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CONSIDERATIONS FOR FINANCIAL MARKET INTEGRITY OF CARBON CREDIT MARKETS

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1.INTRODUCTION

Carbon credit markets have seen substantial interest and attention, and appreciable growth, in recent years, driven by the global push to mitigate climate change and transition to lower-carbon economies.[1]

As recent events have shown, establishing and scaling carbon credit markets that operate with high integrity is not without challenges. These challenges include environmental integrity concerns, such as the complexity of accurately measuring and verifying emissions reductions, as well as financial market integrity challenges, including the need for robust market infrastructure and transparent frameworks.

While past and ongoing efforts by private industry initiatives to promote integrity in these markets have been largely focused on enhancing environmental integrity, the World Bank and the International Organization of Securities Commissions (IOSCO) recognized that financial market integrity is equally critical for the effective functioning of carbon credit markets and have partnered to prepare this note on considerations for financial market integrity of carbon credit markets, building on IOSCO's existing work on carbon markets and the World Bank's ongoing work in emerging markets. While there are interdependences between environmental and financial markets integrity and progress on both is needed, this note focuses on the latter. The key audience for this document is policy makers, and relevant regulators and other authorities in jurisdictions, including but not limited

1 Carbon credit markets are seen as one of the tools which could help companies mitigate the emissions they are unable to reduce in other ways. Voluntary Carbon Markets (VCMs) have expanded significantly, albeit are still small, as firms increasingly rely on carbon credits to offset their emissions and bolster their sustainability credentials. Simultaneously, countries have shown increasing interest in carbon markets, with 89 compliance carbon pricing instruments either currently operational or in development, and an additional 46 governmental crediting mechanisms also in operation or underway. Furthermore, 143 countries have indicated in their Nationally Determined Contributions (NDCs) that they plan to, or may, use carbon credits from cooperative approaches to finance climate action and achieve national targets.

to emerging markets and developing economies (EMDEs), who are considering policy measures to enhance or develop market integrity in carbon markets.

This note (i) describes the current carbon credit market ecosystem; (ii) explains the key vulnerabilities of carbon markets; and (ii) summarizes the key elements of financial market integrity for carbon credit markets. IOSCO has independently published a final report on Good Practices in Voluntary Carbon Markets (IOSCO's Final Report on Good Practices for VCMs), detailing and explaining a set of good practices aimed at advancing financial market integrity in VCMs. These good practices, while not legally binding, aim to support sound market structures and enhance financial integrity, facilitating orderly and transparent trading of carbon credits. As this note and IOSCO's Final Report on Good Practices for VCMs underscore, financial market integrity helps carbon credit markets operate transparently, fairly, and efficiently, protecting against fraud and market manipulation. Such integrity is vital for fostering investor confidence, which is essential for the continued growth and stability of carbon markets.

Given the increasing interest in carbon credit markets among some jurisdictions, including but not limited to EMDEs, these interested jurisdictions may seek technical assistance. IOSCO and the World Bank therefore plan to continue this collaboration in 2025. This will aim to include the development of implementation assistance for jurisdictions as they consider ways to reflect this high-level approach including IOSCO's carbon markets related reports, adapted to their country context, for enhancing or establishing their own carbon credit markets and to support capacity-building programs and technical assistance.

2.CARBON CREDIT MARKETS ECOSYSTEM

Carbon markets can generally be classified into two mechanisms based on their issuance: allowance and crediting. Emission **allowances** are typically issued within cap-and-trade, or Emission Trading Scheme (ETS) markets, regulated by setting binding limits on greenhouse gas emissions. Governments establish a cap on total allowable emissions on participating entities and issue corresponding allowances every year. Companies must hold enough allowances to match their capped emissions, creating a financial incentive to reduce emissions as the cap decreases. They also have the possibility to trade emission allowances in excess of their actual emissions to those companies that are emitting above their emission cap. **Crediting markets** operate at a project, sectoral and jurisdictional level, where credits are issued for emissions reductions or removals that occur below a predetermined baseline. Approaches to generating carbon credits include targeting

carbon intensity reductions for efficiency gains, issuing reduction credits for lowering emissions compared to a reference year, avoidance credits for preventing future emissions, and removal credits for actively removing carbon dioxide against a zero baseline, such as through afforestation and carbon capture. These baselines serve as reference points to measure the effectiveness of emissions reduction efforts.

Based on the role of government or specific institutional bodies' policies and regulations, carbon markets have generally been categorized as Compliance Carbon Markets (CCMs) and Voluntary Carbon Markets (VCMs). CCMs operate under a government regulatory framework where participants are subject to a set of binding targets, whereas VCMs are driven by voluntary emission reduction commitments that go beyond legal requirements for the reduction of emissions.

Interconnectivity and Evolving Dynamics in Carbon Markets

Since 2021, post-Kyoto agreement, national mitigation commitments under the Paris Agreement have increased in ambition, prompting governments to adopt diverse market mechanisms, compliance cap-and-trade or ETS systems, and carbon taxes. Some governments[2] are however also introducing their own VCM through voluntary crediting mechanisms, leading to a proliferation of **independent and government led carbon certification programs** at both national and international levels. This has led to calls to reduce or avoid fragmented development by potentially utilizing compatible or unified operating criteria and/or oversight.

In parallel, some CCMs under government regulations such as cap-and-trade or carbon tax-offset schemes, are allowing participants to partially off-set their obligations with carbon credits certified by independent domestic and international carbon crediting programs that operate under industry self-regulatory frameworks.[3] An added challenge in this case is the fact that, generally, certification programs frequently own and operate the Registry[4] of the credits they issue with little interoperability with other Registries. Countries

2 Japan, India, China, Egypt to name a few.

3 Colombia and South Africa's carbon tax-offset system or Brazil's planned cap-and-trade system for example.

4 As noted in IOSCO's Final Report on Good Practices for VCMs, Registries are databases that record ownership, issuance, retirement, and transfer of carbon credits. Typically, registries will make publicly available the following information about a carbon credit: a unique identifier number, information about the project, the vintage year of the credit (i.e., the year in which the emissions reductions or removals occurred), the quantity of carbon credits issued, the name of the project proponent, the current owner of the credit and its transfer history. Additional information may be name of the project proponent, the current owner of the credit and its transfer history. Other information may be included, depending on the registry. In doing so, registries are meant to ensure that the issuance of a

implementing various carbon pricing schemes will need a holistic approach to develop interoperability among domestic and international systems and common governance and operations framework. Under the Internationally Transferred Mitigation Outcomes (ITMO) Agreement, countries have multiple options for registry adoption, including developing domestic or regional registries, relying on third-party systems, or utilizing the UNFCCC international registry. Considerations should include, among others, interoperability with the Article 6.2 centralized platform and other relevant systems, including counterparty country registries, exchanges, and trading platforms.

As a result of these developments, the boundary between CCMs and VCMs may be less distinct in some circumstances. This has led to a number of dynamics in the carbon markets that are relevant from a financial market integrity perspective across both VCMs and CCMs, including the evolving market infrastructure with intermingled functions, and an increase in the number of stakeholders with growing relevance to the financial sector.

1) Evolving market infrastructure with intermingled functions with potential for conflict of interest

The diversification of trading venues, some of which are under the jurisdiction of financial sector regulators, reflects the increasing complexity of carbon credit market transactions.[5] This trend underscores the need for careful consideration of regulatory frameworks and market integrity measures across the board to support interoperability, create a level playing field in terms of accountability and transparency, and manage conflicts of interest. On trading platforms, carbon credits are traded in spot markets, used as underlying assets for derivatives, or auctioned. Marketplaces have also been an emerging venue for primary and secondary market purchases, where carbon credits are offered by project developers, brokers, or operators of marketplaces themselves. Marketplaces may also have varying levels of connection with existing registries. Trading venues can extend to the blockchain if carbon credits are tokenized or issued natively on-chain.

2) Expansion of stakeholders with growing relevance of the financial sector

Various stakeholder categories have emerged and are expected to expand, driven by

carbon credit is transparent and documented, and that credits can be tracked, thereby facilitating their trading or retirement.

5 Exchanges offer standardized products and trading rules, while other marketplaces may have lower participation thresholds and enable project-level investments or credit purchases. Exchanges under regulatory regimes include AirCarbon Exchange, Chicago Mercantile Exchange, London Stock Exchange, Moscow Exchange, Tokyo Stock Exchange, Xpansiv CBL, etc.

motivations including project sourcing or risk management needs, increased focus on environmental integrity, increased investor scrutiny, or investment portfolio diversification needs. For the purpose of financial market integrity, there are four important groups to account for. The first one are those entities participating in the carbon markets value chain that are already under the supervision of financial sector regulators. This may include project financiers and carbon credit buyers such as banks and asset managers, insurance companies, and carbon intermediaries or brokers. The last of these may not always be supervised by a financial sector regulator. The second group comprises the infrastructure service providers, including registries of different types and trading venues not always linked to a registered/recognized exchange. The third group includes service providers such as carbon rating agencies that are not regulated, unlike their equivalent credit rating agencies in securities markets. The fourth group involves entities that provide key services in the carbon crediting value chain, such as third-party verification and validation bodies (VBBs), and carbon certification programs, which in most cases also own and manage carbon registries for the carbon credits they certify. The fourth group does not conduct activities directly linked to financial markets, though they have a direct impact on the quality and therefore the value of carbon credits. In most jurisdictions, private sector run carbon certification program tend to adhere to best market principles issued at this point by industry bodies.

3.KEY VULNERABILITIES OF THE CARBON MARKETS

The division between CCMs and VCMs, as well as between domestic and international markets is becoming blurred. With VCMs still in their nascent stages and generally unregulated, shortcomings from a financial market integrity perspective persist across carbon credit markets. Vulnerabilities identified below, and in more detail within IOSCO's Final Report on Good Practices for VCMs are:

1) <u>The legal and regulatory treatment of carbon credits</u>

The legal and regulatory treatment of carbon credits remains uncertain in many jurisdictions, particularly in EMDEs. This adds a fundamental uncertainty to market stakeholders, in particular to financiers such as banks and asset managers on security of ownership, accounting and tax treatment, prudential and solvency regulations, reporting, etc. Inputs from market stakeholders, particularly in domestic EMDEs markets, indicate that rather than selecting one definition over another for all markets, it is more appropriate to analyze

which legal definition fits better in each country's legal and institutional context, bearing in mind the costs and benefits of market interoperability.

2) Registries' architecture and integrity standards

Registries are essential to the operation and integrity of carbon markets, serving as the core infrastructure for recording the issuance, transfer, cancellation, and retirement of carbon credits. They have several functions that in some cases overlap with trading platforms, which include registrars of projects and the ownership of credits; transfer of ownership of credits between account holders; and provision of a transparent and auditable trail by recording the final entity that claims the environmental attribute of a credit by retiring it. Currently, there are no globally recognized standards for such registries and limited enforcement authority exists today within the mandates of relevant regulators and other authorities.[6] Vulnerabilities across all registries could be grouped into four categories:

i) **Data integrity and security**: The integrity of databases and audit trails throughout the lifecycle of carbon credits might be at risk if robust processes are not in place. Without stringent measures to prevent unauthorized data alterations and to maintain clear audit trails from the point of issuance, discrepancies could arise between the certified reductions or allocations and the credits issued. Furthermore, there could be vulnerabilities related to operational resilience, particularly against cyberattacks, if adequate data protection, regular audits, and disaster recovery protocols are not thoroughly implemented.

ii) **Interoperability and reconciliation**: The lack of consistent and accurate data across registries might pose risks, especially when credits are listed across multiple sale points. The absence of robust reconciliation processes and inadequate interconnectivity between registries and various sale points are not supportive of an efficient market. Furthermore, it could lead to registration errors, including double selling, resulting in disputes and financial losses, which could erode trust in the market. In the absence of common data approaches and an enforcement framework, the recognition, transfer, cancellation, and retirement of credits across frameworks could become unreliable.

6 International and domestic carbon registries are generally associated with carbon programs and operate under the same self-regulatory regimes.

iii) **Custodial function**: The custodial responsibilities of registry account holders, especially those managing third-party credits, are often overlooked. Some trading platforms are also performing as sub-custodians. There are no common standards on issuances such as requisites to perform custody functions, client account segregation, custody account reconciliation, back-office platforms and processes, and reporting to clients.

iv) **Governance for integrity standards**: There are no governance standards applicable to registries to manage potential conflict of interest or potential malpractices across the infrastructures. For example, in the case of entities responsible for setting standards and certifying credits having ties to project developers receiving those credits, or in the case of the same entity certifying credits and owning and operating the registry. Without clear separation of roles, enhanced disclosure practices, and stringent conflict-of-interest policies, the integrity of the entire process could be compromised. These shortcomings may also affect infrastructures managed by the public sector such as carbon tax offset registries or carbon allowance registries where carbon credits are allowed to be used.

3) Secondary market architecture, conduct, and transparency

Secondary markets can play a crucial role in providing liquidity, price discovery, risk management, and market efficiency in carbon credit markets. They have evolved to embrace various forms of trading mechanisms, including spot, secondary Emission Reduction Purchase Agreement (ERPA), and derivatives trading, which can occur through over-the-counter (OTC) transactions or electronic trading platforms. However, this diversity has not always resulted in fully serving the intended purpose of secondary markets due to the potential for market manipulation, potential conflicts of interest, the lack of transparency, and equitable access to information. Fraud, insider trading, and other fraudulent activities have been reported in relatively mature compliance ETS, and such practices can easily be replicated in more nascent CCMs and VCMs.[7]

Trading platforms in particular serve as an important element in the carbon credit market ecosystem. In cases where integration with carbon registries is not comprehensive, trading platforms may provide the functions of transactional registries. This can occur

7 Recognizing these risks, the CFTC established the Environmental Fraud Task Force (EFTF) specifically tasked with proactively identifying and addressing potential loopholes and malpractices.

when trading activities do not immediately result in the reflection of credit transfers in the accounts of the same entity within respective registries. Also, as some trading platforms, particularly those operating outside regulatory oversight, emerge that allow participation from various parties including retail investors, the need for robust oversight becomes increasingly critical. Some of trading platforms introduce credits from relatively new carbon credit standards, or where the certification is done by the same entity as the operator of the trading platform.

Lastly, in light of highly publicized issues with carbon credit quality, such as verified carbon credits not corresponding to carbon emission reductions or removals, transparency into the carbon mitigation projects for which carbon credits are generated may be necessary to facilitate widespread development of trustworthy secondary markets for spot carbon credits and carbon credit derivative products. Such transparency could be paramount to enable secondary-market investors, including retail investors, to make informed decisions when purchasing or selling spot carbon credits or carbon credit derivative products.

4) Conflicts of interest

Conflicts of interest exist at multiple points along the carbon credit lifecycle. At the carbon credit creation stage, carbon credit verification programs perform a valuable and essential function in verifying the appropriate number of carbon credits to be attributed to a given carbon mitigation project. But verification programs also face one of the most prevalent conflicts of interest in performing this function, as they typically are paid for their services by the project developers whose carbon credits they verify. Additionally, carbon certification programs typically own and manage carbon registry platforms for which a fee is charged to carbon issuers The dual role of certifying carbon credits and managing carbon registries may create perverse incentives in certifying lower quality carbon credits.

In addition, potential conflicts of interest of trading platforms can also undermine market integrity. These platforms may prioritize profits over fair practices, leading to biased outcomes. This conflict is present for example when a financial institution or marketplace invests in carbon projects to which it is also an intermediary providing brokerage to other carbon credit purchasers. Such dual roles can result in biased recommendations, potentially masking deficiencies in the carbon credits they are promoting.

5) Contract standardization

The carbon credit market's increasing complexity, driven by diverse participants and

multi-jurisdictional operations, poses challenges for legal, financial, and operational frameworks. As carbon credits move across countries and legal systems, uncertainty arises in determining applicable laws for dispute resolution and compliance. The lack of standardization in contracts throughout the carbon credit lifecycle exacerbates these challenges. Especially for the primary market, diversity in contractual arrangements significantly **increases transaction costs** as each agreement requires unique and often complex contract designs, escalating legal and advisory fees for all parties involved. This complexity and uncertainty can **deter smaller or less-resourced entities from participating in the carbon market**, ultimately limiting market liquidity and growth. Furthermore, the absence of standardization in ERPAs introduces **ambiguities around credit delivery schedules** and the quality of carbon credits, which can lead to disputes over whether contractual obligations have been fulfilled, potentially resulting in financial losses and litigation. The lack of clear standards also complicates the determination of **the appropriate authority for resolving disputes**, propelling uncertainty and inefficiencies in enforcement across jurisdictions.

Understanding these trends and issues provides the necessary groundwork to assess the responses required to maintain both efficiency and integrity. Building on this foundation, Section 4 identifies key elements that advance financial market integrity in carbon credit markets, as set out in greater detail in IOSCO's Final Report on Good Practices for VCMs.

4. KEY ELEMENTS OF FINANCIAL MARKET INTEGRITY FOR CARBON CREDIT MARKETS

Addressing the vulnerabilities discussed above and drawing upon experiences in traditional financial markets, financial integrity in carbon credit markets should mean that, among other things, (i) they operate in a manner that is free from manipulation, fraud, and other unfair practices, (ii) their market structures do not unduly favor some users over others and (iii) investors are given fair and transparent access to market facilities and price information on a real-time basis.[8] In short, a sound financial market rests on high levels of transparency, accountability, fairness, open access, efficiency, and resilience together with effective regulatory oversight[9], as should carbon credit markets. Below, we explore these

8 https://www.iosco.org/v2/about/?subsection=about_iosco

9 https://www.iosco.org/library/pubdocs/pdf/IOSCOPD774.pdf

aspects in greater detail with the objective of providing an approach to address numerous shortcomings identified in the previous section.

1) Transparency as a key element of carbon markets

In the context of carbon markets, transparency is as crucial a component of well-functioning markets as it is for traditional markets. To allow consumers and other market participants to make informed decisions, it must encompass both the underlying carbon assets and the transactions involving them.

Asset-level transparency requires comprehensive disclosure of carbon credit attributes to provide market participants with a clear understanding of the environmental and financial characteristics of the asset. In the carbon credits markets ecosystem, data remains a challenge. Given that credit issuance is project-based, there currently exists little high-quality granular data to support pricing and due diligence for particular carbon credits. Transaction-level transparency is equally important for market integrity and efficiency. It involves the clear and timely disclosure of trade information, including prices and details of trade executions, order flows, and market activities. Again, data availability in secondary carbon credit markets is limited, as most trading of carbon credits is currently executed via OTC markets with little public pricing information available.

To improve transparency of carbon credits, several components may be appropriate, as outlined in IOSCO's Final Report on Good Practices for VCMs. These include, amongst other things:

i) Standardization of the taxonomy of carbon credit attributes and transparency over carbon credit programs methodologies (IOSCO GP5 & 7)

ii) Public disclosures of rules for listing, delisting, and record keeping (IOSCO GP10 to 14)

iii) Public Availability of pre- and post-trade data (IOSCO GP10 to 14)

iv) Transparency by carbon credit rating agencies on data sources and methodologies. (IOSCO GP14)

2) Accountability as a key element of carbon markets

Accountability speaks to the conduct of market participants, so that individuals and institutions are responsible for their actions and decisions. In financial markets, accountability

means that financial institutions and market participants operate transparently, ethically, and in compliance with regulations.

A key factor is the management of conflicts of interest, which is essential for maintaining trust and transparency. At the secondary market level, traders with a stake in carbon credits might have incentives to manipulate prices. They could issue buy or sell recommendations to customers to artificially boost prices or profit from arbitrage opportunities, which could implicate laws prohibiting fraud or market manipulation. In addition, entities providing carbon credit ratings and data might also offer consulting services to the projects they rate. This could present conflicts as these entities can be incentivized to offer higher ratings in exchange for performing and being compensated for other ancillary activities, thus compromising the integrity of the ratings. At the level of carbon certification entities, conflict of interest circumstances may also take place when they own and operate registries. The former may have an incentive to approve carbon credits they can register without appropriate due diligence. In addition, robust governance structures with clear roles and responsibilities, effective systems, controls and procedures for risk management and ethical conduct are essential to prevent fraud and other types of manipulations.

To mitigate or manage conflicts of interest and promote better governance, several components may be appropriate, as outlined in IOSCO's Final Report on Good Practices for VCMs. These include, amongst other things:

i) Developing a framework that sets out how to identify, mitigate, manage and disclose conflicts of interest (IOSCO GP17)

ii) Emphasizing the importance of know-your-customer and due diligence (IOSCO GP9)

iii) Implementing enforcement actions, market surveillance and trade monitoring (IOSCO GP10-17).

iv) Promoting transparency around the creation of carbon credits (IOSCO GP 6).

3) Market integrity, fairness and resilience as key elements of carbon markets

Risk management is a critical factor to support financial market integrity. A comprehensive risk management framework helps to mitigate the impacts of uncertainties that could jeopardize the smooth and sound functioning of a financial institution's activities. By identifying and assessing potential risks, market participants can develop strategies to protect their interests and the overall integrity of the market. For trading venues, these may

include systems and processes relating to order entry, order routing execution systems, data dissemination, network infrastructure, market regulation, risk management systems, surveillance and the like to help ensure critical operations are provided. For carbon credit registries, it is about adequate governance and ensuring the efficiency and reliability of registry and custodial functions performed by them or their account holders, including appropriate reconciliation procedures.

Operational resilience is one factor that supports financial market integrity in carbon credit markets by designing markets that can operate fairly, efficiently, and transparently in the event of an emergency or other disruption to normal business operations. In carbon credit markets, this includes robust and reliable registries, reliable trading platforms, and reliable clearing and settlement systems that can minimize the impact if any such events and continue to operate critical functions until a return to normal operations.

To promote market integrity, fairness and resilience, several components may be appropriate, as outlined in IOSCO's Final Report on Good Practices for VCMs. These include, amongst other things:

i) Ensuring registries maintain accurate, complete and up-to-date record; with an approach to oversight similar to that of central securities depositories (IOSCO GP8)

ii) Implementing comprehensive governance frameworks (IOSCO GP15)

iii) Promoting robust risk management practices which include the management of operational and technological risks (IOSCO GP16)

iv) Ensuring market surveillance and monitoring of trading (IOSCO GP 19)

v) Ensuring trading venues have appropriate resources (IOSCO GP 20)

4) Efficiency as a key element of carbon credit markets

Market efficiency refers to the degree to which market prices reflect all available, relevant information. When markets are efficient, it means that assets are priced accurately and fairly, based on all known information at any given time. In the context of carbon credit markets, it therefore encompasses how accurately carbon credit prices reflect the cost of reducing emissions, thereby stimulating investment in low-carbon technologies and practices.

Price discovery in the carbon credit markets is influenced by a variety of challenges. The existence of various standards, methodologies and registries lead to a fragmented market. In general, there is a high level of market concentration, with a small number of service providers serving most of the market. Other key factors influencing market efficiency in carbon credit markets include information availability and accessibility, i.e., whether participants have access to reliable and timely data. Another key factor is market liquidity, i.e., whether trading volumes are sufficient to ensure price discovery. In that context, standardization of high integrity carbon credits as well as of carbon credit contracts could play a crucial role in reducing uncertainty and transaction costs and increasing market liquidity. In addition, and over time, interoperability between different carbon markets could also support cross-border trading, expanding the investor base and deepening the market. A larger and more integrated market could enhance price discovery and reduce price volatility.

To improve carbon credit markets efficiency, several components may be appropriate, as outlined in IOSCO's Final Report on Good Practices for VCMs. These include, amongst other things:

i) Standardization of carbon credits, to enhance the ability of market participants to assess and compare the quality of credits and their underlying projects (IOSCO GP5)

ii) Better disclosures on the use of carbon credits (IOSCO GP21).

5) Oversight as a key element of carbon credit markets

Regulation and oversight are critical to financial markets functioning and trust among investors and other stakeholders. This is essential for market confidence, stability, and growth.

Regulatory oversight is essential for the integrity of carbon credit markets, as it is for any other financial market. As noted above, the activities undertaken by some unregulated trading platforms, standards, registries and other service providers such as carbon rating agencies can, if not conducted with integrity, create risks to carbon credit markets and, potentially, to financial markets participants active in those markets.

By establishing clear rules and standards, in accordance with their oversight authority, regulators foster a level playing field and reduce the risk of fraud, manipulation, and other unethical practices. This, in turn, attracts a wider range of investors and participants,

increasing market liquidity and efficiency. Enforcement actions, including penalties for non-compliance, deter potential violators and promote adherence to regulatory standards.

To apply appropriate and effective regulation, supervision and oversight, several components may be appropriate, as outlined in IOSCO's Final Report on Good Practices for VCMs. These include, amongst other things:

i) Considering regulatory and supervisory oversight of carbon credit markets (IOSCO GP2).

ii) Providing clarity over the regulatory treatment of carbon credits (IOSCO GP1).

iii) Develop or make use of arrangements for cross-border and domestic enforcement and supervision cooperation arrangements (IOSCO GP3).

iv) Enforcement actions (IOSCO GP18)

5.CONCLUSION

The note sets out a series of potential vulnerabilities associated with carbon credit markets, with additional details in IOSCO's Report on Voluntary Carbon Markets. The lack of common understanding and clarity regarding the legal and regulatory treatment of carbon credits, in many jurisdictions, is affecting their issuance, trading, and retirement. The lack of regulatory certainty and oversight of key stakeholder groups such as those referenced above may hinder the development and growth of carbon credit markets grounded in financial integrity. Thus in some jurisdictions, including in particular in emerging markets where policymakers wish to develop sound carbon credit markets, policymakers may wish to consider the key elements listed here and further detailed in the IOSCO Final Report on Good Practices for VCMs, including providing clarity on the regulatory treatment of carbon credits in light of their objectives and legal mandate(s), and providing robust supervision and enforcement. The WB and IOSCO stand ready to assist jurisdictions with reflecting this high-level approach alongside IOSCO's good practices as they establish and develop carbon markets in their jurisdictions.