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Emerging Market Green Bonds Report 2020

On the Road to Green Recovery

This document is for the exclusive attention of professional investors, investment service providers, and other professionals in the financial industry.

Spring 2021

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KEY HIGHLIGHTS

Highlights for 2020

$40 billion
emerging market green bond issuances in 2020

21%
increase in **emerging market ex-China** green bond issuances from 2019

$226 billion
emerging market green bonds cumulative issuance through 2020

$260 billion
projected emerging market green bond issuance between 2021-2023

$100 billion
projected annual emerging market green bond issuance by 2023

50%
of cumulative green bond issuance by financial institutions

43
emerging markets have issued green bonds since 2012

7
emerging markets with debut offerings in 2020

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Yerlan Syzdykov
Global Head of Emerging Markets
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" While both short-term and long-term effects of the COVID-19 crisis remain uncertain, market participants globally are working toward building resilient economies and sustainable financial systems capable of addressing climate and environmental challenges. Financial markets are expected to play a key role toward addressing challenges that investors face in terms of climate risks and sustainable projects objectives. The fiscal policy efforts in emerging economies will bring forward recoveries, providing an opportunity to boost green investment in areas including renewable energy, green urban infrastructure, and climate-smart agriculture.

Through this unique and innovative partnership with the IFC, Amundi remains committed to the development of the green bond market in emerging countries through vigorous and robust engagement efforts with different market participants to boost both supply and demand of green bonds. This report highlights the key trends and outlook in green market segments of emerging market debt along with opportunities for financing climate commitments and sustainable development objectives in emerging countries.

As compared to the last three years, the supply of green bonds in emerging markets is expected to double in the next three years. Similar to previous years, China was on the forefront of green bond issuance in emerging countries despite a decrease in 2019 and first half of 2020. This downturn is attributed to the decrease in domestic supply of green bonds, as the supply of USD- and EUR-denominated green bonds remained strong. There is a positive trend in green bonds issuance in other emerging countries highlighted by an increase in issuance by 21 percent in 2020. Several countries including Saudi Arabia, Egypt, and Kazakhstan issued green bonds for the first time in 2020. "

International Finance Corporation

" As green finance moves from niche to mainstream, momentum for green and sustainable investment in emerging markets is building. Despite unprecedented challenges in 2020, the green bond market remained resilient. Cumulative global green bond issuance reached the milestone of US$1 trillion since 2007, and 7 emerging markets issued green bonds for the first time. Robust investor appetite and more supportive policy environments will continue to support the growth of the green bond market in emerging markets.

The devastating effects of the COVID-19 pandemic hit emerging markets especially hard in 2020 and are likely to continue having an impact at least in the near term. The social and economic consequences, including exacerbated poverty rates, reinforce the urgency of investment for sustainable development. Recovery measures that combine needed fiscal stimulus with a focus on green sectors and reinforce commitments to the transition to low-carbon economies could create significant opportunities to invest in green and sustainability-related projects. IFC estimates that investment opportunities in emerging markets have the potential to generate over US$10 trillion through 2030 and create over 200 million jobs in green sectors.

International Finance Corporation is at the forefront of mobilizing private capital for sustainable development and climate change. The partnership with Amundi exemplifies IFC's efforts to create new markets and align investor demand with supply. This report examines green bond market development in emerging markets and how it can be strengthened through green recovery efforts. "

Jean Pierre Lacombe
Director, Global Macroeconomics, Market and Portfolio Research
IFC

ABBREVIATIONS AND ACRONYMS

Amundi: Amundi Asset Management
ASEAN: Association of Southeast Asian Nations
COP26: 26th United Nations Climate Change Conference
COVID-19: Coronavirus disease 2019
CO_2: carbon dioxide
EAP: East Asia and the Pacific
ECA: Europe and Central Asia
EM: emerging market
ESG: environmental, social, and governance
ESRM: environmental risk and social management
EU: European Union
GBS: Green Bond Standard
GDP: gross domestic product
GBP: Green Bond Principles
ICMA: International Capital Markets Association
IDA: International Development Association
IFC: International Finance Corporation
IMF: International Monetary Fund
LAC: Latin America and the Caribbean
MENA: Middle East and North Africa
NDC: nationally determined contributions
NGFS: Network of Central Banks and Supervisors for Greening the Financial System
SA: South Asia
SBN: Sustainable Banking Network
SBP: Social Bond Principles
SBTi: Science Based Targets Initiative
SDGs: Sustainable Development Goals
SEC: Securities and Exchange Commission
SFDR: Sustainable Finance Disclosure Regulation
SLBs: sustainability-linked bonds
SSA: Sub-Saharan Africa
SRI: Sustainable and responsible investment
TCFD: Task Force on Climate-related Financial Disclosure
UAE: United Arab Emirates
UNEP FI: United Nations Environment Programme Finance Initiative

EXECUTIVE SUMMARY

The third edition of the "Emerging Market Green Bonds Report" highlights the key trends in and outlook for green bond market developments in emerging markets (EMs) in the context of the COVID-19 crisis. The report also provides a broad overview of the policy and regulatory updates that could affect the green bond market.

Key findings of this report

- The economic fallout caused by COVID-19 has greatly affected EMs, which will experience widely divergent recovery paths. Recovery measures could create significant opportunities for green and sustainability-related projects by prioritizing large-scale public investment in green sectors and encouraging private sector investment through supportive policies.
- Given the highly supportive market fundamentals for the EM green bond market, EM green bond issuance is expected to double in the next three years compared to the previous three and the market to cross the US$100 billion mark of annual issuance by 2023.
- Key determinants of the potential for green bond markets include (a) sustainable finance policies and frameworks; (b) green bond issuance momentum; (c) capital market development; and (d) governance and political stability. Out of 57 EMs analyzed, 22 showed improvements from 2019 to 2020 on these measures. EM issuers that are able to demonstrate strong commitments to sustainable development objectives will benefit from strong and growing investor demand.
- Despite the unprecedented challenges for the global economy and financial markets in 2020, the global green bond market proved resilient, achieving the key milestone of US$1 trillion in cumulative issuance since 2007, with issuance of US$280 billion in 2020. Since 2012, 43 emerging market economies have issued green bonds, registering cumulative issuance of US$226 billion. In terms of sectoral trends, robust issuance by nonfinancial corporates demonstrates increasing diversification of issuers. Financial institutions make up 50 percent of cumulative green bond issuance by volume in emerging markets.
- EM green bond issuance outside China was resilient in 2020, increasing by 21 percent to US$22 billion. Debut issuances from Armenia, Egypt, Georgia, Hungary, Kazakhstan, Romania, and Saudi Arabia contributed to this increase.
- China remained the largest green bond issuer in emerging markets in 2020 despite a fall in issuance as a result of lockdowns and project delays due to COVID-19 and a government push to issue pandemic-related bonds. Over half of China's issuance occurred in the second half of the year, signaling a rebound in the green bond market.
- Global green bonds outperformed the overall market, extending the cumulative performance since the end of 2017 to 311 basis points. EM green bonds outperformed conventional EM bonds in 2020 and demonstrated lower volatility. Based on secondary market data, the average EM "greenium" stands at -3.4 basis points, which represents 3.5 percent of the average spread of bonds in the sample. As the "greenium" becomes wider, EM issuers will have greater incentive to issue green bonds, which should support the "greening" of the EM debt market.
- Sustainable financial policies and appropriate regulatory frameworks are necessary to encourage capital flows to green projects and sectors. A number of initiatives at the global level could further mobilize EM green bond market development. These include the development of benchmark green taxonomies, implementation of the Task Force on Climate-related Financial Disclosure's recommendations, and efforts by central banks that focus on capacity building and technical assistance for EMs. Many EMs have made notable progress on launching and implementing sustainable finance policies and frameworks. Several countries also strengthened their commitments to achieve net-zero emissions in 2020.

INTRODUCTION

The pandemic and its multiple effects hit the global economy hard in 2020. Consecutive waves of infections and extended or renewed lockdowns and other social distancing measures not only depressed economic activity but also had profound social effects. Relative to pre-pandemic baseline forecasts, real gross domestic product (GDP) is projected to be 6 percent lower in 2022 in emerging markets (EMs) and 3 percent lower in developed economies. This growth shock is expected to reverse two decades of progress on poverty reduction worldwide, with 8 out of 10 of the "new poor" living in middle-income countries.[1] Although the rapid development of COVID-19 vaccines and, more recently, the launch of widespread immmunization drives provide a clear path out of this unprecedented global crisis, the short-term outlook, especially in EMs, is still uncertain. What is certain is that EMs will experience widely divergent recovery paths and will require substantial fiscal policy support.

In the short term, this fiscal support is likely to continue to focus on providing relief and mitigating the immediate effects of the pandemic. Once the focus shifts toward spurring long-term recovery, policy makers will have the choice to concentrate the stimulus on green investments, particularly in sectors such as renewable energy, distribution and storage, green urban infrastructure, and climate-smart agriculture. The International Monetary Fund (IMF) has called for policy makers to "green" their response to the crisis, promoting green investment alongside carbon pricing mechanisms to support the recovery efforts.[2]

This emphasis on green recovery will come into sharp focus at the upcoming 2021 United Nations Climate Change Conference (COP26) in November, where governments are expected to renew their climate commitments by submitting updated nationally determined contributions (NDC). Because EMs generally may have more limited scope for countercyclical fiscal and monetary policies than developed economies, incorporating green objectives to EM recovery efforts would be necessary not only to mitigate climate risks and environmental challenges but ultimately also to increase resilience to future shocks.

Meeting global climate goals will require investment on an unprecedented scale across EMs. Fortunately, a wide range of opportunities exist to finance climate commitments and sustainable development objectives. The 2021 IFC report "A Green Reboot for Emerging Markets" identified 10 sectors across 21 EMs that can support job creation and sustainable growth going forward.[3] These investment opportunities have the potential to generate over US$10 trillion through 2030 and create over 200 million jobs in sectors related to green infrastructure, climate-smart cities, and the transition to low-carbon economies.

Seen in this light, the COVID-19 pandemic, notwithstanding its tragic human and economic cost, may come to be seen as a turning point for a significant increase in investment into green sectors. Financial markets have a key role to play in supporting sustainable growth and development, mobilizing capital for projects with environmental benefits on a large scale, and addressing climate risk. Despite the pandemic, investor appetite for green financing instruments remained robust in 2020. After a lackluster first half, global issuance of green bonds rebounded in mid-2020, reaching the key milestone of US$1 trillion in cumulative issuance since 2007.[4]

Investor interest was spread across different kinds of instruments in this space: "use of proceeds" green bonds, tied to the financing of well-defined green investment projects; "use of proceeds" issuances with social and sustainability objectives; and sustainability-linked bonds tied to sustainable performance indicators at the issuer level (see box 1). With EMs still offering yield pickup in the global context at a time when there is increased appetite for environmental, social, and governance (ESG) products, EM issuers that are able to demonstrate commitment to sustainable development objectives will benefit from strong and growing investor demand.

The third edition of IFC and Amundi's "Emerging Market Green Bonds Report" provides an overview of EM green bond developments over the past year and discusses policy and regulatory changes driving EM green bond issuance. Despite the challenges that remain with regard to data quality and availability, supply constraints, and overall macroeconomic and policy uncertainty, this report concludes with a positive outlook on the potential for green bond market growth across the EM world.

Both government action and private sector investment will be needed to enable a green recovery at the scale and speed required. Although the economic fallout caused by COVID-19 has greatly affected EMs, recovery measures can create significant opportunities to invest in a green and sustainable recovery. Among EMs, China, Colombia, India, Indonesia, Nigeria, and South Africa have already integrated some green measures into their pandemic stimulus packages, including spending on solar systems, geothermal projects, afforestation, and electric vehicle infrastructure. Nevertheless, governments will need to concentrate more efforts toward incorporating environmental considerations into their fiscal responses. Enacting policies that support green and sustainable finance standards, data, and reporting would encourage more private sector investment.

A substantial green recovery across emerging markets could bring about significant short- and medium-term benefits when it comes to job creation and investment opportunities. Ultimately, adopting a low-carbon pathway will offer a path toward achieving long-term sustainable growth and limit the rise in global temperatures to well below 2°C.

Box 1: Labeled Bonds - Definitions and Guidelines[5]

Although this report focuses on green bonds, the below definitions are provided to clarify terminology and distinguish between the different types of labeled bonds. The proliferation of labels requires vigilance from investors on the actual project eligibility, allocation, and impact reporting commitments attached to labeled bonds.

Green bonds: Green bonds are fixed-income instruments with proceeds earmarked exclusively for new and existing projects that have environmental benefits. The Green Bond Principles (GBP) developed under the auspices of the International Capital Markets Association (ICMA) have four components: use of proceeds, process for project evaluation and selection, management of proceeds, and reporting. A number of countries and jurisdictions have developed their own set of guidelines for green bond issuance, many of which align with the GBP.

Social bonds: The use of proceeds from social bonds is directed toward projects that aim to achieve positive social outcomes especially, but not exclusively, for a target population. ICMA's Social Bond Principles (SBP) have four components analogous to the GBP: use of proceeds, process for project evaluation and selection, management of proceeds, and reporting. The 2017 SBP were updated in June 2020 to reflect changes in the market, notably in the context of COVID-19. For example, social project categories and target populations were expanded to encourage organizations to issue bonds in line with the SBP in this unprecedented period.

Sustainability bonds: Sustainability bonds are debt instruments whose proceeds will finance or refinance a combination of green and social projects. The Sustainability Bond Guidelines established by ICMA are aligned with the four core components of both the Green Bond Principles and Social Bond Principles.

Sustainability-linked bonds: Sustainability-linked bonds (SLBs) are performance-based non-earmarked bonds whose financial or structural characteristics (for example, coupon rate) are adjusted depending on achievement of predefined sustainability objectives. The objectives are measured through key performance indicators and assessed against sustainability performance targets. In June 2020, ICMA published the Sustainability-Linked Bond Principles, providing guidelines that recommend structuring features, disclosure, and reporting.

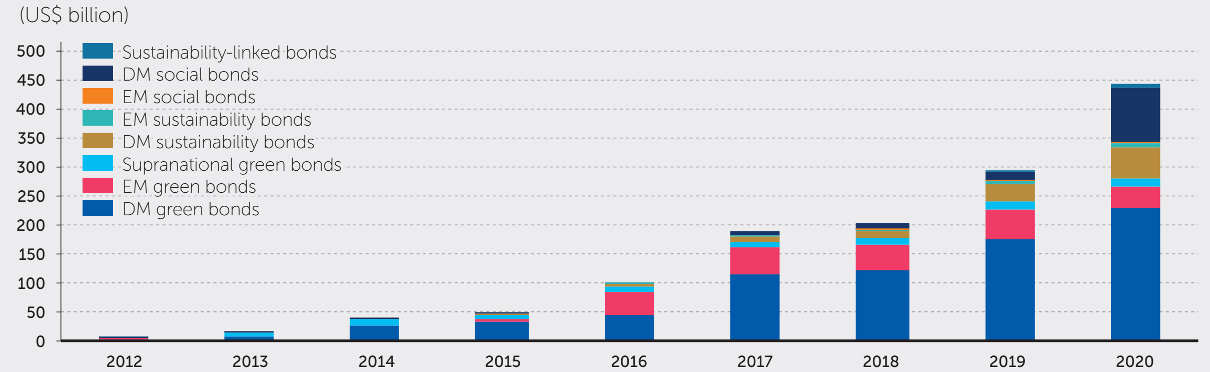
Climate transition bonds: Climate transition bonds are new products that aim to finance the transition to a low-carbon economy. ICMA has not published separate guidelines for transition-labeled bonds. The Climate Transition Finance Handbook published by ICMA in December 2020 recommends disclosures for issuers labeling either use-of-proceeds or sustainability-linked instruments with a climate transition label. Four key elements of the recommended disclosures are the issuer's climate transition strategy and governance; business model environmental materiality; climate transition strategy that is science-based, including targets and pathways; and implementation transparency.

Other labels: Some issuers have also used other marketing labels for sustainable debt funding such as blue, adaptation, or sustainable development goal (SDG) bonds. In essence, most of these bonds remain use-of-proceeds bonds aligned with ICMA principles, but their branding has been adapted to single out a specific feature of their program. For instance, blue bonds are green bonds focused on the financing of water-related sustainable projects. Some bonds labeled "sustainable development bonds" depart from ICMA principles though, as they are not "use-of-proceeds" bonds, but rather are general purpose bonds from issuers who wish to flag that their mission is inherently sustainable.

MARKET ANALYSIS: THE CURRENT STATE OF THE MARKET

Despite unprecedented challenges in 2020, the green bond market proved resilient. The global green bond market achieved a key milestone of US$1 trillion in cumulative issuance since 2007, with issuance of US$280 billion in 2020. Overall, momentum for bonds with environmental, social, and governance (ESG) objectives accelerated, as other thematic bonds, namely social, sustainability, and sustainability-linked bonds, reached record levels of issuance (figure 1).[6]

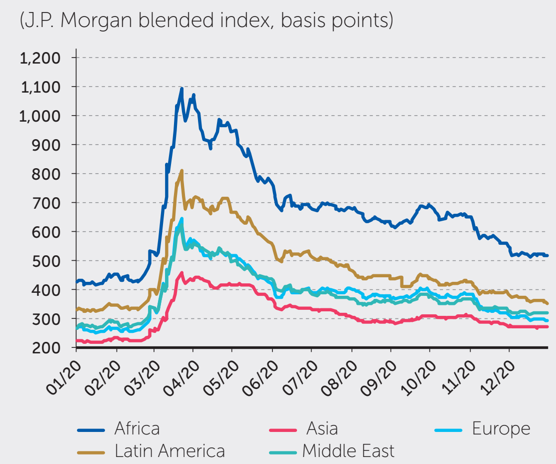
Figure 1 - Global ESG Thematic Bond Issuance



Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

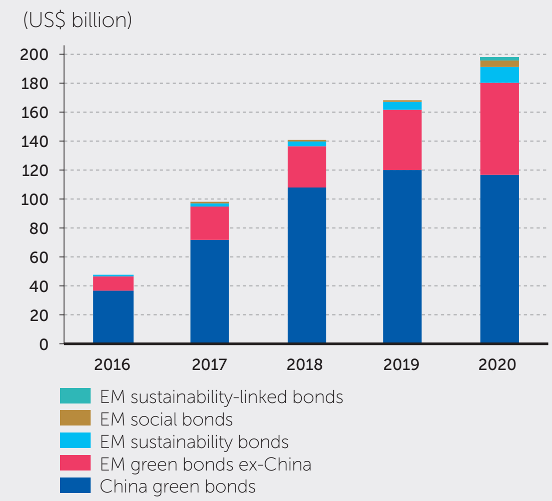
Turning to emerging market countries, the effects of the COVID-19 crisis on market conditions for EM debt varied from country to country, reflecting domestic factors and the extent of policy support, but spreads had generally returned to pre-crisis levels by the end of 2020 (figure 2). According to the IMF, at least 18 EM central banks used asset purchase programs to stabilize local currency bond markets and to stem large portfolio outflows, with some debt issuance postponed to the second half of the year. Nevertheless, the EM green bond market was also resilient with 174 green bonds amounting to US$40 billion in issuance from 101 issuers (figure 3).[7]

Figure 2 - EM Debt Spreads



Source: J.P. Morgan.

Figure 3 - EM ESG Thematic Bond Market Size

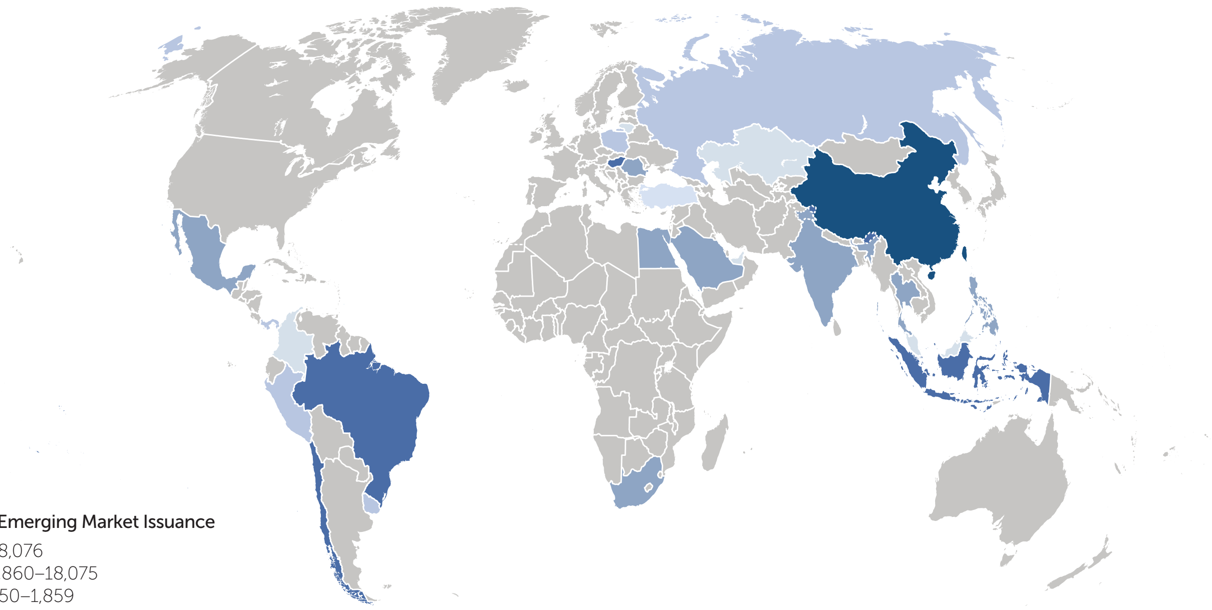


Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

Despite a decline in issuance relative to 2019, China remained the largest EM green bond issuer. China's green bond issuance fell to US$18 billion after four consecutive years of issuance over US$30 billion (see box 2). Over half of China's issuance occurred in the second half of 2020. On the other hand, EM ex-China green bond issuance rose 21 percent in 2020 to US$22 billion, an even more rapid growth than the 17 percent increase in global green bond issuance.

The largest issuers were Chile, the Czech Republic, Hungary, Brazil, and Indonesia (figure 4). Among the new entrants to the EM green bond market were Egypt, with a sovereign green issue of US$750 million in September 2020, and Hungary, with sovereign green issues of US$1.9 billion, as well as another US$300 million in issuance from nonfinancial corporates. Other debut green bond issuers were financial sector institutions based in Armenia and Kazakhstan and nonfinancial corporates based in Georgia, Romania, and Saudi Arabia. Since 2012, 43 emerging market economies have issued green bonds, registering cumulative issuance of US$226 billion (figure 5). Excluding China, issuance has been almost equally split between the private and public sectors.

Figure 4 - Emerging Market Green Bond Issuance, 2020 (US$ million)



2020 Emerging Market Issuance
- 18,076
- 1,860–18,075
- 750–1,859
- 200–749
- 0.5–199
- No data

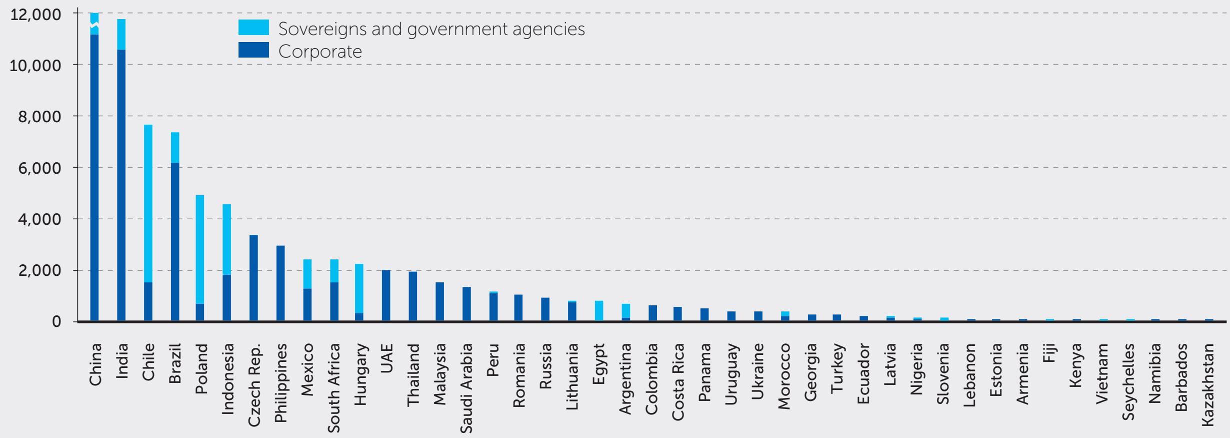
Source: IBRD 45635. March 2021.

Country	**Volume** (US$ million)
China	18,076
Chile	3,811
Czech Republic	2,508
Hungary	2,192
Brazil	1,913
Indonesia	1,860
Saudi Arabia	1,300
Mexico	1,239
Romania	1,041
Thailand	955
Philippines	919
India	916
Egypt	750
Russia	357

Country	**Volume** (US$ million)
Panama	289
Poland	255
Uruguay	253
Georgia	250
Peru	200
South Africa	200
Colombia	159
Turkey	115
United Arab Emirates	97
Malaysia	61
Lithuania	53
Armenia	50
Kazakhstan	0.5

Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

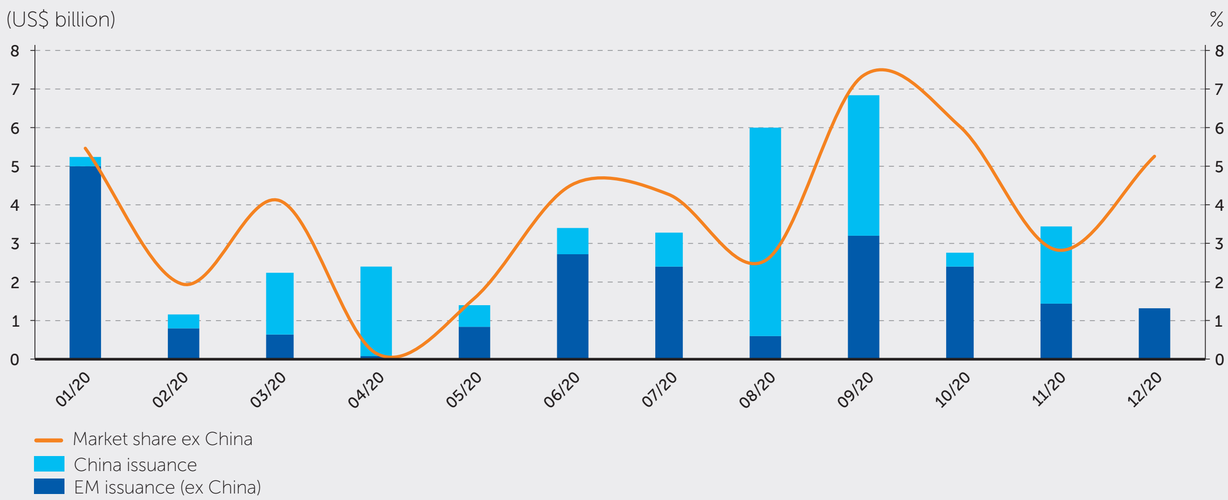
Figure 5 - Cumulative Emerging Market Green Bond Issuance, 2012–2020 (US$ million)



Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

As a share of total bond issuance, green bonds in EMs ex-China held steady, averaging 3.8 percent in 2020 compared with 3.4 percent in developed markets (figure 6). Consistent with the global activity in ESG thematic bonds, the volume of outstanding social and sustainability bonds more than doubled with issuance of US$15 billion in emerging markets, including landmark sovereign sustainability issuances from Mexico and Thailand. Nonfinancial corporates in Brazil, Poland, and the United Arab Emirates were the first to issue sustainability-linked bonds in emerging markets.

Figure 6 - Emerging Market Green Bond Issuance, Monthly, 2020

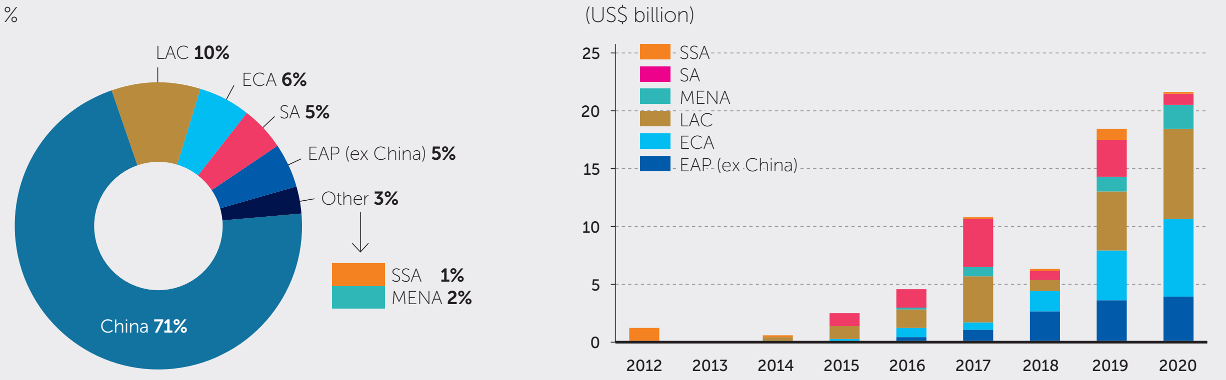


Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

A Regional View

The East Asia and Pacific region maintained its leadership in EM green bond issuance, with 76 percent of the total EM cumulative green bond issuance since 2012. Latin America and the Caribbean increased its share of the cumulative issuance from 7 percent at end-2019 to 10 percent at end-2020 (figure 7).

Figure 7 - Emerging Market Green Bond Issuance, by Region, 2012–2020



Region	Number of countries	Number of issuers	Volume (US$ billion)
East Asia and the Pacific (EAP)	7	262	172.0
Europe and Central Asia (ECA)	14	31	14.3
Latin America and the Caribbean (LAC)	11	51	21.3
Middle East and North Africa (MENA)	5	9	4.4
South Asia (SA)	1	22	11.8
Sub-Saharan Africa (SSA)	5	14	2.6
Total	**43**	**389**	**226.4**

Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

East Asia and the Pacific: **China** has the third largest volume of green bonds globally, with US$115 billion in outstanding bonds, and led emerging markets in 2020 issuance. Association of Southeast Asian Nations (ASEAN) countries issued a combined US$3.8 billion in 2020, an 8.6 percent increase from 2019. A third sovereign green bond from **Indonesia** in June 2020 (US$750 million at five years) reinforced the government's commitment to play a leadership role in greening the financial system and climate action. Renewable energy corporates based in **Indonesia**, **Malaysia**, the **Philippines**, and **Thailand** made up most of the rest of the region's issuance.

South Asia: Among emerging markets, **India** has the second largest volume of outstanding green bonds (US$10.8 billion) and has consistently been the second largest issuer after China. This past year, however, India's green bond issuance dropped significantly, to US$916 million from US$3.2 billion in 2019. Data on green loan issuance, which more than doubled from US$1.5 billion in 2019 to US$3.6 billion in 2020, according to Bloomberg, suggest that bank financing was more attractive than bonds.

Latin America and the Caribbean: In 2020, **Chile** led Latin America and the Caribbean as the largest issuer in the region (and the second largest among EMs) with taps and new issues of its sovereign bonds totaling US$3.8 billion, about half of the region's issuance. Nonfinancial corporates in **Brazil** placed several issues amounting to US$1.6 billion, while financial institutions placed another US$150 million of green bonds. Green bonds in **Mexico**, **Panama**, **Uruguay**, **Peru**, and **Colombia** rounded out the region's increasing share of emerging market issuance with US$2.1 billion of issues.

Europe and Central Asia: Europe and Central Asia nearly doubled its total volume of green bonds in 2020 led by the **Czech Republic** (US$2.5 billion) and **Hungary** (US$2.2 billion). Of the seven countries issuing debut green bonds in 2020, five were from the region: **Armenia**, **Georgia**, **Hungary**, **Romania**, and **Kazakhstan**. **Hungary**'s inaugural sovereign bond was issued shortly before its net-zero emissions target by 2050 was set in legislation. **Lithuania**, **Poland**, **Russia**, and **Turkey** issued a combined US$1.8 billion in green bonds.

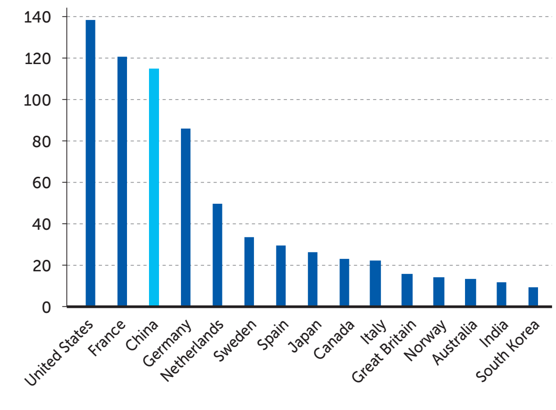
Middle East and North Africa: Overall debt issuance in the Middle East and North Africa has been increasing due to declining oil revenues and increasing pressure on government finances. The region saw a substantial boost in green bond issuance with **Egypt**'s sovereign green bond—the first in the region. The US$750 billion bond was oversubscribed 5x and will finance a US$1.9 billion portfolio of green projects in pollution prevention and control, sustainable water and wastewater management, clean transportation, and renewable energy. **Saudi Arabia** came to the green bond market for the first time with a US$1.3 billion green sukuk from Saudi Electricity Co. The **UAE**-based First Abu Dhabi Bank placed its fourth green bond—this one the first Hong Kong dollar-denominated private placement green bond by an offshore financial institution.

Sub-Saharan Africa: Financial institutions have accounted for 60 percent of the region's cumulative green bond issuance. In February 2020, **South Africa**'s Standard Bank issued the region's first offshore bond—a 10-year US$200 million issue.

Box 2: China's Green Bond Market

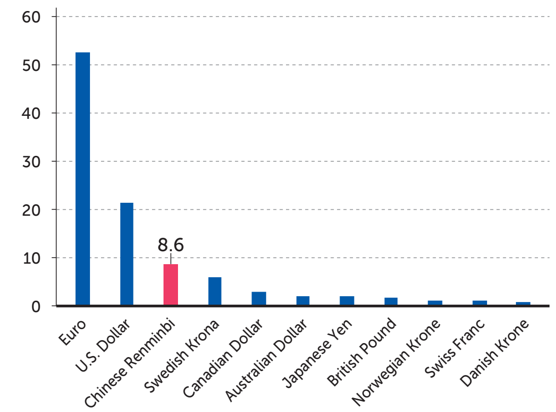
China currently has the third largest volume of outstanding green bonds in the world at about US$115 billion, after the United States and France (figures 8 and 9). This is despite a drop in issuance of China's green bonds in 2020 to US$18 billion from US$34 billon in 2019, which was likely a result of the disruption of the pandemic. The government's push on pandemic bonds (especially between February and September 2020) contributed to the lack of supply of green bonds by commercial banks. This box explores (1) why investors are interested in China's green bonds; (2) why issuers have incentives to issue more green bonds; and (3) scope for further developments.

Figure 8 - Outstanding Green Bonds, by Country (US$ billion)



Source: Bloomberg.

Figure 9 - Market Share of Green Bonds Outstanding, by Currency (%)



Source: Bloomberg.

Why Investors Are Interested in China's Green Bonds

In the current low yield environment, China's bond yields are generally attractive to global investors. The Barclays Global Aggregate Index (market cap of around US$65 trillion) illustrates the relative attractiveness of China's bonds, which have the fourth largest weight by currency after USD, EUR, and JPY in the global fixed income market (figure 10).

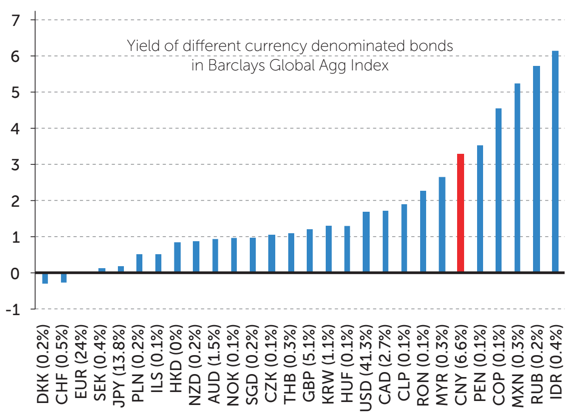
China has the largest EM green bond market in terms of both issuance and outstanding amount. It therefore offers much better liquidity for investors than its EM peers with China having the largest EM weight in the JP Morgan green bond index, which has a minimum issue size for hard currency bonds of US$300 million, at 3.2 percent. President Xi's commitment to achieving carbon neutrality by 2060 at the UN General Assembly in September 2020 is a signal that developing the green market will remain a policy priority. Greater harmonization of China's standards with international ones could boost investor demand for offshore issuance.

Why Issuers Have Incentives to Issue More Green Bonds

The announcement of the goal of carbon neutrality by 2060 (see also carbon neutrality timeline in section on policy and regulatory developments) is likely to incentivize issuers to re-focus on green bond issuance as they did pre-COVID-19. The dip in green bond issuance in 2020 is likely to be temporary, and issuance could go back to pre-2020 levels relatively quickly. Indeed, as of early March 2021, China has already issued US$4 billion of green bonds, compared with US$2.7 billion, US$2.7 billion, and US$2.5 billion for 2020 Q1, 2019 Q1, and 2018 Q1, respectively, based on Bloomberg data.

Commercial banks have been the largest source of issuance in China, while local government financing vehicles or government agencies have been stepping up issuance (figure 11). Renewable energy and green buildings have provided many investment opportunities in China, whereas transportation is another area of growth.

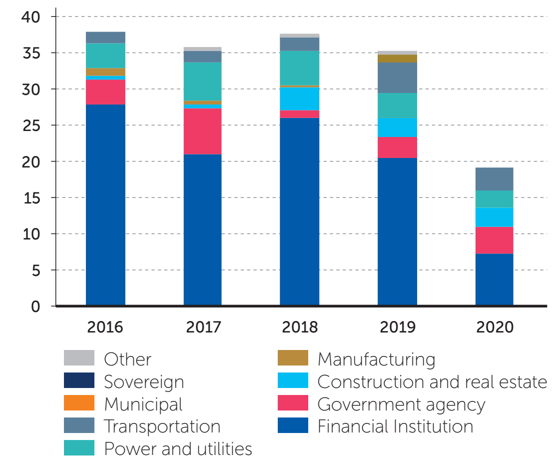
Figure 10 - Global Bond Yields
(%)



Note: The x-axis includes reference to the weight of the currency within the Barclays Global Aggregate Index.

Source: Bloomberg.

Figure 11 - China's Green Bond Issuance, by Issuer Sector, (US$ billion)



Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

Scope for Further Developments

While the closer alignment of the Chinese green bond standard to international standards (such as on the clean coal front) is welcomed by investors, further improvement is needed in two areas: (a) credit rating and (b) market access. Currently, very few domestic bonds have international credit ratings as they are relying on local credit rating agencies. This makes valuation and credit assessment more difficult for international investors.

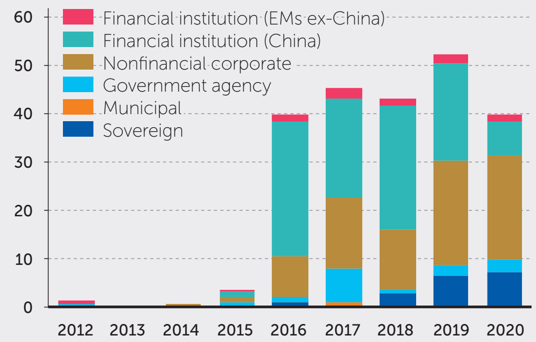
Since 2019, international rating agencies have been able to obtain licenses to rate domestic Chinese bonds, and there has been a gradual increase in international credit ratings. An additional challenge is that domestic bonds require local settlement accounts, which means investors would need to open and prefund a local account before they could buy domestic bonds.

Trends in Emerging Market Green Bond Issuance

Issuing Sectors: Financial institutions in emerging markets make up 50 percent of cumulative green bond issuance by volume, which contrasts with 19 percent in developed markets (figures 12 and 13). Privately owned banks account for about 70 percent of the issuance by financial institutions outside of China. In 2020, the share of financial institutions declined somewhat due to the decrease in issuance by Chinese financial institutions. Sovereigns, nonfinancial corporates, and government agencies retained similar shares of issuance in 2020 as in 2019, while in developed markets, corporates and sovereigns increased their shares.[8]

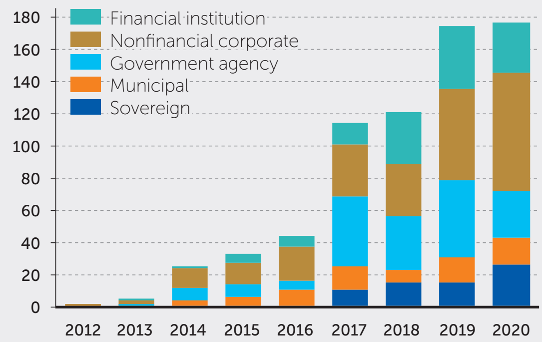
Nearly half of nonfinancial corporate green bond issuance in EMs are in the power and utilities sector, while issuance in the construction and real estate sectors has also steadily increased (figure 14).

Figure 12 - EM Green Bond Issuance, by Sector (US$ billion)



Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

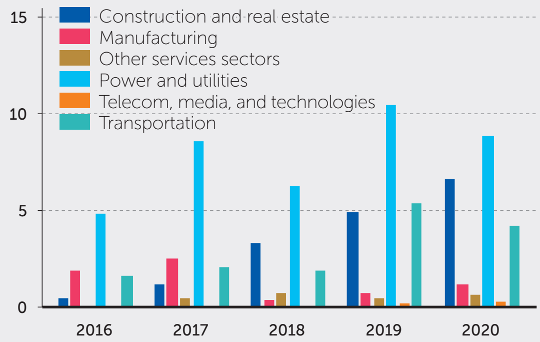
Figure 13 - Developed Market Green Bond Issuance, by Sector (US$ billion)



Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

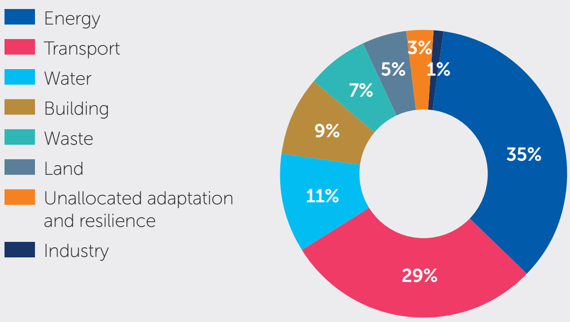
Use of Proceeds: Green bond issuers typically designate use of proceeds for specific projects that would contribute to environmental objectives. Cumulatively, the largest share of the use of proceeds has been designated for renewable energy, while transport projects were increasingly prevalent in 2020 (figure 15). Other categories for use-of-proceeds bonds include water, green buildings, waste, land, adaptation and resilience measures, information and communications technology, and industry.

Figure 14 - EM Green Bond Nonfinancial Corporate Issuing Sector, 2012–2020 (US$ billion)



Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

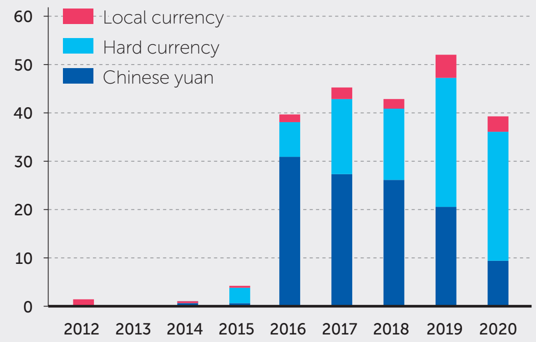
Figure 15 - EM Green Bond Issuance, by Use of Proceeds, 2012–2020 (%)



Source: Climate Bonds Initiative, IFC.

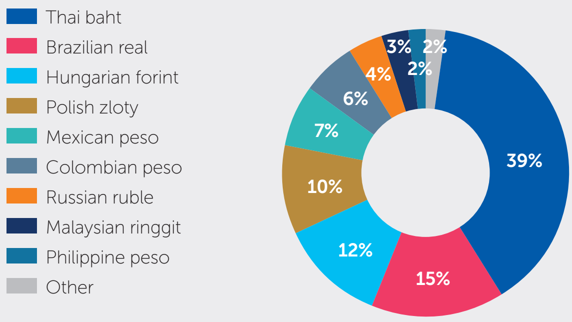
Currency: Emerging market green bonds outside China have been mostly denominated in hard currency (figure 16). Hard currency issues accounted for 88 percent of the volume in 2020. An increasing share of Chinese green bonds are denominated in hard currency as well. Over 75 percent of the local currency bonds outside China were issued in Thai baht, Brazilian reals, Hungarian forints, or Polish zlotys (figure 17).

Figure 16 - EM Green Bond Issuance, by Currency, 2012–2020 (US$ billion)



Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

Figure 17 - EM Local Currency Green Bond Issuance, ex-China, 2020 (%)

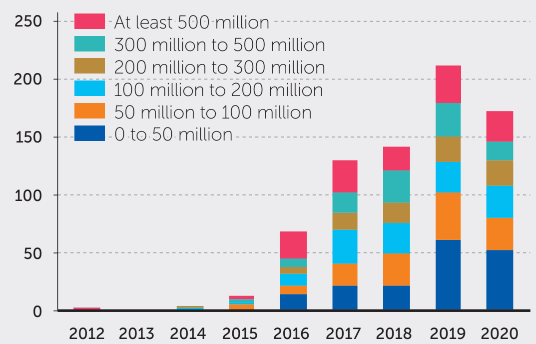


Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

Issue Size: Issuance sizes of EM green bonds are gradually trending larger, with 54 percent of the 2020 issue sizes at least US$100 million (figure 18). About 25 percent of the bonds issued are benchmark-size of at least US$300 million and 16 percent are at least US$500 million. Benchmark-driven investments play a growing role in EM bond markets, as inclusion in major indices provides greater access to external financing.[9]

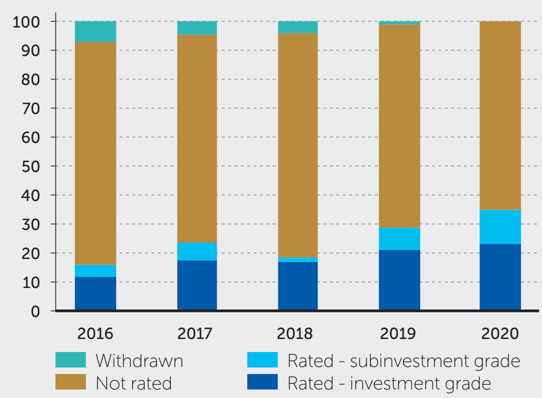
Ratings: The lack of internationally recognized credit ratings affixed to EM green bonds has been a limitation for investment because the ratings are key to assessing creditworthiness. Over half of the bonds without such ratings have been issued in China, where many issuers have relied on local credit rating agencies. In the past two years, however, an increasing percentage of issuers have obtained a credit rating from at least one major credit rating agency (figure 19). Of the total number of green bond issues in 2020, 23 percent were rated investment grade and another 12 percent were rated subinvestment grade.

Figure 18 - EM Green Bond Issuance Size
(number of bonds)



Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

Figure 19 - EM Green Bond Issuance, Ratings
(%)



Source: IFC, Bloomberg.

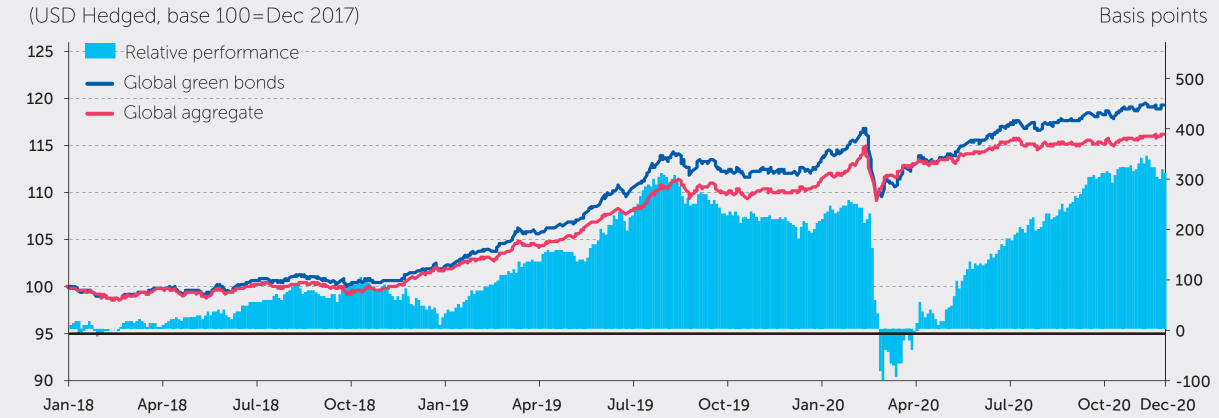
Tenor: Emerging market green bonds have typically been medium-term instruments, with the majority of issuances having a 3- to 5-year tenor. In 2020, however, issues were longer dated, as 33 percent of issuances were in the range of 5 to 10 years and another 32 percent of issuances were over 10 years.

MARKET PERFORMANCE

Measured by the broad indexes, green bonds showed strong performance in 2020

Global green bonds outperformed the overall market again in 2020, extending the cumulative overperformance since the end of 2017 to 311 basis points (figure 20). This reflected in large part the continued depressed level of market policy rates that benefit the longer-duration bonds in the green bond index. EMs maintained a 9 percent weight in the global green bond index, thanks to the momentum of new deals.

Figure 20 - Total Return Performance of Global Green Bonds vs. Global Aggregates



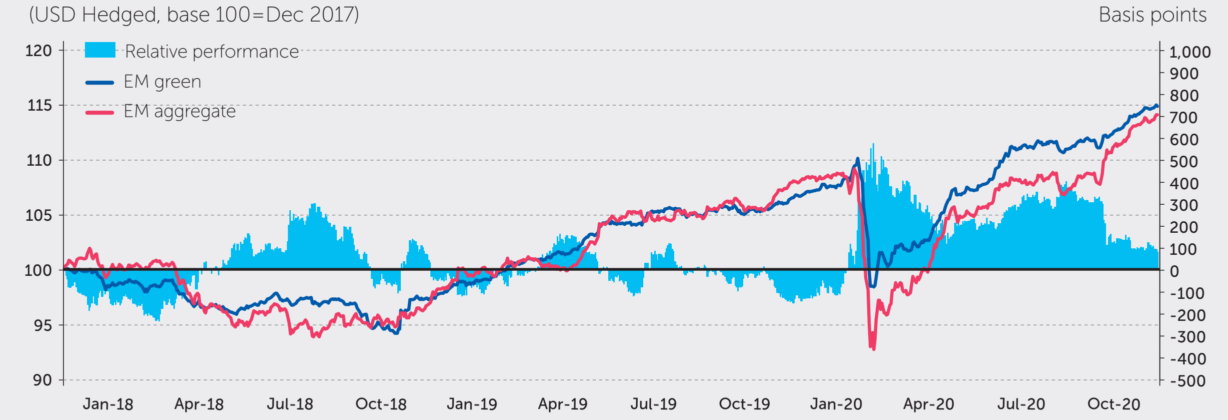
Source: Bloomberg.

J.P. Morgan launched its first green bond index in November 2020,[10] tracking US$400 billion in green bonds issued across hard currency credit (USD, EUR, and GBP denominated) and local currency government bonds across developed and emerging markets. In 2020, the EM subset of the J.P. Morgan Green Bond index outperformed the conventional J.P. Morgan EM index (6.6 percent vs 5.4 percent). Overall, the green sub-set demonstrates lower volatility for similar performance in EMs (figure 21).

The "Greenium" in Emerging Markets

As documented in last year's report,[11] green bonds generally trade in secondary markets at tighter spreads than comparable conventional bonds by very small margins. This is the so-called green bond premium or "greenium." When the "greenium" widens (turns more negative), green bonds outperform conventional bonds. The recent Amundi study "Facts and Fantasies about the Green Bond Premium,"[12] analyzed the "greenium" from two different perspectives: a reweighted "green adjusted index" comparable to a conventional index and a "curve greenium," the discount in the specific green issues in the curve of an issuer. The study found that over the last four years, the former averaged -4.7 basis points, widening somewhat during the COVID-19 crisis in 2020. The "curve greenium," on the other hand, averaged -2.2 basis points. It was more pronounced for supranational issuers and utilities and tended to be higher for issuers with higher ESG standards. The green bond premium does not hide a liquidity premium as the levels are even more negative with comparable bonds when accounting for liquidity factors.

Figure 21 - Total Return Performance of J.P. Morgan EM Green Index vs. J.P. Morgan EM Aggregate



Source: J.P. Morgan.

Based on secondary market data,[13] the average EM "greenium" stands at -3.4 basis points, which represents 3.5 percent of the average spread of bonds in the sample (figure 22). These spreads are based on reference spreads between green bonds and comparable conventional bonds by the same issuer (figure 23).

Figure 22 - EM Green Premium Statistics

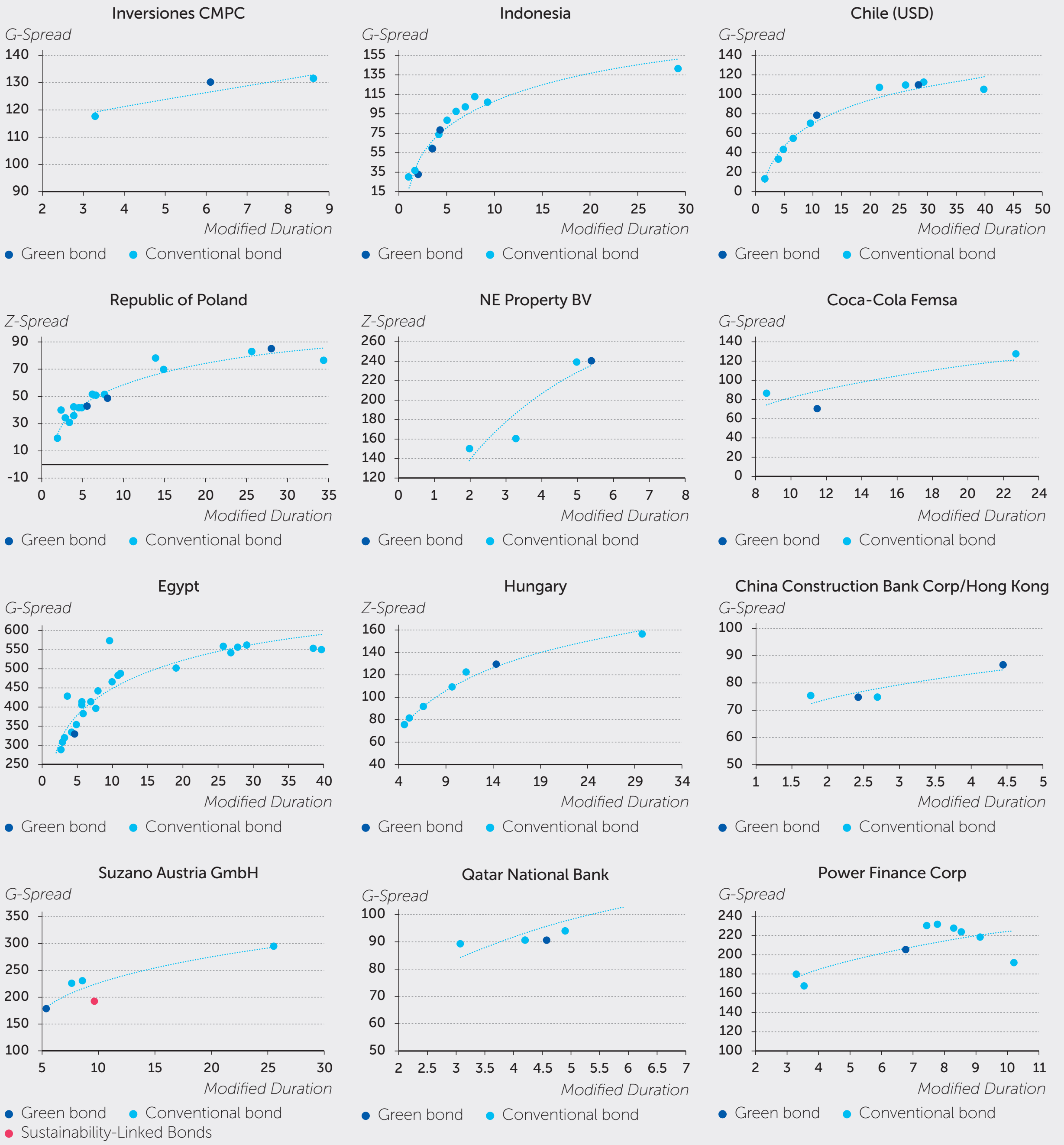
Median Premium (basis point)	**Average Premium** (basis point)	**Number of observations**	**T statistic**	**Average Modified Duration**	**Average Spread** (basis point)	**Average Premium vs Average Spread** (%)
-2.4	-3.4	24	-1.9	5.8	97	-3.5

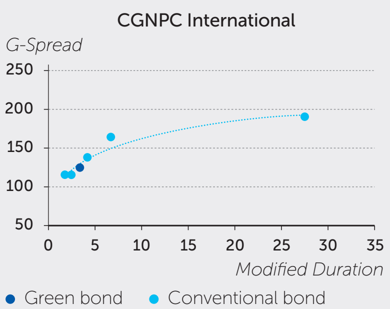
Source: Amundi, Bloomberg.

Given the relatively small size of the EM green universe—and consequently the small number of observations in the sample—it would be premature to draw firm conclusions. Nevertheless, given the high yield nature of this segment of the market, there could be potential for the EM "greenium" to widen. The negative premium is mostly a result of the imbalance between the supply of green bonds and investors' demand. As the "greenium" becomes wider, EM issuers will have greater incentive to issue green bonds, which should support the "greening" of the EM debt market.

Furthemore, the "greenium" does not encompass the "green halo" effect, which is supposed to capture the wider benefits of green bond issuance for issuers, who may see overall increased access to debt capital markets. As green and sustainable finance markets grow, issuers and investors alike benefit from signaling a robust ESG strategy.

Figure 23 - Curves of Select Green Bond EM Issuers





Note: The Z-spread or zero volatility spread is the constant yield spread over the entirety of the swaps spot curve such that the present value of the cash flows matches the clean price of the bond. The G-spread or nominal spread is defined as the difference between the yield of the corporate bond and the interpolated yield of the treasury bond of the same time to maturity. Depending on the type of issuer and currency of the issuance, both of them are used as a market standard for bond market pricing.

Source: Amundi, Bloomberg.

REGULATORY AND POLICY DEVELOPMENTS

Sustainable financial policies and appropriate regulatory frameworks are necessary to encourage capital flows to green projects and sectors. Before discussing regulatory developments in EMs, a number of global policy and regulatory initiatives are covered, as these can have a significant impact on mobilizing capital for EM green bond markets. A fundamental concern for institutional investors relates to the reliabiilty and comparability of data used in their analysis. The implementation of global regulatory and policy initiatives, such as the ones mentioned below, will be key to strengthening investor confidence going forward.

Global Initiatives

Changes in U.S. Policy: In the United States, the new administration's climate agenda marks a significant policy shift. As part of his Clean Energy Revolution, President Biden has committed to decarbonizing the U.S. power sector by 2035 and to achieving carbon neutrality by 2050. Alongside job creation and the modernization of critical infrastructure, supporting green technologies is a key priority for federal investments. President Biden also announced that the United States has rejoined the Paris Agreement, which means the country will have to submit its nationally determined contribution ahead of COP26 scheduled for November 2021. Although this announcement has symbolic significance, political hurdles still lie ahead, as congressional approval will be needed to enact climate-related legislation. Still, if successful, these policies could create positive spillovers for the green bond market, including in EMs.

EU Taxonomy and Green Bond Standard: The EU Green Bond Standard (GBS) will establish a uniform, recognizable, and high-quality standard for green bonds across the European Union. It aims to increase transparency and comparability in the green bond market, as well as to provide clarity to issuers on the steps to follow for a green bond issuance. In 2020, the European Commission conducted a public consultation on the GBS and now has to decide how and in what legal form to take forward the new standard.

The GBS will be a voluntary standard that would facilitate alignment with the EU Green Taxonomy, which provides a classification system for environmentally sustainable economic activities. In June 2020, the European Union published its Taxonomy Regulation setting out four overarching conditions that an economic activity has to meet to qualify as environmentally sustainable.[14] Moreover, the United Nations Environment Programme Finance Initiative (UNEP FI) and the European Banking Federation launched a report aimed at assessing the applicability of the EU Taxonomy on Sustainable Activities to core banking products for labeling or disclosure purposes.[15] The report put forward a set of recommendations to support banks in meeting their sustainabilty targets.

Although these European policy developments are not applicable to EMs specifically, investors in emerging market economies can use the Green Taxonomy criteria and the future GBS as benchmarks for their own investments, regardless of the location of the underlying economic activity. As a result, these EU initiatives represent significant progress for the global green bond market and are likely to foster the further development of EM-specific taxonomies.

Sustainable Finance Disclosure Regulation (SFDR): As part of its action plan on financing sustainable growth of March 2018, the European Commission introduced the SFDR, which aims to ensure transparency on sustainability across financial markets in a standardized manner and thus to enhance comparability. Most of these new disclosure obligations have been applicable since March 10, 2021. For example, in-scope financial products now have to disclose precontractual documents showing whether and how they integrate sustainability risks. The three European Supervisory Authorities recently published draft Regulatory Technical Standards, on the content, methodologies and presentation of disclosures under SFDR. This includes an updated list of environmental and social indicators for principal adverse impacts that financial actors will need to provide reporting on in the coming years. This should clarify reporting information for green bond issuers going forward. This new EU sustainable finance tool can help scale up the financing of sustainable projects and activities in emerging markets.

Task Force on Climate-related Financial Disclosure (TCFD): The Task Force has received widespread support for its recommendations in 2020. Over the past year, the number of organizations supporting the TCFD grew more than 85 percent, reaching over 1,500 organizations across 25 developed countries and 20 emerging markets. In its review of company reports (conducted using artificial intelligence technology[16]), TCFD found that companies' disclosure of their climate-related financial information—in alignment with the Task Force's recommendations—has steadily increased since the recommendations were published in 2017. The largest increases relate to disclosure on how companies identify, assess, and manage climate-related risk. Industries considered the most exposed to material climate risk actually demonstrated the highest levels of TCFD disclosure. Paving the way, New Zealand announced in September 2020 that it will implement mandatory climate risk reporting in line with TCFD recommendations. The United Kingdom followed suit, signaling its intention to make TCFD-aligned disclosures mandatory by 2025, with a significant number of requirements to be in place by 2023.

Network for Greening the Financial System: The membership of the Network of Central Banks and Supervisors for Greening the Financial System (NGFS) expanded significantly in the past year, including across emerging markets.[17] In a 2020 report, the NGFS highlights that notable progress has been made by central banks worldwide. Institutions have increasingly taken steps to integrate sustainable and responsible investment (SRI) practices in their portfolios, motivated by a growing awareness of reputational risks and a desire to lead by example.[18] NGFS efforts are particularly important insofar as they contribute to capacity building and technical assistance in EMs.

UN Sustainable Development Goals: There is a growing momentum in global capital markets to establish a relationship between investments and the United Nations Sustainable Development Goals (UN SDGs). In response, a number of bodies and institutions have created frameworks for investors to adopt these goals as references for their investments. Most recently, the International Capital Markets Association published its "High-Level Mapping to the Sustainable Development Goals," serving as a guide for public and private sector issuers and investors to review their green, social and sustainability bond issuances, and investments against the SDGs.[19] This guide will be particularly useful for EM investors because delivering on the UN's sustainable development agenda will require additional financing of US$2.1 trillion in emerging market economies alone (see figure 24).[20]

Science Based Targets Initiative (SBTi) for Financial Institutions: In 2018, the SBTi launched a project to encourage financial institutions to align their lending and investment portfolios with the objectives of the Paris Agreement. More than 55 financial institutions worldwide have publicly committed to setting emissions reduction targets that align with this initiative. In October 2020, the SBTi published a guidance document setting out target validation criteria and recommendations to help financial institutions determine their objectives.[21] By encouraging more financial institutions to set ambitious objectives, this initiative can create incentives for financial actors across EMs to commit to substantial emissions reductions.

An increasing number of governments worldwide are taking action to cut carbon emissions. In 2020, several countries made commitments to achieve net zero emissions by 2050, in line with the objectives set by the Paris Agreement. The following is a timeline of recent national net zero engagements:

COUNTRIES' 2020 NET-ZERO COMMITMENTS TIMELINE

Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec

Jan: **Austria's** coalition government sworn in January 2020 promised to pursue climate neutrality by 2040

May: **Spain** announced it is seeking to pass a new climate law to ensure it can cut its emissions to net zero by 2050

Jun: **Hungary** set a legally binding target to reach net-zero emissions by 2050

In **Ireland**, in a coalition deal, three political parties agreed to set a 2050 net zero emissions target by law

Sep: **China** announced its ambition to become carbon neutral by 2060

South Africa's government unveiled its Low Emission Development Strategy, outlining its aim of becoming a net-zero economy by 2050

Oct: **Japan** pledged to achieve net-zero emissions by 2050

South Korean President Moon Jae-in pledged that his country will reach carbon neutrality by 2050 during a speech to the national assembly

Nov: Joe Biden was elected president of the **United States** on a climate platform to aim for net-zero emissions by 2050

Dec: **Argentina** raised its climate ambition in an updated plan to the UN, pledging to achieve carbon neutrality by 2050

Brazil set an "indicative" goal of carbon neutrality by 2060 in its updated pledge to the Paris Agreement

Colombia, **Panama**, and **Nepal** submitted their pledges to become carbon neutral by 2050 to the UN

Regulatory and Policy Developments in Emerging Markets

Many EMs have made notable progress on launching and implementing sustainable finance policies and frameworks. The IFC-initiated Sustainable Banking Network (SBN) enlarged its membership by three countries (Maldives, Serbia, and Ukraine) to 42 countries, representing US$43 trillion of total banking assets. Of these, 25 countries have national policies, guidelines, principles, or roadmaps focused on sustainable banking.[22] New sustainable finance initiatives by SBN members in 2020 are described (in figure 25).

In October 2020, the Association of Southeast Asian Nations set forth the ASEAN Central Banks' Agenda on Sustainable Banking, which recommends the development of frameworks to encourage banks to embed sustainability into business practices. These could include an ASEAN-wide taxonomy, green lending principles, and supervisory guidelines and disclosure requirements to support banks in integrating climate- and environment-related risks into risk management. A proposed ASEAN Green Map would further strengthen efforts to green the financial system at the regional level.

Figure 24 - Excerpt from ICMA High-Level Mapping for Green Bond Project Categories

SDG	Green Bond Project Category	Example Indicators
1 NO POVERTY	- Climate Change Adaptation	- Number of people benefiting from measures to mitigate the consequences of climate change such as natural disasters
2 ZERO HUNGER	- Climate Change Adaptation - Environmentally Sustainable Management of Living Natural Resources and Land Use	
3 GOOD HEALTH AND WELL-BEING	- Pollution Prevention and Control - Renewable Energy	- Amount of wastewater treated, reused, or avoided before and after the project - Amount of raw/untreated sewage sludge that is treated and disposed
6 CLEAN WATER AND SANITATION	- Sustainable Water and Waste Water Management - Terrestrial and Aquatic Biodiversity Conservation	- Volume of water saved - Volume of wastewater treated for reuse - Area covered by sustainable land and water resources management practices - Potable water produced
7 AFFORDABLE AND CLEAN ENERGY	- Energy Efficiency - Renewable Energy	- Renewable energy produced - Avoided greenhouse gas emissions (tons CO_2eq)
8 DECENT WORK AND ECONOMIC GROWTH	- Eco-efficient and/or Circular Economy Adapted Products, Production Technologies, and Processes - Energy Efficiency - Renewable Energy	
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	- Energy Efficiency - Renewable Energy	
11 SUSTAINABLE CITIES AND COMMUNITIES	- Clean Transportation - Eco-efficient and/or Circular Economy Adapted Products, Production Technologies, and Processes - Environmentally Sustainable Management of Living Natural Resources and Land Use - Green Buildings - Pollution Prevention and Control - Renewable Energy - Sustainable Water and Waste Water Management	- Floor space of green real estate - Waste that is prevented, minimized, reused, or recycled before and after the project - Number of electric vehicles deployed - Number of electric vehicle charging points installed
12 RESPONSIBLE CONSUMPTION AND PRODUCTION	- Eco-efficient and/or Circular Economy Adapted Products, Production Technologies, and Processes - Environmentally Sustainable Management of Living Natural Resources and Land Use - Pollution Prevention and Control - Renewable Energy - Sustainable Water and Waste Water Management	- Avoided resource waste - Avoided emissions to air (other than greenhouse gases) - Reduction of food losses - Materials sourced sustainably or recycled - Absolute or % reduction in local pollutants - Reduction of hazardous materials used
13 CLIMATE ACTION	- Climate Change Adaptation - Climate Change Mitigation	- Water storage capacity - Reduction in weather-related disruption and/or risk frequency (%) - Flood-resilient floor space - High-risk assets with climate insurance cover - Greenhouse gas emissions reduced
14 LIFE BELOW WATER	- Environmentally Sustainable Management of Living Natural Resources and Land Use - Terrestrial and Aquatic Biodiversity Conservation	- Avoided or reduced marine and fresh water pollution (ecotoxicity, eutrophication) - Biodiversity loss avoided or reduced (# of species)
15 LIFE ON LAND	- Environmentally Sustainable Management of Living Natural Resources and Land Use - Terrestrial and Aquatic Biodiversity Conservation	- Avoidance or reduction of land pollution (ecotoxicity, acidification, salinization, transformation) - Avoidance or reduction of biodiversity loss (# of species) - Certified afforested or reforested land - Area covered by sustainable land and water resources management practices - Expenditure on conservation and sustainable use of biodiversity and ecosystems

As EMs step up the issuance of green bonds and other sustainable finance instruments, the quality and availability of information to identify, measure, and track green investment are key building blocks to ensure investor confidence and scale markets. National, regional, and international green bond guidelines or frameworks are designed to guide issuers on how to improve transparency and fulfill disclosure and reporting requirements. These include specifying eligibility criteria prior to issuance; measuring; regularly reporting on the environmental impact post-issuance; and obtaining external reviews to provide pre-issuance opinions and post-issuance verification. Prior to 2020, national green bond guidelines had been established in 13 SBN countries.[23] SBN member countries that issued taxonomies and guidelines in 2020 include Colombia, which issued a good practice guide for green bonds and Thailand, which released its sustainable financing framework in July 2020 with guidelines on eligible green project categories. Russia has circulated a consultative draft of green finance guidelines with a taxonomy.

In recognition of the need to build resilient economies, some governments have already started including climate mitigation and adaptation measures and green investment targets in their national recovery plans. South Africa's National Economic Reconstruction and Recovery Plan includes sustainability, resilience, and inclusion as key priorities. Specific green measures include improving energy efficiency and retrofitting buildings, diversifying energy sources, and supporting biodiversity. Indonesia's 2020-2024 National Medium-Term Development Plan supports climate change mitigation and adaptation measures, environmental sustainability, and green recovery.

Figure 25 - New Sustainable Finance Policies and Actions in 2020

	Country	Entity	Action	Description
Central Bank	Bangladesh	Bangladesh Bank	Sustainable Finance Policy and Rating for Banks and Financial Institutions	Provide sustainable finance taxonomy, green taxonomy, and a sutainability rating system
	China	People's Bank of China	Updated Green Bond Endorsed Project Catalogue (draft consultation)	Outlines eligible use of green bond proceeds
	China	People's Bank of China	Notification on Evaluation of Green Finance Performance of Deposit-Type FIs in the Banking Industry (draft consultation)	Extends green evaluation coverage from green credit to include more financing tools, such as securities, investments, leasing, and trusts
	Georgia	National Bank of Georgia	ESG Reporting and Disclosure Principles	Provides guidance to banks in ESG reporting and disclosure
	Mongolia	Central Bank of Mongolia	Announced national Green Loan Statistics	Calculates amount and ratio of green loans based on Mongolia Green Taxonomy
	Nepal	Nepal Rastra Bank	Issued Unified Directive requiring financial institutions to integrate environmental risk and social management (ESRM)	Requires financial institutions to integrate ESRM into credit risk process and formulate ESRM policies
	Philippines	Bangko Sentral ng Philipinas	Issued Sustainable Finance Framework	Requires banks to integrate ESRM
Other Regulatory Bodies	Chile	Pensions regulator	Passed new rule to require ESG and climate risk be part of investment analysis of pension funds	
	Colombia	Superintendencia Financiera de Colombia	Good Practice Guide for Issuing Green Bonds; External Circular 028 of 2020	Includes recommendations related to project selection and evaluation, fund management, and information disclosure; formally incorporates definition of a green bond
	Honduras	National Banking and Insurance Commission	Standard for the Management of Environmental and Social Risk	Sets standards for financial institutions to manage environmental and social risk
Stock Exchange	Argentina	Bolsas y Mercados Argentinos	Issued three guidelines and regulations on green, social, and sustainable bonds and investment funds	Provides guidelines and regulations on issuance and listing of green, social, and sustainable bonds, as well as funds
	Colombia	Colombia Stock Exchange	Issued Guide for the Preparation of ESG Reports for Issuers in Colombia	Elaborates the contents and other details for ESG reports
	South Africa	Johannesburg Stock Exchange	Expanded Green Bond Segment to a Sustainability segment	Makes it easier to list and trade sustainability-related instruments

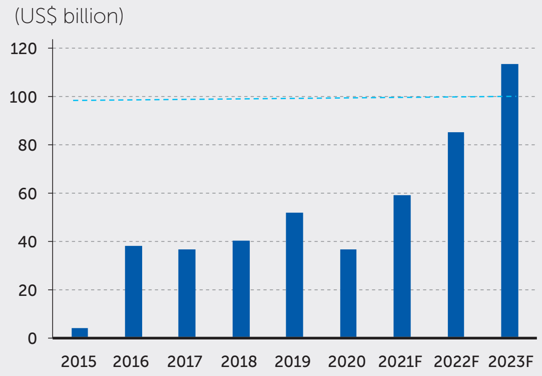
Source: Sustainable Banking Network.

GREEN BOND OUTLOOK

Fundamentals remain highly supportive for the EM green bond market. EMs ex-China have demonstrated steady increase in issuance the past two years, and after the downturn in 2020, the market in China is expected to recover. Projections for the green bond market must take into account that there are many factors underpinning its development that warrant further study and analysis. These include the green finance opportunities and overall capital market development in individual EMs.

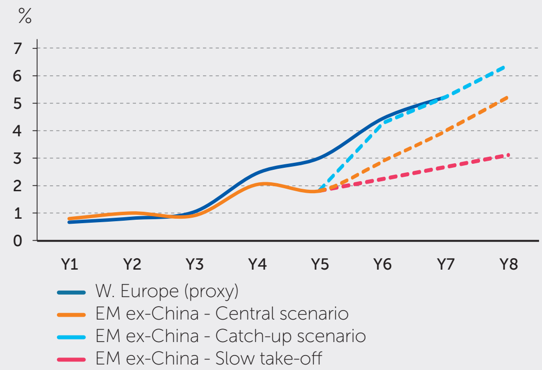
One approach is to assume that green bond issuance as a share of total bond issuance in EMs will continue to follow a similar trajectory to that of Western Europe, where the green bond market is the most mature. As awareness of the benefits of green bonds for both issuers and investors is rising, green bonds have moved from a niche segment to become mainsteam. Based on this approach, EM green bond issuance is estimated to double in the next three years compared to the previous three and the market to cross the US$100 billion mark of annual issuance by 2023 (figure 26). Overall, for the EM segment and based on the central scenario, about US$260 billion of green bond issuance is projected over the next three years (2021–2023).

Figure 26 - Projections for EM Green Bond Issuance



Source: Amundi.

Figure 27 - EM ex-China: Market Share of the Green Format in Total Supply



Note: Y1 = 2014 for Western Europe and 2016 for EM ex-China, dashed lines indicate projections.

Source: Bloomberg, Amundi.

Green bond issuance from EMs ex-China appears strong

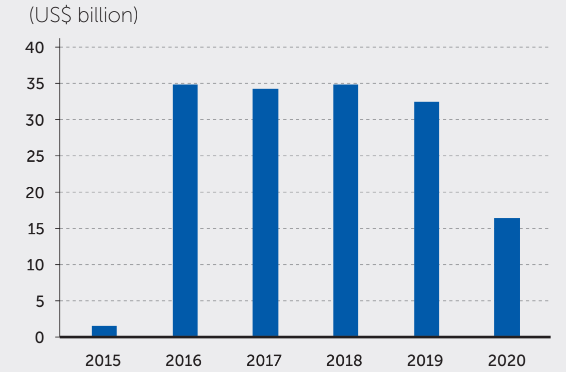
Based on Bloomberg data, green bond issuance as a share of total bond issuance in EMs had been trailing the more mature European market by only two years. Although the overall share in EMs declined slightly in 2020, the renewed momentum for green bonds in the latter half of the year and the early part of 2021 indicates an upward trend.

The central projection assumes that the green bond market share from EMs ex-China will trend toward 5 percent by 2023, a three-year timelag to the market development in Western Europe (figure 27). In a catch-up scenario, a faster recovery in 2021 would keep the EM ex-China segment only two years behind Europe. In a 'slow take-off scenario,' incremental market share gains would be similar to the average of the past two years.

Regulatory clarification should stabilize and then propel China's green issuance

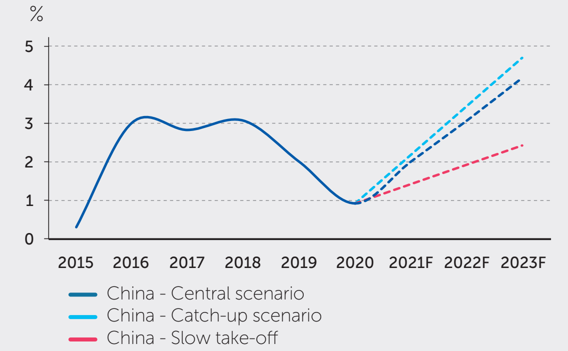
Green bond issuance trends have been more erratic in China (figure 28). The launch of a unique regulatory framework for issuing green bonds created a market boom in 2016 with green bonds quickly reaching 3 percent share in total bond issuance. After four years of steady issuance, green issuance aligned with international standards declined in 2020.

Figure 28 - Annual Green Bond Issuance in China



Source: IFC, Bloomberg, Environmental Finance, Climate Bonds Initiative.

Figure 29 - China - Market Share of the Green Format in Total Supply



Source: Amundi.

Several factors, however, suggest that the the supply of green bonds will likely resume quickly. Once completed, the ongoing process of streamlining guidelines for issuing green bonds across the different Chinese regulatory authorities (including the People's Bank of China and National Development and Reform Commission) and the adoption of the new Green Bond Catologue should faciliate issuance. These guidelines are expected to be closer to international norms (notably, clean coal is expected to no longer be eligible and there would no longer be flexibility in using proceeds for purposes other than green project funding).

Although annual energy transition investments were down by 12 percent in China in 2020, they were still sizable at US$135 billion. Banks have implemented internal systems to tag their loans to green activities making it easier to identify pools of eligible assets for green bond funding. Moreover, green bonds are accepted as collateral, which could incentivize banks in China to buy domestic green bonds.

In the central case projection for China, a firm rebound is expected as soon as 2021, followed by a steady recovery back to peak market penetration levels in 2022 (figure 29). The catch-up scenario reproduces the boom seen in 2016, and the slow take-off scenario assumes a slower adoption of international green bond standards.

Opportunities for Green Bond Market Growth

Each EM has unique characteristics that can influence the development of the green bond market. To look at these in-depth requires an understanding of the specific green finance opportunities, the debt financing conditions within the country, and the domestic and international investor demand for that country's green debt. The key determinants of the potential for green bond markets include (a) sustainable finance policies and frameworks; (b) green bond issuance momentum; (c) capital market development; and (d) governance and political stability. Figure 30 lays out how individual EMs perform across these measures and indicates whether there has been a notable change from 2019 to 2020. Out of 57 EMs in the analysis, 22 showed improvements from 2019 to 2020 across the overall measures. Ongoing challenges to scaling green bond markets are described in box 3.

East Asia and the Pacific: China is expected to regain momentum in the green bond market given its policy commitments and ongoing process to streamline guidelines. ASEAN continues to provide regional coordination on the development and implementation of sustainable finance strategies, which include scaling up green and sustainability bond markets. Structural reforms in Indonesia should enable increased infrastructure spending, which could extend to green infrastructure. In the Philippines, the central bank issued the country's first sustainable finance framework, under which banks have three years to integrate transition plans integrating sustainability principles into corporate governance and risk management frameworks.

Europe and Central Asia: Prospects for the growth of green bond markets in Europe and Central Asia are high given the significant momentum generated in the past year with the issuance of green bonds in four new markets along with efforts to create more supportive policy environments. To access the Recovery and Resilience Facility, member states of the European Union are submitting national recovery plans in April 2021, which are required to include a minimum 37 percent expenditure to support climate objectives. Hungary's central bank introduced preferential prudential treatment for energy-efficient mortgage loans and is considering fiscal incentives for green bond issuers and investors.

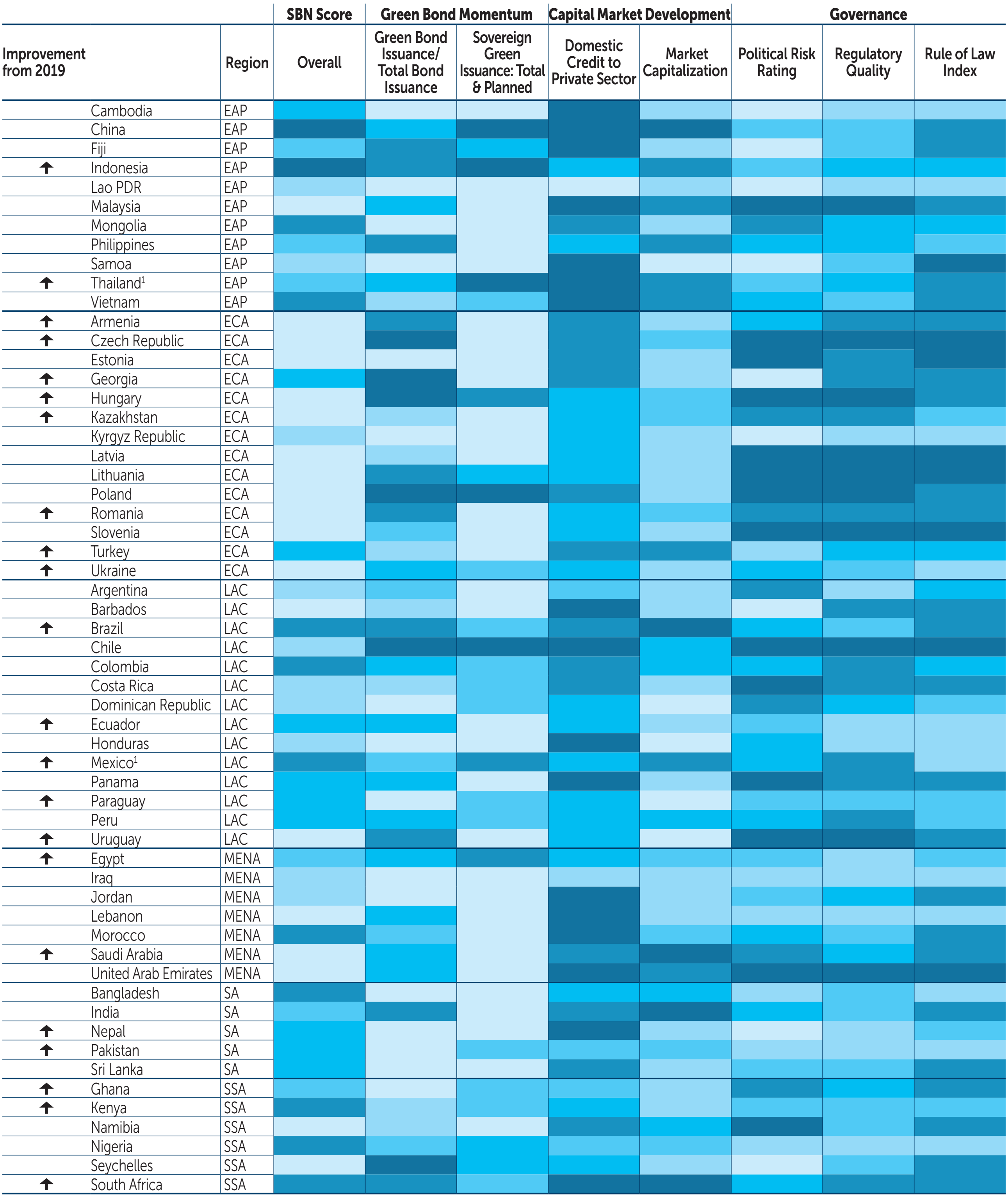
Latin America and the Caribbean: Planned sovereign issues are likely to generate considerable momentum for green bond markets in Latin America. Brazil, which seeks to finance railroad infrastructure, and Paraguay are the most recent countries to announce their intentions in this regard. Mexico successfully placed its sustainability bond in 2020, while green bond issuance plans in Colombia, Costa Rica, the Dominican Republic, and Peru were delayed, most likely due to the pandemic. Some efforts to strengthen the market infrastructure for green bonds through guidelines and frameworks that meet international standards gained traction. One notable example is Colombia's banking regulator, which established a regulatory framework for issuing and investing in green bonds.

Middle East and North Africa: The growth potential of green bond markets in the Middle East and North Africa is high as economic diversification and the transition to clean energy accelerates. Investment in renewable energy projects in the region has been robust, including several large-scale solar projects and water treatment and desalination projects. Debut green issuances in Egypt and Saudi Arabia generated considerable interest in the region. Additionally, the convergence between green finance and Islamic finance continues to attract interest from domestic institutional investors, given the focus on sustainable devleopment. The development of guidelines and standards for green finance can be adapted for Islamic finance instruments.

South Asia: India, which had been the second-largest EM green bond issuer but saw weakened issuance in 2020, is already set to regain previous issuance volumes with early issuances in 2021 from renewable energy corporates. To meet its ambitious targets, India's renewable energy capacity has been advancing, and bond issuance can meet capital requirements for some of the larger-scale projects. Elsewhere in South Asia, Pakistan announced plans to issue a euro-denominated green bond in 2021, which would be its first issuance. Bangladesh has developed green project definitions and created a green taxonomy to enable funds to be more easily directed toward green projects (see box 4).

Sub-Saharan Africa: Green bond markets remain underdeveloped in Sub-Saharan Africa, where there are substantial green infrastructure development needs and opportunities for investment in renewable energy and climate-smart agriculture that will also support job creation. South Africa has led the region with issuance of green bonds by financial institutions and corporates and is planning to issue a sovereign green bond to finance green infrastructure. In June 2020, South Africa's Treasury published recommendations to promote a more sustainable economy, including developing a green taxonomy, which has been taken up by a working group.[24] Kenya and Nigeria have advanced some of the policy foundations to bolster green finance opportunities (see box 4).

Figure 30 - Determinants of Green Bond Market Potential



1. Mexico and Thailand issued sovereign sustainability bonds in 2020.

Notes: Countries included are those that are SBN members and/or green bond issuers. Countries are scored from 0 to 5 on each of the components, with 5 being the highest on a relative basis, according to available data.

The **SBN Score** is based on the Sustainable Banking Network (SBN) measurement framework assessing national sustainable finance policies. This score is from 2019, which is the latest available. Countries who were not SBN members as of 2019 are indicated as zero.

Green Bond Issuance/Total Bond Issuance is the percent of green bond issuance out of total bond issuance from 2017-2020.

Sovereign Green Bond Issuance is based on whether the sovereign has already issued green bonds and whether it has announced plans to do so.

Private Credit / GDP refers to financial resources provided to the private sector by financial institutions. The data source is the World Bank.

Market Capitalization data are sourced from the World Bank, World Federation of Exchanges, Bloomberg, and individual stock exchanges.

The **Political Risk Rating** is from the PRS Group.

The **Regulatory Quality** and **Rule of Law Index** indicators are from the World Bank.

0
1
2
3
4
5

Box 3: Scaling Up Green Bond Markets

In the "Emerging Market Green Bonds Report 2019," five key challenges were identified that need to be addressed to enable more rapid expansion of the market. These remain ongoing challenges, and some have indeed been exacerbated by the pandemic and the global economic contraction in 2020. Nevertheless, some progress has been made as the pandemic has highlighted the necessity to channel finance toward sustainability objectives.

Quality and availability of information

According to most green bond frameworks or guidelines, the issuer needs to specify eligibility criteria prior to issuance, as well as measure and report regularly on the environmental impact post-issuance. The majority of labeled green bonds have been verified by an external reviewer prior to issuance. However, there is still considerable discrepancy in terms of the type and detail of information provided. Regarding impact reporting, investors note the lack of standardization even for commonly reported metrics (such as, reduction of greenhouse gases), and the need for greater transparency.[25]

Supply constraints

One major constraint for scaling up green finance has been the lack of assets that are labeled as green. As policy makers focus on green national recovery plans, green industries are projected to grow, increasing the need for identifying, measuring, and tracking green assets. Green taxonomies will be particularly helpful in clarifying and harmonizing definitions of green.

Lack of awareness and know-how about green debt instruments

As the global green market is reaching new records of issuance, overall awareness about green bonds has been growing among both issuers and investors. In EMs, the availability of technical assistance for debut issuers, including on disclosure and reporting requirements, as well as working groups and task forces focused on green and sustainable finance have generated momentum for green bond markets. Although international investors demonstrate increasing appetite for green debt instruments, awareness among domestic investors tends to be lower.

Overall macroeconomic and policy instability as well as challenges related to regulatory frameworks

Macroeconomic and policy stability were considerably challenged in many EMs by the pandemic, the strain on health care systems, and unemployment. In some countries, governments faced delays on their plans to transition to low-carbon. Nevertheless, as highlighted above, some countries have taken encouraging steps to develop sustainable finance policies and regulatory frameworks, which are needed to encourage capital flow to green projects and sectors.

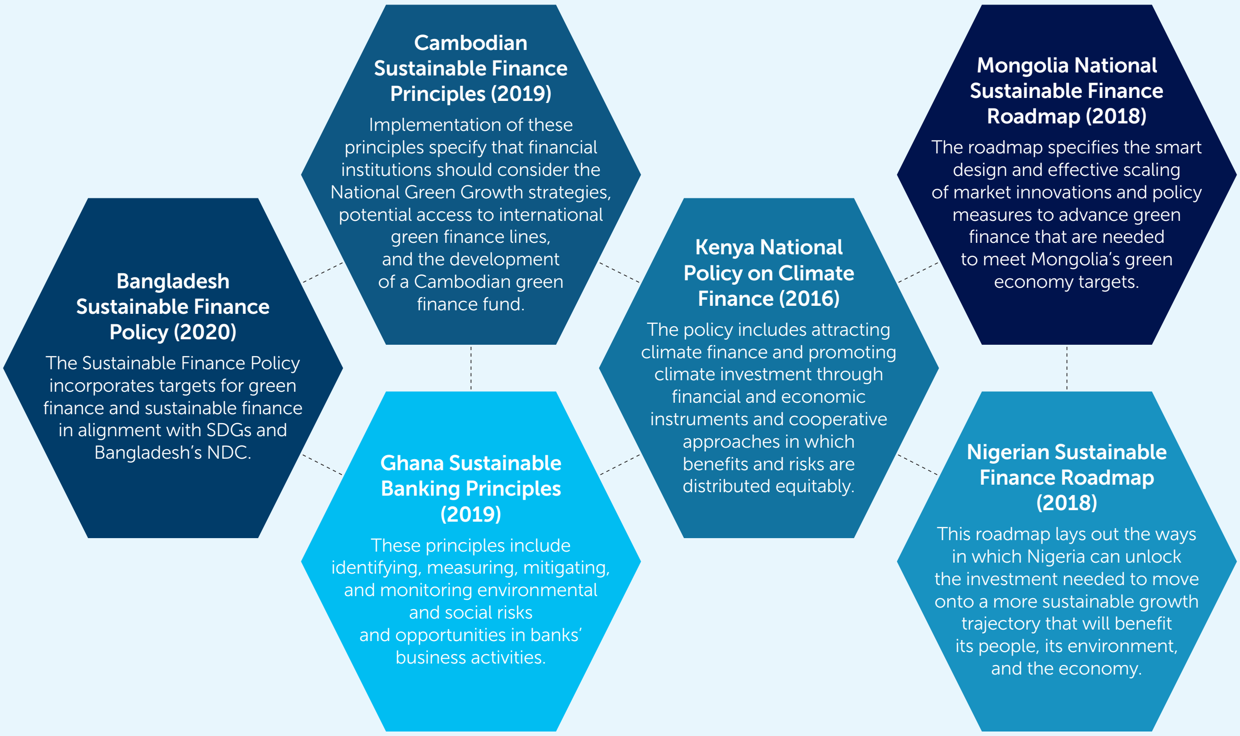
Underdeveloped capital markets with insufficient liquidity and high transaction costs

In many emerging market economies, limited capital market depth and underdeveloped financial market infrastructure remain key hindrances to boosting green bond issuance. Such infrastructure includes exchanges and trading platforms, clearing houses, credit risk assessment, custodians, and fiduciaries. Building resilient economies includes developing local currency markets that would reduce both exposure to exchange rate risk and dependence on foreign currency borrowing. As these capital markets are developed, countries have an opportunity to simultaneously incorporate green and sustainable financial frameworks.

Box 4: Spotlight on IDA Countries' Support for Green Finance Opportunities

Low-income countries classified by the World Bank as International Development Association (IDA) countries face unique constraints because of the size and maturity of their markets, yet they have demonstrated high levels of ambition and good progress in developing systems that support the adoption of sustainable finance. National commitments and pressing environmental and social challenges have been the key drivers for sustainable finance initiatives in IDA countries (see figure 24). Such initiatives serve as a pathway to de-risk investments and enable the financial flows needed to support climate action and sustainable development. Efforts to develop national enabling frameworks for sustainable finance are typically initiated by either the regulator or the banking association. Over time, there tends to be a convergence toward public-private partnership.

Figure 31 - Select Sustainable Finance Initiatives in IDA Countries



Source: Sustainable Banking Network.

Of the 11 IDA countries that are SBN members, Bangladesh, Cambodia, Ghana, Kenya, Mongolia, and Nigeria have identified green finance opportunities as a high priority, most commonly identifying green bond issuance as a primary financing mechanism.

Building the capacity of regulators and financial institutions is cited by these countries as the critical and ongoing challenge and is part of the broader issue of developing a supportive enabling environment and capacity building. Countries also highlight the challenge of developing specific regulations or tools to support financial institutions. These include the development of green bond or other green asset guidelines and the development of a catalog or taxonomy of green projects that meet eligibility criteria.

Green Bond Issuance in IDA Countries: Case Studies.

Kenya's Green Bond Program. Kenya's program has focused on (a) technical support for potential issuers, (b) training programs for issuers and verifiers, (c) regulation and policy research on demand for green finance, and (d) green bond issuance for Kenya. Kenya issued Green Bond Listing Rules in December 2018, and the Green Bond Guidelines were published in early 2019. Enabled by such policy infrastructure, Acorn Holdings issued Kenya's first corporate green bond of US$40 million in October 2019. Through engagement with many different stakeholders, the Kenyan Banking Association addressed issues of awareness and capacity and is working to create an enabling policy and regulatory environment to encourage additional green bond issuances.

Nigeria's Green Bond Guidelines. In 2017, Nigeria developed guidelines for issuers as well as investors, followed by the issuance of its first sovereign green bond with proceeds mostly going to solar projects at the end of 2017. The Securities and Exchange Commission (SEC) of Nigeria began development of a nonsovereign green bond market in Nigeria and developed guidelines based on international practices with the assistance of the Climate Bonds Initiative. The Green Bond Issuance Rules complement work already done by the federal government and aim to create a nonsovereign green bond market. Access Bank issued Nigeria's first corporate bond in 2019—a US$41 million five-year bond. Collaborating with international partners and leveraging international guidelines have been critical to developing Nigeria's guidelines and facilitating its green bond issuances. At end-2020, cumulative green bond issuance in Nigeria amounted to US$103 million.

Development of Green Taxonomies in IDA Countries: Case Studies.

Bangladesh's Green Taxonomy. Bangladesh Bank published a detailed taxonomy in 2017, with 52 products in eight sectors/categories that details which sectors and what products within the sector qualify as green. The central bank is slowly moving away from a more detailed taxonomy in favor of a broader green project definition. On the basis of its experience, Bangladesh Bank recommends an approach of wide engagement and tailoring the process to country specifics by consulting with banks and financial institutions to gauge their knowledge about green finance and use this data to create an appropriate strategy. In January 2021, Bangladesh Bank issued an official circular asking all banks and financial institutions to ensure that 2-15 percent of their loans meet broader sustainable finance requirements and to set targets at the beginning of each year.[26] Per the green taxonomy, 5 percent of the portfolio must also be green finance related.

Kenya's Green Taxonomy. Kenya developed green project definitions as part of its green bond guidelines in 2019, building on the taxonomy developed by the Climate Bonds Initiative. The taxonomy contains both eligible sectors and excluded sectors, making it easier to report and identify green assets. The Kenyan Banking Association worked closely with Climate Bonds Initiative to adapt the taxonomy to the Kenya context, for example, by including more water projects. From its experience, the association suggests that building on already established taxonomies can accelerate the process.

Mongolia's Green Taxonomy. The Mongolian Sustainable Finance Association was established by Mongolian banks with a mandate to expand the sustainability agenda into all relevant economic sectors and become a sustainable finance regional knowledge center. With support from Tsinghua University and IFC, the association developed a green taxonomy approved in December 2019 to enable more consistent reporting and disclosure. This taxonomy identifies 58 green activities in eight sectors. In the first quarter of 2020, banks began reporting the green share of their lending portfolio to the central bank in line with the taxonomy. Developing a tailored national green taxonomy stressed the need for industry-specific guidelines, rating standards, labels, and local verification capacity.

Source: The text, figure, and case studies are drawn from the Sustainable Banking Network's June 2020 publication "Necessary Ambition: How Low-Income Countries Are Adopting Sustainable Finance to Address Poverty, Climate Change, and Other Urgent Challenges."

ANNEX

List of bonds included in the sample for figure 23 (Curves of Select Green Bond EM Issuers):

Ticker	Coupon	Maturity
CMPCCI	4.375	04/04/2027
INDOIS	3.750	03/01/2023
INDOIS	3.900	08/20/2024
INDOIS	2.300	06/23/2025
CHILE	2.550	01/27/2032
CHILE	3.500	01/25/2050
POLAND	1.125	08/07/2026
POLAND	1.000	03/07/2029
POLAND	2.000	03/08/2049
NEPSJ	3.375	07/14/2027

Ticker	Coupon	Maturity
KOF	1.850	09/01/2032
EGYPT	5.250	10/06/2025
REPHUN	1.750	06/05/2035
CCB	1.000	08/04/2023
CCB	1.250	08/04/2025
SUZANO	5.750	07/14/2026
QNBK	1.625	09/22/2025
POWFIN	3.750	12/06/2027
CHGDNU	2.750	07/02/2024

ENDNOTES

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2. IMF (October 2020) World Economic Outlook: A Long and Difficult Ascent, available at: https://www.imf.org/en/Publications/WEO/Issues/2020/09/30/world-economic-outlook-october-2020
3. IFC (January 2021) A Green Reboot for Emerging Markets, access at: https://www.ifc.org/wps/wcm/connect/79ef3830-ff20-4430-ad10-c0cf01e93a42/IFC_GreenReport_FINAL_web_1-14-21.pdf?MOD=AJPERES&CVID=nslSBiN
4. Climate Bonds Initiative (December 2020) US$1Trillion Mark Reached in Global Cumulative Green Issuance, available at: https://www.climatebonds.net/2020/12/1trillion-mark-reached-global-cumulative-green-issuance-climate-bonds-data-intelligence
5. The principles and guidelines mentioned are available at the following:
Green Bond Principles: https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/green-bond-principles-gbp/
Social Bond Principles: https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/social-bond-principles-sbp/
Sustainability Bond Guidelines: https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-bond-guidelines-sbg/
Sustainability-Linked Bond Principles: https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/sustainability-linked-bond-principles-slbp/
Climate Transition Finance Handbook: https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/climate-transition-finance-handbook/
6. The Sustainability-Linked Bond Principles were published by ICMA in June 2020, providing guidance for the structuring, disclosure, and reporting of sustainability-linked bonds.
7. The dataset is based on consolidating available data from Bloomberg, Climate Bonds Initiative, and Environmental Finance. The definition of emerging markets/economies/countries is based on Amundi Planet Emerging Green One's investment universe. It consists of the Fund's Target Countries, which are IFC member countries, including countries eligible to receive International Development Association's (IDA) resources and countries eligible to receive Official Development Assistance (ODA) as defined by the Organisation for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC), which qualify as Emerging Markets and are not excluded as per the Fund's Investment Guidelines. While Russia is not included in the investment universe, it is included in this dataset. China bonds that do not meet international norms or standards as defined by Climate Bonds Initiative are excluded from the dataset.
8. Issuer categories are based on classifications from Bloomberg, Climate Bonds Initiative, and Environmental Finance.
9. Arslanalp, Drakopoulos, Goel, and Koepke (2020), Benchmark-Driven Investments in Emerging Market Bond Markets: Taking Stock, IMF Working Paper.
10. The index applies an ESG scoring and screening methodology, tilting toward green bond issuers ranked higher on ESG criteria and underweighting green bond issues that have not been reviewed independently.
11. IFC and Amundi (2020), Emerging Market Green Bonds Report 2019.
12. Ben Slimane, Da Fonseca, and Mahtani (2020), Facts and Fantasies about the Green Bond Premium, Amundi Working Paper, 103.
13. This data sample includes green and sustainability bonds from EM issuers.
14. Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32020R0852
15. UNEP FI and European Banking Federation (January 2021) Testing the application of the EU Taxonomy to core banking products: High level recommendations, available at: https://www.unepfi.org/news/industries/banking/unep-fi-launches-new-report-which-tests-the-application-of-the-eu-taxonomy-to-core-banking-products-with-26-major-banks/
16. The artificial intelligence technology is based on a set of statistical language models trained to identify responses to questions tied to the recommended disclosures. The approach is designed to provide an indication of alignment with the disclosures but not to assess the quality of the disclosures.
17. The US Federal Reserve System joined the network, together with seven other new members: Central Bank of Paraguay, Financial Regulatory Authority of Egypt, Financial Services Authority of Indonesia, Central Bank of Iceland, Polish Financial Supervision Authority, Central Bank of Uruguay, and the European Securities and Markets Authority.
18. NGFS (December 2020) Progress report on the implementation of sustainable and responsible investment practices in central banks' portfolio management, available at: https://www.ngfs.net/node/332005
19. ICMA (June 2019) Green, Social and Sustainability Bonds: A High-Level Mapping to the Sustainable Development Goals, available at: https://www.icmagroup.org/sustainable-finance/the-principles-guidelines-and-handbooks/mapping-to-the-sustainable-development-goals/
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21. Science Based Targets Initiative (October 2020) Sector Science-Based Targets Guidance, available at: https://sciencebasedtargets.org/sectors/financial-institutions#resources
22. Sustainable Banking Network countries with national policies and guidelines focused on sustainable banking include Bangladesh, Brazil, Cambodia, China, Colombia, Ecuador, Georgia, Ghana, Indonesia, Kenya, Mexico, Mongolia, Morocco, Nepal, Nigeria, Pakistan, Panama, Paraguay, Peru, Philippines, South Africa, Sri Lanka, Thailand, Turkey, and Vietnam.
23. These include: Argentina, Brazil, Chile, China, Ecuador, India, Indonesia, Kenya, Mexico, Morocco, Nigeria, Peru, and South Africa.
24. South Africa National Treasury (2020), Financing a Sustainable Recovery, available at: http://www.treasury.gov.za/publications/other/Sustainability%20technical%20paper%202020.pdf; South Africa National Treasury (2020), Green Finance Taxonomy Project Briefing Report, available at: http://sustainablefinanceinitiative.org.za/wp-content/downloads/Stakeholder_Briefing_Document_9_October_2020.pdf
25. Environmental Finance (2020, Green Bond Funds - Impact Reporting Practices 2020, available at: https://www.environmental-finance.com/assets/files/reports/Green%20Bond%20Funds%20-%20Impact%20Reporting%20Practices%202020.pdf
26. This mandate was issued in January 2021 after the original case study. Download the Circular (in Bengali): https://www.bb.org.bd/mediaroom/circulars/gbcrd/jan112021sfd01.pdf. Read more (in English) at https://www.pv-magazine.com/2021/01/14/bangladesh-mandates-2-of-loans-issued-must-be-for-green-projects/#:~:text=Bangladesh's%20central%20bank%20has,projects%2C%20including%20renewable%20
energy%20facilities.

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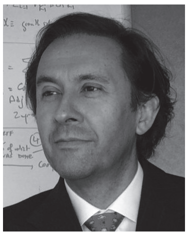

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