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Creating Markets, Creating Opportunities

A Climate Opportunity for the Private Sector

DESIGNING INVESTOR-FRIENDLY CARBON MARKETS: LESSONS FROM THE IFC FORESTS BOND

Clear incentives for investors, transparent carbon markets, the backing of a partner with real financial or business clout. These are some of the features IFC believes will make a successful outcome more likely for issuers of 'forests bonds,' debt issued to raise money for tackling deforestation where interest rates are tied to the borrower meeting predetermined targets. These conclusions are based on the lessons learned from IFC's role in the first ever forests bond, issued in 2016 that matured five years later. With 10 million hectares of forest lost every year worldwide[1], triggering desertification, erosion and reducing the earth's natural ability to absorb carbon dioxide, the need to raise funds is becoming ever more urgent.

Designing a successful forests bond

In the past, disincentives to investing in voluntary carbon credits have included having to navigate a complex set of rules to create these assets, low liquidity of the market, scarcity in financing, an inadequate risk-management framework, and limited availability of data on their functioning. In future, drawing on lessons learned from the IFC Forests Bond and similar financial instruments, the following principles should be adhered to in designing such bonds in order to attract more mainstream investors or corporates:

Make Easy-to-Understand, Reward Positive Outcomes

Green bonds have been very successful partly because they are an easy investment proposition to understand for mainstream capital market investors. Generally, when investing in green bonds, the investors' focus will be on the use of proceeds and on its independent verification known as second opinion. The proposition of a voluntary carbon credit-linked bond must be simple enough that a mainstream investor does not need to understand how to choose one international standard over another, whether or how to assess the environmental and social integrity of the underlying projects, or how to determine the inherent quality of the carbon credit.

One good example of a straightforward and easy-to-understand bond is the World Bank's recently issued Wildlife Conservation Bond, also known as the Rhino Bond[2]. This five-year, $150 million bond is an outcome-based financial instrument that channels investments to achieve conservation outcomes—measured in this case by an increase in black rhino populations. If the rhino population growth meets certain thresholds over this period, bondholders receive a success payment at maturity, but in the meantime investors in the Rhino Bond will not receive coupon payments. Instead, the issuer will make conservation investment payments to finance rhino conservation activities at two parks in South Africa.

Success for the purposes of the final payment depends on the growth rate of the rhino population, independently calculated by Conservation Alpha and verified by the Zoological Society of London. The success payment at maturity is paid to investors by the World Bank with funds provided by a performance-based grant from a donor, the Global Environment Facility, in addition to principal redemption of the bond. This represents a new approach to conservation financing that passes project risks to capital market investors and allows donors to pay for conservation outcomes.

Future Forests Bonds could be structured like the Rhino Bond. The issuer would make payments for voluntary carbon credits issued by one or more nature-based projects and, if a certain number of credits are issued at maturity, investors would then receive a success payment in addition to the principal redemption of the bond. Mainstream investors would then not need to be involved in the carbon market themselves but would need to agree to a zero-coupon instrument. Such a structure would simplify the proposition to mainstream investors that lack visibility of the voluntary carbon market. The success payments would need to be funded by a donor, while the donor would receive the voluntary carbon credit.

Find the Right Partner

In the Rhino Bond, the Global Environment Facility provides a performance-based grant to fund the success payment if the thresholds for conservation are met. In the Forests Bond,

IFC obtained price support from BHP, an Australian mining company that had pre-agreed to purchase them at the same fixed price to comply with its internal climate commitments. BHP bought the voluntary carbon credits being issued by the project when the bond investors opted for a cash coupon. Going forward, the issuer of the next forests bond could approach traditional donors, such as the Global Environment Facility, or other sovereigns or philanthropies. It should also reach out to companies that have adopted net-zero commitments and are interested in turning such commitments into action through investments in emissions abatement projects.

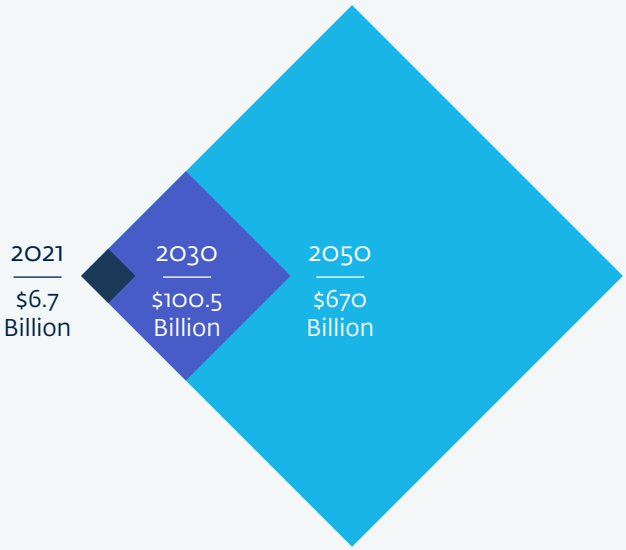
If the underlying projects are successful and voluntary carbon credits are issued, a corporate off-taker can use those credits for its own internal commitments, as one of the tools for climate risk management in anticipation of regulation on climate risk disclosure entering into force[3]. The provision of a performance-based grant would come with voluntary carbon credits as a prize.

Build a More Transparent Market

Multilateral development banks have an important role to play in the voluntary carbon market by helping bring greater transparency to it with initiatives like the World Bank's Climate Warehouse that connects different registries in real-time[4]. Presently, investors and corporations lack visibility on the underlying voluntary carbon market and future trends[5], which can be a disincentive to invest[6]. Companies do not necessarily have voluntary carbon market traders; there is an absence of a pricing model to value the carbon credits, or a straightforward way of finding the price of carbon credits such as an index. New initiatives are coming together that are designed to address factors that might undermine confidence and transparency in the credits[7]. These include addressing concerns about so-called greenwashing, where companies or issuers create a false or misleading impression that their operations or products are more environmentally or socially responsible than they are.

Voluntary Carbon Markets

Voluntary carbon markets are carbon market transactions undertaken by entities on a voluntary basis as opposed to carbon market transactions driven by mandatory international, national, or regional regimes (known as compliance markets). Voluntary carbon markets have traditionally focused on offsetting carbon footprints of companies, enabling them to hit emission targets they set for themselves for corporate social responsibility reasons.



Voluntary carbon market value reached a record $6.7 billion in 2021. It is estimated that demand could increase by a factor of 15 or more by 2030 and by a factor of up to 100 by 2050.

In addition, the introduction of standardized transaction services is helping to improve transparency. While most of the transactions are currently happening in private arrangements and over-the-counter deals, some wider exchanges are emerging[8]. Exchanges have been trying to simplify and speed up the trading of carbon credits by creating standard products, which ensure common specifications are followed. Standardized products are currently preferred by traders and financial players looking to buy and hold in anticipation of skyrocketing carbon credit demand. Carbon credit indexes are also emerging, including some that use artificial intelligence[9].

That brings us to the increased role of digital technologies at every step of the process, which have the potential to open paths for greater use of carbon credits. Projects will benefit from data being collected using satellites and aerial sensors from drones for measuring, reporting, and verifying emissions[10]. Blockchain technology is being used to provide traceability and immutability to avoid the double-counting of credits[11]. Credits can be registered in meta-registries[12] and, as mentioned, registries can then be connected in real time through initiatives like the World Bank's Climate Warehouse. If done right, the digitalization of carbon assets offers the opportunity to increase scale, liquidity, consistency, and transparency—all of which will contribute to an enhanced value proposition for carbon credits. The starting point would be for standards setters to create a framework for the issuance of non-fungible tokens (NFT) or to approve tokens as digital versions of their carbon credit issuance. These organizations should also control the retirement or burning of tokens[13].

Designing future forests bonds with these elements would be a double win: bringing about real emission reductions with investors opting for carbon credits at the end. Creating the ideal conditions is key to encouraging mainstream investors to participate in voluntary carbon markets and invest in performance-based financial instruments, thus contributing to the scaling of voluntary carbon markets. With the private sector under growing pressure to do more to reach the goals of the 2015 Paris Agreement, creating viable and scalable voluntary carbon markets is an important step down this road.

About the IFC forests bond

In 2016 IFC issued the first-ever Forests Bond. Three years in the making, the Bond raised $152 million to support private sector development aimed at reducing deforestation in Kenya. Sold to major global institutional investors, it was listed on the London Stock Exchange and attracted broad media attention[14]. By the time of its maturity five years later, the Bond had succeeded in creating an innovative template for avoiding deforestation, while providing tangible, verified benefits to the community.

The Bond came with an innovative offer: investors could receive their annual coupon in either carbon credits or cash. The hope was that the bond could both help prevent deforestation and contribute to the growth of a voluntary carbon credit market by providing institutional investors access through a capital markets product[15]. As it transpired, none of the investors opted for carbon credits—choosing instead to receive the bond's coupon in cash every year—a disappointment for the Bond's creators. However, important lessons were garnered from the experience on how to design future green bonds in a way that potentially will create incentives to increase investor participation in voluntary carbon markets.

Until this bond's issuance, forestry-based emissions reduction projects had never been linked to capital markets, even as corporate engagement in carbon markets generally had started to boom, driven by net zero[16] emission targets being established across corporate operations. As of June 2022, one-third of the world's 2,000 largest publicly listed companies have committed to a net zero emissions target, as part of the United Nation's Race to Zero campaign[17]. Given that the use of offsets has been encouraged as a supplementary and interim complement to corporate decarbonization strategies[18], voluntary carbon market transactions are likely to continue increasing. Their market value reached a record $6.7 billion in 2021[19]. It is estimated that demand could increase by a factor of 15 or more by 2030[20] and by a factor of up to 100 by 2050.

The IFC Bond followed the United Nations Reducing Emissions from Deforestation and Forest Degradation scheme and

complied with the Climate, Community and Biodiversity Standards developed by Verra, a leading independent organization that sets standards for carbon credits. The Bond project achieved emission reductions through a combination of forest protection of over 200,000 hectares and community development activities which support alternative livelihoods for over 116,000 people in the project area. Deforestation has been a significant issue in Kenya in recent years. The country has lost about 11 percent of its tree cover since 2000, the equivalent of 180 million tons of CO_2 emissions[21].

The project's forest protection activities included forest and biodiversity monitoring, funding for community wildlife scouts, forest patrols, social monitoring, and carbon inventory monitoring. Community development activities included reforestation of Mount Kasigau, operating ecotourism projects, construction of schools, provision of scholarships, establishment of an eco-charcoal production facility, support for community-based organizations and expanding and improving capacity in an organic clothing facility. Both forest protection and community development activities were significantly funded by the sale of voluntary carbon credits[22]. The project offset 1 million tons of CO2 per year of which approximately 5 million carbon credits were delivered to IFC during the life of the Bond. Issued by Verra, these high-quality carbon credits represented real, additional, verifiable, and permanent greenhouse gas emission reductions with community benefits.

The credits to be delivered to investors electing to receive them were bought and paid for by IFC at a fixed price and delivered to IFC's registry account with Verra. To the extent that investors did not elect to receive delivery of carbon credits, IFC still purchased such credits from the project and delivered them to BHP, the Australian mining company. With this price support, the project was assured to sell at least an agreed quantity of credits annually, thereby providing the project with an assured cash flow in support of its work in generating credits. In addition, BHP had an option to purchase additional voluntary carbon credits from the project, which it did every year. Investors, however, chose cash over carbon credits every year—even when prices of said credits went above the fixed price paid by the Bond[23].

Renewed international impetus for carbon markets

Looking at the future global picture, compliance (mandatory) markets and voluntary carbon markets have so far been operating largely independently from each other[24]. Compliance markets are set to move quickly after the rules for an international carbon market were agreed upon at the Conference of the Parties to the United Nations Framework Convention on Climate Change held in Glasgow in December 2021 (COP26)[25]. Glasgow concluded with the adoption of key commitments that will impact carbon markets and policy in the years ahead, reaffirming that international carbon markets are an important means of reaching the Paris Agreement's[26] goal of reducing emissions and limiting average global temperature increases.

Voluntary Carbon Credits

Voluntary carbon credits should always represent real, additional, verifiable, and permanent emissions reductions or removals that are certified by international standards in accordance with a series of methodologies for each type of carbon project[1]. Unlike compliance credits, voluntary carbon credits are unregulated and their price and quality varies depending on the nature of the project, its location, the year the credits are issued or delivered and whether or not there are co-benefits such as community development and biodiversity protection. In addition, given that the market is fragmented and unregulated, voluntary carbon credits are only available from private project developers and over-the-counter brokers.

1 According to data from S&P Global Platts Analytics, the number of carbon credits issued by the largest independent standards (Verra, the American Carbon Registry, Climate Action Reserve and Gold Standard), totaled 1,242 million mt of CO2 as of July 31, 2021. In 2020, half of the credits issued came from Verra and the Gold Standard.

The rules adopted in Glasgow do not include any explicit reference to voluntary carbon markets[27] but there is an implicit recognition that private entities may participate in transactions in the compliance market created by the Paris Agreement to meet corporate climate goals. This renewed political support suggests that in the future, prices and trade volumes in the voluntary markets will become a lot more significant[28]. In addition, considering the complexity of approvals and authorizations that comes with implementing activities under the Paris Agreement, the voluntary carbon market is likely to remain a venue of choice for many corporate buyers, at least in the near term.

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7 The Integrity Council for the Voluntary Carbon Market (icvcm.org) emerged from the taskforce for Scaling Voluntary Carbon Markets which is hosting a conversation among representatives of the private sector, buyers and sellers of carbon credits, standard setters, financial institutions, market infrastructure providers, civil society, international organizations, and academics to find a pathway toward greater participation in the voluntary carbon market. Institute for International Finance. iif.com/tsvcm. The Integrity Council for the Voluntary Carbon Market was set up as an independent governance body to set up global threshold standards for carbon credits; the Voluntary Carbon Markets Integrity Initiative (vcmintegrity.org) will support offsetting in corporate net zero plans and give a voice to indigenous peoples and local communities to participate in shaping regulations for the market.

8 Among the largest exchanges for carbon credits at the moment are the New York-based CBL Xpansiv and Singapore based AirCarbon Exchange (ACX). Find them at xpansiv.com/cbl and www.aircarbon.co.

9 Platts is publishing six AI-driven carbon credit indices that reflect the value of different types of voluntary carbon credits. spglobal.com/platts/en/our-methodology/price-assessments/energy-transition/carbon-credit-indices.

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