learnt:

- A functioning and active debt market with appropriate levels of regulatory and legislative protection, transparency and good governance is key to the development of a Green Bonds market. Whilst these can be alleviated in the short-term through innovative financial engineering, this is not sustainable for the long-term. Ultimately, investors need to trust the credibility of the frameworks and rules in place.
- Investment decisions need to focus more on long-term environmental and climatic impact rather than short-term yield.
- High returns offered on Governments' 'risk-free' debt continues to crowd out corporate issuance which is perceived to be riskier by investors, making it more difficult to develop the market.

Emergence Plaza's Green Bond issue was long delayed due to the lack of established criteria for green buildings in Côte d'Ivoire and the WAEMU region, which resulted in a 15 month wait to obtain the Edge Green Building certification that allowed the bond to be labelled as green. The issuer benefited from FSD Africa's technical assistance in getting the validation from CBI as a CBS Certified issuance.

Although the bond was ultimately placed privately with selected investors (a less expensive alternative to a public listing), the transaction took advantage of the then-recently published guidelines of the CREPMF, which, according to the lead arranger of the issuance, Hudson & Cie, helped increase investor demand for the issue. The price obtained – approximately 150 basis points below the interest rate on the bank loan held at the time – reflects the success of the bond issue.

Key lesson learnt:

- Conducive regulation, even in more difficult markets, sends positive signals to market participants and investors.

Stakeholder Engagement

A number of interviews and discussions with key market stakeholders such as issuers, deal arrangers, and regulators were conducted to gain insight into the hurdles, challenges and opportunities associated with the development of a Green Bond market in WAEMU. Below, we summarise the key take-aways.

Market Readiness: The interviews show that there is clear interest from investors and issuers for Green Bonds, but that the market configuration is not currently conducive to their issuance. On the one hand, issuers do not have the necessary knowledge about green eligibility criteria and the green bond issuance process. On the other hand, investors' appetite is hampered by the lack of appropriate regulations or guidelines, which should allow for harmonisation of eligibility criteria for green investments and of pre- and post-issuance practices in the WAEMU zone, in addition to convergence of these practices towards international standards.

Pricing: The lack of a pricing advantage to compensate potential issuers for the extra effort required to issue

labelled bonds was a point raised by many interviewees. Potential issuers would be incentivised by the provision of technical assistance to facilitate the adoption of best practices: assessment/verification of the bond's alignment with the four core components of the GBPs (in general, green bond issuers are required to conduct two external reviews, one before and one after the issuance of the bonds), certification, and rating.

Capacity Building: Significant capacity building is required to support the development of a Green Bond market in WAEMU. Sustained stakeholder engagement, e.g. focused training sessions, should focus on:

- Green bond definition
- Eligibility criteria for green projects
- The labelling verification and certification process
- Impact reporting requirements

A senior representative of APSGI UEMOA interviewed during the research phase of the assignment suggested that the project team partner with the regional brokers' association (APSGI UEMOA[50]) to run a capacity building workshop in Abidjan and/or Dakar as the brokerage firms own the relationships with issuers and are better positioned to help mainstream green finance once they have a better understanding of the Green Bond issuance process.

Investor Appetite: In the WAEMU bond market, local banks are the main investors. The Tier 1 banks are mainly subsidiaries of European and Moroccan banks, especially in Cote d'Ivoire and Senegal. As such, any international regulation to include green investment in their asset portfolio will be applicable to those banks. That said, key attributes that would encourage local banks to invest in green bonds on their own accord are (i) the yield on these bonds and (ii) the possibility of pledging these bonds to the Central Bank as collateral in order to obtain short-term credit facilities (and therefore haircuts that will be applied by the Central Bank on this type of collateral).

These two points are crucial, as they demonstrate the need not only for quality paper but also for additional incentives to increase investors' appetite.

The second key group of investors who would have great potential for investing in green bonds are insurance companies and pension funds. However, in the absence of regulatory pressure, or industry best practices that would allow them to distinguish themselves, they would rather focus on the securities' maturity – in order to match their assets with their liabilities, as well as on an attractive yield, before considering any potential impact resulting from their investment.

Sectors with strong potential for green bond issuance:

- Renewable energy production (Sovereign / Corporate)
- Transportation (Sovereign)
- Agriculture (Financial institutions)
- Low-carbon Real Estate (Corporate)
- Waste Management (Sovereign)

50 L'Association Professionnelle des Sociétés de Gestion et d'Intermédiation de l'UEMOA

CONCLUSIONS AND RECOMMENDATIONS

We can affirm from the findings of the review that whilst there are strong prospects for green financing in the WAEMU region, the development of a Labelled Bond (Green, Sustainable, Social, etc.) market is in a nascent stage. Despite the relatively high interest in green bonds, our stakeholder engagements highlighted limited understanding of the eligibility criteria for green products, the evaluation and selection process and/or the benefits of labelled bonds, making it difficult to assess the existence of eligible assets or the development of future pipelines of eligible projects.

Market regulation is an area that needs urgent attention as this helps set the tone and provides the necessary guidance to potential issuers of labelled bonds. Whilst the private placement of the Emergence Plaza green bond issuance highlights issuers' reluctance to finance projects through the markets due to the inability to gauge investor appetite or to appreciate the benefits of green bonds investment accurately, it affirms the positive effects of regulations on investor confidence. By comparison, Nigeria has encouraged the growth of its green bonds market by developing rules to guide green bonds issuance. FMDQ Securities Limited, a Nigerian-based Securities Exchange, has recently taken this initiative further by establishing a dedicated Green Bonds segment on its issuance platform.

In the WAEMU region, commercial banks are the main investors in a debt market primarily dominated by sovereign issuance. With greater demand from banks for the issuance of more green bonds, governments would be encouraged to explore opportunities for issuing more sustainable debt instruments to meet the infrastructure gap and commitments to the Nationally Determined Contributions (NDCs). However, this is currently hindered by the limited knowledge – among banks especially – of green bonds issuance processes and impact reporting requirements. A well-thought through and consistent FSD Africa-supported intervention in the two larger economies of Cote d'Ivoire and Senegal – as was implemented in Nigeria – could provide the necessary capacity building needed to address the knowledge gap in government ministries, domestic and regional central banks, and debt management agencies. The lessons learnt from this program can then be leveraged in the smaller economies such as Togo and Benin Commercial Banks are major providers of finance in the WAEMU region. Inadvertently, they are likely to have extended loans to finance implementation of projects that may hitherto have been eligible for green financing. Conducting Portfolio Reviews and Green Tagging exercises on bank loan books to assess their exposure to green financing could potentially increase the opportunities for green bond issuance to refinance existing positions at a much lower cost of capital, and to free up much needed capital resources that can be deployed to projects in more sustainable sectors.

The market challenges are real but not insurmountable. Leveraging learnings from other markets, FSD Africa can provide real and effective interventions that could assist with the market development process. Examples are listed below:

- Develop a sustained capacity building programme through workshops, literature and market engagement. General training and specific/bespoke capacity building are needed for three groups of stakeholders, namely Regulators, Issuers and Intermediaries, and Investors
- Engage with UMOA-Titres (Union Monetaire Ouest Africaine), BCEAO (Banque Centrale des Etats de l'Afrique de l'Ouest) and CREPMF (Conseil regional De L'Epargne Publique Et Des Marche) to develop regulations and guidelines to support Green Bond market development.
- Technical Assistance should be provided to potential issuers that show an interest in Green Bonds. FSD Africa, for example, could support Financial Institutions in conducting a portfolio review of their loan books.
- Engage with market regulators and commercial banks to develop appropriate industry-specific products.
- FSD Africa could consider taking positions in certain issuances through the use of the Local Currency Bond Fund (LCBF) as a de-risking mechanism to crowd in potential green investors.

In conclusion, developing an active green bonds market in the WAEMU region would go some way in assisting Member States to fund their NDCs (Nationally Determined Contributions), address the challenges faced from the impacts of global warming, implement effective development plans in light of the strong demographic pressures anticipated, and rebound from the economic impacts of the global COVID-19 pandemic and war in Ukraine. However, this will only be possible if appropriate interventions are made to develop the market as a whole.

ANNEXES

Project Categories Eligible for Green Bond Financing and Associated Requirements

Project Category	Use of Proceeds	Eligibility criteria
Renewable energy	Development, construction, installation and maintenance of hydroelectricity production facilities	Hydro power below 25MW; and Hydro Power above 25MW with emissions intensity below 100gCO2e/kWh (or a power density greater than 5MW/m2) using the G-res tool (developed by the International Hydropower Association and the UNESCO Chair for Global Environmental Change), or a site-specific assessment in line with the IEA Hydro Framework.
	Development, construction, installation and maintenance of Solar Facilities	Development, construction, installation and maintenance of Solar Facilities (such as Photovoltaic or Thermodynamic plants).
	Development, construction, installation and maintenance of Wind Facilities	Development, construction, installation and maintenance of Onshore Wind Facilities.
	Development, construction, installation and maintenance of Bioenergy facilities (Biomass, Biogas and Biofuels)	Development, construction, installation of Bioenergy facilities fed by sustainable sources of local raw material (such as organic waste) avoiding conflict of utilisation of the resources, deforestation and land use. Development, construction, installation of anaerobic digestion of sewage sludge treatment facilities dedicated to biogas production used directly for the generation of electricity and/or heat or upgraded to bio-methane and equipped with a methane leakage monitoring measure.
	Development, construction, installation and maintenance of Energy Storage Facilities aiming at promoting the development of Renewable energies	Development, construction, installation and maintenance of Energy Storage Facilities (aiming at promoting the development of Renewable energies and/or replacing peak electricity produced by less environmentally friendly units).
Sustainable mobility	Development, construction, installation and maintenance of electric rail transportation & vehicles for the movement of goods and people as well as related infrastructure projects	Electrified rail transport equipment and infrastructure for freight and/or passenger transport & acquisition of new electric rolling stock.
Green Buildings	Development of new buildings or acquisition of existing buildings; Major renovation or restructuring of existing buildings	Applies to buildings receiving an Edge certification. Projects demonstrating at least 30% of energy consumption savings post refurbishment (for buildings and plants).

Project Category	Use of Proceeds	Eligibility criteria
Pollution Prevention and Control	Projects focused on waste reduction, collection, recycling and sustainable treatment	Projects to increase non-hazardous waste collection and processing (removal, processing, recycling, composting), either through the construction of new waste management systems and facilities or through the expansion/improvement of existing ones, limited to sorting, recycling or recovery and waste reclamation.
Sustainable water and wastewater management	Projects focused on water resources' protection and management	Projects dedicated to the protection of water resources, water stress mitigation, water drainage capacity, or efficiency in water distribution, including irrigation systems to promote water saving and recovery. Projects dedicated to the construction or extension of centralised wastewater systems including collection (sewer network) and treatment.
Environmentally sustainable management of living natural resources and land use	Projects contributing to land use/soil protection, prevention of desertification and soil erosion	Projects dedicated to combatting desertification, restoration of degraded land and decontamination of grounds. Projects contributing to the prevention of deforestation and to sustainable forestry development with label FSC and PEFC.
	Projects contributing to biodiversity conservation	Programmes for the protection and restoration of ecosystems and priority species.
	Projects contributing to sustainable agriculture	Projects promoting sustainable agricultural practices such as organic agriculture. These projects follow the climate-smart approach, with techniques that aim at the reduction of GHG emissions, and increased resilience to climate change.
Climate Resilience: Land and Water related hazards	Projects dedicated to the minimisation of drought risks & flood risks	Projects dedicated to strengthening resilience and adaptive capacity to drought risks, flood risks, climate- related hazards and natural disasters such as: • early warning systems for monitoring and forecasting water and climate related hazards; • construction and maintenance of adaptation measures and / or infrastructure (e.g., incorporation of submergible transformers, switches, pumps).

Excluded activities:

- Projects related to Acquisition, Development, Operation and maintenance of new or existing fossil fuel-based electricity generation capacity or heating systems (including, but not limited to, coal, oil or natural gas-powered assets).
- In the specific context of sustainability mobility: Projects for infrastructure dedicated to the transport of fossil fuels or blended fossil fuels.
- In the specific context of Pollution Prevention and Control: Projects dedicated to Waste-to-Energy.
- Projects related to water desalination.
- Production or trade in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCB[51]'s, wildlife or products regulated under CITES[52].
- Production or trade in weapons and munitions.
- Production or trade in alcoholic beverages (excluding beer and wine).
- Production or trade in tobacco.
- Gambling, casinos and equivalent enterprises.
- Production or trade in unbonded asbestos fibres.
- Drift net fishing in the marine environment using nets in excess of 2.5 km. in length.
- Production or activities involving harmful or exploitative forms of forced labour/harmful child labour.
- Production or trade in wood or other forestry products other than from sustainably managed forests.

Stakeholder Mapping

Stakeholders	Missions and Responsibilities	Expected Role and Requirements	Identified actors and/or potential partners
Conseil Régional de l'Epargne Publique et des Marchés Financiers (CREPMF), Abidjan, Cote d'Ivoire	Regulatory and supervisory body for the WAEMU Regional Financial Market. Its main mission is to organise and control public offerings on the one hand, and to authorise and control participants on the other. In this regard, any fund raising on the regional financial market is subject to the prior authorisation of the CREPMF, expressed by a visa for operations carried out through public offerings or by the attribution of a registration number for bonds issued through private placement.	CREPMF would have to develop Green Bonds regulation to provide guidance to the market participants. The regulation would follow international best practice and require disclosure on behalf of the issuers of the bond's use of proceeds, selection of projects, management of proceeds, and reporting. The introduction of a new set of regulatory requirements and supervisory enforcements would be expected to provide investors with confidence through increased transparency and disclosure from the issuers, and enhanced monitoring from the regulator.	Through engagement with international bodies such as the IFC, the UN Environment Programme (UNEP), and the Climate Bonds Initiative (CBI), existing resources could be leveraged to develop a new set of regulatory requirements. (IFC helps the private sector to address climate change through investments and innovative financing, and by addressing regulatory and policy obstacles to green growth.)
UMOA-Titres (UT), Dakar, Senegal	UT aims to support the development of the bond market and the issuance and management of public securities issuance in the Union. In particular, the UT aims at supporting the Member States in the issuance of sovereign debt and in developing capacity building for the public and private sectors. The UT Agency runs the Public Securities Market. The Public Securities Market is the only regional auction market exclusively dedicated to the financing of WAEMU member states. UT assists the public treasuries in: • Determining and formulating their financing needs • Programming and coordinating their interventions on the market • Operational management of public securities issues • Promotion of public securities to investors • Reinforcement of their capacities • Investment of their cash surpluses	UT would be a key interlocutor for any initiative and/or intervention on the regional market. UT is knowledgeable and can facilitate the process by bringing either operational support or capacity building to market stakeholders. UT would in particular be expected to: • Provide operational support to the Green Bonds issuance process from Sovereigns • Help promote the issuance of Green Bonds to investors • Develop capacity building for key market stakeholders	Transactions between stakeholders are facilitated by support structures ensuring the regulation and promotion of the Public Securities Market. These structures develop and update the regulatory framework and assist governments and investors. In this respect, alongside WAMU-Securities, there are key institutions such as BCEAO, CREPMF, BRVM, ADB and BOAD. BCEAO is the Central Depository and Settlement Bank for public securities issued by auction. It is the central depository for securities issued following a multiple price (bonds) or multiple rate (bills) auction procedure. The CREPMF is the Financial Markets Authority.

Stakeholders	Missions and Responsibilities	Expected Role and Requirements	Identified actors and/or potential partners
Ministries	Ministries (Finance, Environment and Budget & Planning) would set up a committee, typically headed by the Debt Management Office, for coordination, management and follow-up on the status of a Sovereign bond issue.	Members of the committee are likely to be consulted, especially for States' bond issuance. As they are involved in the development of national plans and programmes, they might weight in the decision-making process when it comes to selecting the type of bond that would be issued (green, SDG, Social, etc.) and might require alignment of the issue with some government objectives. They might also be responsible for approving the issuance.	These will primarily include the Ministries of Finance, Environment, National Budget and Planning, as well as the Sub-National Agencies or States in each country that are sponsoring the projects seeking green finance.
Potential Issuers	Issuers sell bonds or other debt instruments in the bond market to fund the operations of their organisations. This area of the market is mostly made up of States, local authorities and national departments in charge of privatisation operations, and companies established in the WAMU territory: - Governments: These are the 8 WAEMU member states: Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo. These States use the Public Securities Market to finance their development programmes at controlled costs. - Municipalities: They are locally issued by states, cities, special-purpose districts, public utility districts, school districts, publicly-owned airports and seaports (semi-public issuers), and other government-owned entities that seek to raise cash to fund various projects. - Commercial Banks: These would be key issuers in the regional bond market and they can range from local banks up to regional/pan-African banks. - Development Banks: These could pave the way for green bond issues by other key institutions; the African Development Bank (AfDB) established a Green Bond Framework in 2013 and a Social Bond Program in 2017, for example. - Corporates: Companies issue Corporate Bonds to raise money for funding a wide range of activities and projects. Investors' appetite is likely to be lower for corporate bonds that are not backed by governments or guarantees.	CREPMF has summarised all the obligations applying to potential issuers of green, socially responsible, or sustainable bonds in the WAEMU: http://www.crepmf.org/Wwwcrepmf/Consultations/pdf/JCAP_WAEMU_GSS_guidelines.pdf	The sectors that would be targeted are: Energy, Infrastructure, Agriculture, Transport, Real estate. Below is a list of potential issuers ('potential' as they have already issued bonds or would have the capacity to do so): Regionally focused development banks: - ECOWAS Bank for Investment and Development (BIDC/EBID) - Caisse Régionale de Refinancement Hypothécaire (CRRH) - West-African Development Bank (BOAD) States/Sovereigns (the largest issuers to date): - The 8 WAEMU countries would be candidates through dedicated bodies (Trésor Public de Cote d'Ivoire, Direction Générale de la Comptabilité Publique et du Trésor du Sénégal, Trésor Public du Burkina Faso, etc.) Municipalities & semi-public companies: - Port Autonome d'Abidjan (PAA) - Port Autonome de Dakar (PAD) - Senelec (Energy) (Senegal) Banks : - Bank of Africa - Banque de l'Habitat du Bénin (BHB) - Caisse Autonome d'Amortissement du Bénin (CAA) - Banque de l'Habitat du Sénégal (BHS) Corporates (ex semi-public): - Air Liquide Côte d'Ivoire (Industrial) - Palm Côte d'Ivoire (PALM CI) (agro-industry) - Groupe SIFCA (SIFCA CI) (agro-industry) - Emergence Plaza (CI) - Sonatel (Telecom) (Senegal)

Stakeholders	Missions and Responsibilities	Expected Role and Requirements	Identified actors and/or potential partners
Market Intermediaries (MI)	These are the banks as well as management and intermediation companies / brokers (Sociétés de Gestion et d'Intermédiation - SGIs) approved within the WAEMU zone. Investors must go through these intermediaries to bid for an issue: any submission to an issue on the Public Securities Market must be done through them. Some banks and SGIs have the additional status of Spécialistes en Valeur du Trésor (SVT). This means that these institutions are approved by the Public Treasuries of the Member States as privileged but non-exclusive partners of one or several States. The SVTs have specific obligations in the context of operations related to the Public Securities Market, in return for which they benefit from certain exclusive advantages. Note that SVT are the main holders of public securities, the other investors being mainly non-SVT banks.	Some MIs will act as Bond Underwriters: The underwriting segment of the bond market is traditionally made up of investment banks / SGI and other financial institutions that help the issuer to sell bonds in the market by assisting in key tasks such as creating a prospectus and other legal documents. The need for underwriters is likely to be greater for corporate debt issuance because of the increased risks associated with this type of debt.	APSGI-UEMOA: The Association Professionnelle des Sociétés de Gestion et d'Intermédiation de l'UEMOA is the representative body of the SGI of the 8 countries of the UEMOA. It currently comprises 28 SGI. The entity aims at: • Representing the SGI to the Regional Financial Market authorities (BRVM, DC/BR and CREPMF), public authorities, professional organisations, and partners and operators of the WAEMU Regional Financial Market; • Contributing to the evolution and modernisation of the regulations as an interlocutor of the CREPMF and the public authorities.
Second Party Opinion Provider / Credit Rating Agency	Ratings by credit rating agencies could help in providing external reviews of green bonds, bringing credibility to the system. External review of the bonds could take the form of a second party opinion or bonds certification. This process would aim at providing an independent opinion on the sustainability credentials and management of the bonds.	The SPO Provider would be responsible for ensuring that the Bond Framework is aligned with key standards and guidelines (e.g. ICMA's Green Bond Principles) and is in line with identified best practices. A credible independent review and verification is a requirement and protects the issuer's reputation while providing investors with assurance. The SPO Provider would be instrumental in bringing comfort to investors, in particular when considering non-sovereign issuance.	The following entities have already played a role in previous issuance in the WAEMU zone or could be solicited as SPO provider: • Sustainalytics, an international sustainability rating agency, was the SPO provider for the Cote d'Ivoire Sustainable Bond Framework • Vigeo Eiris (VE), an international social and environmental rating agency, was the SPO provider for the Republic of Benin's SDG Bond Framework • West Africa Rating Agency (WARA).
Guarantee Providers	Enhancements such as first loss guarantees, and/or anchor investors are critical to the development of the green bonds market in Africa. These would form part the strategies required to accelerate the issuance of green bonds in the region. For instance, GuarantCo provided investors with a partial credit guarantee to cover 50% of principal and interest due to investors on the green bond issued by Acorn Holdings Plc in Kenya while the African Local Currency Bond Fund was a cornerstone investor to the North South Power Company Limited (NSP) bond to support local currency issuance in Nigeria.	Such an actor would be expected to provide a guarantee over (local currency) bonds to the bondholders/potential investors. This guarantee would cover the non-payment of scheduled debt service up to the limit of the guarantee. Guarantee over a (local currency) bond would be key to give local banks and institutional investors, such as pension funds and insurance companies, the confidence to engage in long term investment.	Collaboration with other guarantors if required.

Stakeholders	Missions and Responsibilities	Expected Role and Requirements	Identified actors and/or potential partners
Potential Investors	Investors are actors who are looking for advantageous and secure solutions to invest their capital. They may be natural or legal persons, insurance companies, Undertaking for Collective Investment in Transferable Securities (UCITS) management companies, pension funds, investors outside the WAEMU zone, large companies, SMEs, cooperatives or individuals.	Investors are the last link in the chain but their considerations are essential. Depending on their nature (local/international, public/private, large/small, ownership etc.) and investment mandate, they will have specific expectations and requirements for investing. Key concerns of investors regarding the regional financial markets are market infrastructure and regulation (transparency and disclosure requirements for the issuers in particular). Also, in addition to financial considerations, they examine the issuer's governance. Both the Guarantee Provider and the Second Opinion Provider / Rating Agency would be key in providing some reassurance to potential investors over an investment. Some institutional investors are expected to support the government in its issuance for government budget funding, whilst others are more interested its social initiatives (cf. funding for financing national transition plans, etc.).	The following entities are likely to be targeted by investors («»+/++/+++»» to reflect importance): +++ Banks (the largest part of the buy-side in the regional capital market) ++ Institutional Funds - Pension Funds (public only - no private pension funds) - Insurance Companies (do not typically invest in corporate bonds) - Other Funds + Social Impact Funds - Corporate Social Responsibility - Social Impact Investors - Other Funds and Investors SGI/Brokers Insurance Pension Funds Mutual Funds
Media	One of the most noteworthy roles of the media when it comes to providing information relating to financial markets is that they provide accurate and consolidated information from various sources. This is critical to market development as credible media help educate stakeholders at various levels on the benefits of issuing or investing in labelled bonds.	Representatives of some sectors of the media (financial houses) would be expected to possess basic knowledge of capital market instruments. Capacity building would be provided on the benefits of Green Bonds to enable recipients to educate, inform and challenge experts in the market. It is expected that they should be able to provide guidance to players in the market.	These actors will include those presenting financial reports or documentaries, be it for newspapers or screen presentations.

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