

Legal Implications of Voluntary Carbon Credits

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EXECUTIVE SUMMARY

The transition to a low carbon economy is estimated to require significant funding globally¹. The voluntary carbon market continues to play a critical role in that transition by helping to channel funding into projects that reduce carbon emissions or remove carbon from the atmosphere.

A robust voluntary carbon market must be grounded in a strong legal foundation. Much of the process of creating, verifying and transferring the benefit of project activities that reduce emissions already exists within robust legal frameworks. As the market grows in size and complexity, however, secondary markets in fungible voluntary carbon credits (VCCs) would be significantly enhanced by steps being taken both nationally and internationally to better understand the legal nature of VCCs.

As with any intangible asset, the legal nature determines how a VCC as a fungible instrument can be created, bought, sold and retired. It affects what type of security may be taken and enforced in relation to VCCs and how that can be achieved, as well as how VCCs would be treated following an insolvency (including with regard to netting). It may also have an impact on broader considerations, including the regulatory, tax and accounting treatment of VCCs. In short, understanding the legal treatment of VCCs is necessary to achieve deep and liquid secondary markets, which, in turn, will enable the development of a clear price signal for carbon and allow funds to be efficiently channeled to emissions-reducing projects.

Furthering that legal understanding in different jurisdictions will help optimize the enormous potential that a global voluntary carbon market can offer. This whitepaper investigates the legal treatment of VCCs and considers certain other aspects of VCC transactions (such as when they might be regulated as derivatives). The paper also sets out recommended steps that can be taken to further develop legal certainty in VCCs at both a global and jurisdictional level.

ISDA has long-standing experience of working with a broad and diverse range of market participants to lay the foundations for the emergence of robust, well-governed and transparent derivatives markets, ranging from interest rate products to emissions trading. ISDA supports the development of safe, efficient voluntary carbon markets and stands ready to play its part in that development.

¹ A report published in 2020 by the International Renewable Energy Agency (IRENA) estimates the amount at \$110 trillion, www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Apr/IRENA_Global_Renewables_Outlook_2020.pdf

1. INTRODUCTION

1.1 Background

The transition to a low carbon economy will require significant long-term funding, estimated at \$110 trillion by 2050². An effective and liquid voluntary carbon market can help provide the investment required by channeling financing into projects that aim to reduce carbon emissions or remove carbon from the atmosphere.

Derivatives markets can play a critical role by facilitating the raising and allocation of capital for green investments and helping businesses and investors better manage risks. Derivatives can also help enhance transparency by providing information on the underlying commodities, securities or assets, which can ultimately contribute to long-term sustainability objectives³. This is particularly relevant for the voluntary carbon market, which is unregulated and has previously faced criticism over the integrity of certain projects.

The ability to create a successful VCC derivatives market will depend on the strength of the underlying primary market. At the same time, increased trading in derivatives will help promote liquidity and transparency in the primary markets.

ISDA therefore welcomes endeavors, notably by the Taskforce on Scaling Voluntary Carbon Markets (TSVCM), to bring together private-sector stakeholders from across the value chain to develop a roadmap to scale up the voluntary carbon markets. ISDA also supports efforts to develop key general trading terms and promote the standardization of voluntary carbon market contracts where appropriate. This will encourage participation and increase liquidity in the voluntary carbon markets.

The recent launch of exchange-traded derivatives contracts in VCCs has galvanized focus on further developing VCC derivatives. Growth in the over-the-counter (OTC) derivatives market will be helped by greater overall familiarity with transactions in VCCs and related products.

1.2 Benefits of Maximizing Legal Certainty

A voluntary carbon market has existed for some time, and much of the process of creating, verifying and transferring the benefit of project activities that reduce emissions already exists within robust legal frameworks. However, some residual or perceived legal uncertainties remain in certain jurisdictions.

As the voluntary carbon market continues to develop, complex questions may also arise in relation to how VCCs should be treated for capital⁴, margin and trade reporting purposes, which may be difficult to definitively answer due to the uncertainty of their legal nature.

² As estimated in a report published in 2020 by the International Renewable Energy Agency (IRENA), www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Apr/IRENA_Global_Renewables_Outlook_2020.pdf

³ The role of derivatives in sustainable finance is explored in greater detail in a July 2020 paper published by the Centre for European Policy Studies (CEPS) and the European Capital Markets Institute (ECMI), www.isda.org/a/KOmTE/Derivatives-in-Sustainable-Finance.pdf. See also the ISDA paper on Overview of ESG-related Derivatives Products and Transactions, published in January 2021, www.isda.org/a/qRpTE/Overview-of-ESG-related-Derivatives-Products-and-Transactions.pdf and the ISDA paper on the Role of Derivatives in Carbon Markets, published in September 2021, www.isda.org/a/soigE/Role-of-Derivatives-in-Carbon-Markets.pdf

⁴ Implications of the FRTB for Carbon Certifications, ISDA, July 2021, www.isda.org/a/i6MgE/Implications-of-the-FRTB-for-Carbon-Certificates.pdf

Greater clarity over the legal treatment of VCCs would therefore contribute to a more robust market. It would significantly enhance the development of an efficient global voluntary carbon market as the legal treatment governs not only the creation, transfer and retirement of VCCs but also impacts broader considerations, such as fungibility, the circumstances under which a transferee obtains ownership rights to the VCC on a transfer, the requirements for taking proper security and the treatment of VCCs in an insolvency situation (including with regard to netting).

Case Study

- A Japanese corporate buys 30 VCCs from a US project developer, so the registry (located in the US) moves the VCCs from the project developer's registry account to the Japanese corporate's account.
- The Japanese corporate then enters into a New-York-law-governed derivatives contract with a US bank with a security arrangement granted over the 30 VCCs. When the Japanese corporate becomes insolvent, the US bank wants to enforce its security over the VCCs.
- Such a scenario raises a number of legal questions that need to have a clear answer.
 - Does the Japanese corporate have good title to the VCCs?
 - Can a valid chain of title be traced back through the Japanese corporate to the original US project developer?
 - Has the purported security over the VCCs been validly created?
 - If the security is valid, how can the US bank enforce its security?

1.3 How to Increase Legal Certainty

Various actions could be taken to clarify the legal nature of VCCs, including the issuance of an authoritative legal statement, legislative amendments and/or regulatory guidance at a jurisdictional level. Further steps could also be taken in parallel at an international level to drive greater standardization of the legal treatment of VCCs across jurisdictions.

Greater certainty over the legal treatment of VCCs would support the drafting of standardized documentation and legal opinions for a voluntary carbon credit OTC derivatives market. Standardized documentation has contributed significantly to the growth of safe, efficient and liquid global derivatives markets across many asset classes, allowing market participants to transact in confidence and helping to reduce market and credit risk.

ISDA has long-standing experience of working with a broad and diverse range of market participants to lay the foundations for robust, well-governed and transparent markets, ranging from interest rate products to emissions trading. In the context of voluntary carbon markets, ISDA is currently engaged in discussions with market participants worldwide and stands ready to draft standard documentation for secondary market derivatives trading in VCCs. For example, ISDA is coordinating with the International Emissions Trading Association to advance the documentation process.

As part of ISDA's support for the development of this market, and to lay the foundations for standardized documentation, this whitepaper outlines several steps that can be taken to improve legal certainty for VCCs at both a global and jurisdictional level. In this way, the paper seeks to contribute to the continued development of a robust and transparent voluntary carbon market.

1.4 Structure of this Paper

This paper is divided into the following sections:

- A brief overview of the evolution of the voluntary carbon market (for greater detail, the structure and challenges of the voluntary carbon market are further explored in Annex I);
- Analysis of the legal nature of VCCs;
- An exploration of the key legal issues that would benefit from a greater understanding of the legal nature of VCCs;
- Recommended solutions to foster greater legal certainty; and
- A summary of the road ahead.

In addition, example transactions involving VCCs are set out in Annex II, and a glossary of terms has been included in Annex III.

Next Steps

- At a jurisdictional level, ISDA to help facilitate efforts to foster greater legal certainty through authoritative legal statements, targeted legislative amendments and/or regulatory guidance, as appropriate, to help clarify the legal and regulatory treatment of VCCs.
- In parallel, global legal standard setters such as the United Nations Commission on International Trade Law (UNCITRAL) and the International Institute for the Unification of Private Law (UNIDROIT) to produce legislative guidance on substantive legal issues – most importantly, on the legal nature of VCCs – for states across all regions.
- ISDA to continue to engage with market participants worldwide to help the drive towards standardizing documentation and supporting legal opinions for the secondary market.

2. EVOLUTION OF THE VOLUNTARY CARBON MARKET

2.1 Carbon Offsetting

The voluntary carbon market can complement efforts to permanently remove carbon emissions from the atmosphere. A ‘reduce first, mitigate second’ strategy will enable firms to achieve net-zero carbon emissions in an economically efficient way.

While governments, companies and others are working to reduce their carbon footprint through natural mitigation measures such as habitat preservation and technology solutions, it is widely accepted that certain unavoidable emissions will remain. A market in transferable carbon credits has evolved in response, often referred to as carbon offsets as they can be used to compensate for unavoidable emissions.

Implementation of a strategy to reduce emissions can take time, as it involves significant capital expenditure and business restructuring. Use of carbon offset credits is therefore a helpful means of mitigating a company’s carbon emissions as it strives for decarbonization.

2.2 The Mandatory Carbon Market

Multiple mandatory carbon markets (also known as compliance carbon markets) now exist, largely as a result of individual national commitments under global climate agreements. These markets are created by statute or other formal mechanism and are regulated by mandatory international, national or regional carbon reduction regimes.

The EU Emission Trading System (EU ETS) was established in 2005 in response to the 1997 Kyoto Protocol⁵, which set targets for adhering countries to reduce their emissions. It is currently the largest mandatory carbon market in the world and has influenced the design of other mandatory carbon markets. For example, the UK ETS replaced the EU ETS in the UK in January 2021 and follows a near-identical structure. There are similar schemes in China, Japan, Mexico, South Africa, South Korea, the US and nearly 70 other jurisdictions around the world.

ISDA supports the mandatory carbon market through the development and publication of legal definitions and documentation, and is working to increase standardization in the secondary market for derivatives in emission allowances.

2.3 The Voluntary Carbon Market

Voluntary programs started to develop in the 2000s, in parallel with the mandatory carbon markets, as it became clear that there was a demand for carbon credits from entities not required to participate in mandatory carbon markets, including in countries where no mandatory scheme exists. This demand has been greatly accelerated by the Paris Agreement⁶ and the ensuing wave of net-zero commitments by governments and companies all over the world⁷.

Participation in mandatory and voluntary carbon markets is not mutually exclusive, and many companies participate in both.

⁵ For more information about the Kyoto Protocol, see https://unfccc.int/kyoto_protocol

⁶ For more information on the Paris Agreement, see <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

⁷ The United Nations has reported that more than 130 countries have set or are in the process of setting a target to reduce emissions to net zero by 2050, www.un.org/en/climatechange/net-zero-coalition

In contrast to the highly regulated mandatory carbon market, voluntary carbon markets currently do not involve any specific government authority oversight. Organizations can elect to purchase VCCs to offset their emissions and help meet their net-zero goals.

As a significant share of the projects that generate VCCs are located in the Global South, the voluntary carbon market also provides an opportunity to increase capital flow to emerging market economies and provide funding to projects that may not otherwise receive it.

Further information on the nature of VCCs and the structure and challenges of the voluntary carbon market is covered in Annex I.

3. LEGAL NATURE OF VCCs

Certainty over the legal nature of VCCs is key to the application of certain legal principles. Currently, the possible legal treatment of VCCs varies across jurisdictions. In many jurisdictions (as under English law), VCCs should be capable of being recognized as a form of intangible property. In the absence of an authoritative statement directly on this point, however, there may remain perceived or residual uncertainties in certain jurisdictions.

Next Steps

- It may be desirable for steps to be taken in key jurisdictions to clarify the legal nature of VCCs through an authoritative legal statement, targeted legislative amendments and/or regulatory guidance.
- Global legal standard setters, such as UNCITRAL and UNIDROIT, should create a global standard for the legal treatment of VCCs.

3.1 What is a VCC

The possible legal nature of VCCs currently differs across jurisdictions. In many countries, they can be viewed as some form of intangible property; in others, they could be characterized as a bundle of contractual rights. As with any intangible asset, much depends on the legal treatment: different rules could apply on how VCCs as a fungible instrument can be created, bought, sold and retired, how security is taken, and how they are treated on insolvency (including with regard to netting).

There are parallels with other types of asset, including carbon credits in the mandatory carbon markets. However, VCCs differ from those types of carbon credits⁸ in certain key respects⁹ – in particular, VCCs are constituted outside any statutory framework. As such, they typically have no special role in facilitating compliance with regulatory obligations¹⁰. For that reason, their specific legal nature is potentially different.

3.1.1 VCCs as Intangible Property

Whether VCCs constitute a form of property under English law must be established by reference to whether they are “definable, identifiable by third parties, capable in its nature of assumption by third parties, and have some degree of permanence or stability”¹¹.

These requirements would appear to be broadly met in relation to VCCs, and English courts have demonstrated significant flexibility in recognizing property rights in intangible assets where the market treats those assets as property (which is certainly the case with VCCs). Examples of intangible property currently recognized under English law include milk quotas¹², waste management licenses¹³ and goodwill¹⁴, while rights to a personalized car registration number also possibly fall within that category¹⁵.

⁸ Mandatory carbon markets include the EU Emissions Trading Scheme, which issues EU Allowances, and the California cap-and-trade program

⁹ See Annex I paragraph 3 for further detail

¹⁰ See Annex I paragraph 4 for detail on why it is arguable that the distinction between voluntary and mandatory carbon markets is diminishing

¹¹ National Provincial Bank v Ainsworth [1965] AC 1175

¹² Swift v Dairywise Farms Ltd (No.1) [2000] 1 WLR 1177

¹³ Re Celtic Extraction Ltd [2001] Ch. 475

¹⁴ Templeton Insurance Ltd v Thomas [2013] EWCA Civ 35; JSC BTA Bank v Ablyazov [2018] EWCA Civ 1176

¹⁵ Goel v Pick [2006] EWHC 833 (Ch)

VCCs can be seen as representing exclusive access to a finite resource – namely, certification that the holder¹⁶ either directly or indirectly has reduced or removed from the atmosphere one metric ton of carbon dioxide equivalent (tCO₂e) in line with relevant rules and requirements. This view is consistent with the perceived market value of VCCs, which is associated with the holder's ability to claim some level of responsibility (through the retirement or cancellation of the credit) for a finite quantity of tCO₂e reduction or removal arising from a finite set of certified projects. Value ultimately derives from the finite nature of the resources represented by VCCs, which includes the independent verification of such claims, as set out in the relevant carbon standards framework.

In that sense, VCCs can be viewed as an intangible asset, evidenced by the register entries and established in accordance with the relevant carbon standard and registry rules.

Whether VCCs are capable of being recognized as a form of intangible property, however, is a jurisdiction-specific question and so, pending the development of a global standard, will be answered by reference to national laws.

3.1.2 VCCs as a Bundle of Legal Rights

A project is able to generate VCCs once it is assessed and certified as meeting the relevant carbon standard rules¹⁷ by a third-party verifier¹⁸. A further verification by a third party is then carried out on the performance of the project to confirm the activities have resulted in the emissions reductions claimed.

The verifier's findings are set out in a public verification report, which includes the number of VCCs that can be issued as a consequence. It may be possible to characterize these claimed reductions as a contractual right to benefit from the verification process performed by the project developer.

If issued, VCCs are recorded by a registry administrator¹⁹ and are also subject to the contractual framework of the relevant registry (including any terms of use or registry rules). For example, in circumstances where a VCC has been issued and transferred into the account of a project developer, but it is subsequently found the project was not in compliance with the registry rules (for instance, due to fraudulent activity), the project developer may be required to return the affected VCCs for cancellation by the registry.

On this alternative view, VCCs represent a bundle of contractual rights, documented under the relevant service contracts with the verifier and registry rules to which participants are required to adhere. Under such a characterization, VCCs would amount to a bundle of private law contractual rights (and potentially tortious rights) against the project developer, verifier, carbon standard and registrar.

While it is certainly the case that VCCs generally arise in the context of a contractual framework, analyzing the rights and obligations that arise under the various contracts and rules places the onus for the legal treatment of VCCs on the terms of those contracts and rules. In other words, variances in the express (and implied) terms of the various service contracts and registry rules would give rise to differences in the legal characteristics of VCCs. Absent sufficient standardization, that means a higher risk of fragmentation across the market. If contractual rights are to be relied on, a benchmarking exercise of service contracts and registry rules versus the standard criteria may be necessary to ensure market expectations on the features of VCCs are met.

¹⁶ References to the 'holder' of a VCC are loose references to the person to whose account the relevant VCC is credited from time to time in the register constituting the VCC

¹⁷ See Annex I

¹⁸ For example, Verra approves qualified, independent third parties, known as validation/verification bodies (VVBs), to assess projects against Verra's rules and the requirements of the applied methodology. Currently, there are more than 20 VVBs located across five continents. VVBs are accredited to work in specific sectoral scopes, meaning their expertise is geared directly toward the types of projects they audit: <https://verra.org/project/vcs-program/validation-verification/>

¹⁹ Such as Verra, the Gold Standard, the American Carbon Registry and Climate Action Reserve, as further discussed in Annex I

If VCCs are considered a bundle of contractual rights, it will materially impact their transferability. Both the governing law and the terms of a contract will determine how the contract can be transferred. Under English law, a contractual right (as a thing in action) can only be transferred by assignment or novation, both of which require certain formalities to be complied with. For example, all three parties must agree to a novation and a legal assignment requires notice to be given to the obligor.

On that basis, characterizing VCCs as a bundle of contractual rights may give rise to certain complications that would not emerge if it is clear in a particular jurisdiction that VCCs are a different type of property (such as a form of intangible property). Where necessary, steps can be taken in national legislation, and internationally, to provide a legal basis for that conclusion.

3.1.3 VCCs as Distinct from Transactions in VCCs

The characterization of a VCC itself will be distinct from the characterization of a transaction in VCCs (including from a regulatory perspective). The status of an asset is a separate consideration to the status of a transaction in that asset. For example, a listed future or an OTC forward or option transaction with a VCC as the underlying will be a regulated product in many jurisdictions, even if VCCs themselves do not fall within a list of regulated financial instruments in that jurisdiction.

In some jurisdictions, an important factor in determining the regulatory characterization of a transaction is the timing of settlement. Longer settlement times may in certain circumstances be a factor indicating that the transaction is a regulated instrument (such as a derivative), even if the underlying asset is not.

Setting aside derivatives on emission allowances, derivatives on VCCs will be characterized as financial instruments in the EU if they meet the criteria of one or more of the categories of financial instruments set out in Section C of Annex I to the revised Markets in Financial Instruments Directive (MIFID II)²⁰, as implemented in national legislation. Derivatives on VCCs will generally meet these requirements (as distinct from spot contracts) and therefore constitute regulated financial instruments. In this case, regulatory requirements under MIFID II (as transported into national legislation) and the European Market Infrastructure Regulation²¹ will apply, among other regulatory requirements. The regulatory position in the UK is broadly similar to that in the EU²².

In the US, Title VII of the Dodd-Frank Act provides the US Commodity Futures Trading Commission (CFTC) with regulatory authority over swaps, the Securities and Exchange Commission has regulatory authority over security-based swaps, and the two agencies have joint authority over mixed swaps.

If VCCs are traded as the underlying commodity component of a derivatives transaction, then it is likely to be deemed a swap. If that is the case, then there are various levels of oversight depending on whether it is traded on a designated contract market (DCM) or is executed bilaterally between eligible contract participants. Futures contracts traded on a DCM are subject to DCM oversight (such as trade practice surveillance and enforcement actions). In contrast, bilateral derivatives would be potentially subject to the CFTC's trading, clearing and reporting regulations, as well as mandatory margin rules.

²⁰ Directive 2014/65/EU (as amended)

²¹ Regulation (EU) No 648/2012 (as amended)

²² Under UK law, the question would be whether derivatives on VCCs would classify as 'specified investments' under the Financial Services and Markets Act 2000 (Regulated Activities) Order 2001/544 (as amended)

Figure 1: Carbon Credits Under CFTC Rules

Carbon Credits

- If carbon credits meet the definition of a commodity under the Commodity Exchange Act (CEA) (7 U.S.C. § 1(a)(9)), then the Commodity Futures Trading Commission (CFTC) has fraud and manipulation authority over the trading of these credits.
- The CFTC maintains broad fraud and manipulation authority under the CEA (7 U.S.C. §§ 6c(a), 9, 12(a)(5) and 15) and Commission Regulation § 180.1, which extends to any contract of sale of any commodity in interstate commerce.
- Common violations under these provisions include: false representations, fictitious sales, violating bids and offers, spoofing, and front running.

Futures on Carbon Credits

- If carbon credits meet the definition of a commodity under the CEA, then contracts for the future delivery of carbon credits, or carbon credit futures, fall within the CFTC's exclusive jurisdiction (7 U.S.C. § 2(a)(1)(A)).
- The CFTC's exclusive jurisdiction over commodity futures contracts means the CFTC maintains regulatory and enforcement (including fraud and manipulation) authority over such contracts. The CFTC has developed an extensive regulatory regime for trading futures contracts, including centralized trading, clearing and reporting of futures contracts.
- The CFTC has delegated some of its authority over futures contracts to futures exchanges (designated contract markets (DCMs) (7 U.S.C. § 7(a)) and clearing houses (derivatives clearing organizations (DCOs) (7 U.S.C. § 7a-1)), effectively designating them as self-regulatory organizations (SROs). SROs are authorized, among other things, to list and clear futures contracts pursuant to their rules, conduct market surveillance and enforce violations of their rules.

CME Group as a Self Regulatory Organization

- CME operates as a DCM, which is a board of trade registered with the CFTC pursuant to 7 U.S.C. § 7, effectively designated as an SRO.
- To maintain its status as an SRO, CME must comply with the CEA core principles and CFTC regulations (7 U.S.C. § 7(d) and CFTC Part 38). Unless specifically directed by CFTC rules, DCMs have discretion on how to implement such core principles through the exchange's governance structure and the rule book. CME members are required to abide by the exchange's rules and are subject to CME's enforcement authority.
- CME also operates as a DCO, which is a clearing house registered with the CFTC pursuant to 7 U.S.C. § 7a-1.
- As a DCO, CME must comply with the CEA core principles and CFTC regulations, institute clearing and default rules and procedures and has the authority to enforce its rules (7 U.S.C. § 7a-1(c)(2), CFTC Part 39).
- CME's designation as a DCO also enables the clearing house to operate as an SRO.

CME GEO Futures/NGEO Futures Contract

- DCMs as SROs have the ability to list contracts through either a self-certification process or approval process. Each of these processes are laid out under Part 40 of the CFTC regulations.
- In 2021, CME listed for trading two key environmental, social and governance-related futures contracts in its capacity as a DCM: (1) CBL Global Emissions Offset (GEO) futures; and (2) Nature-based Global Emissions Offset (N-GEO) futures contracts. Both contracts provide for the future delivery of carbon offset credits, but vary in terms of contract specifications.
- CME listed these contracts pursuant to CFTC regulation § 40.2, which enables DCMs to list contracts for trading 24 business hours after filing a self-certification application with the CFTC.

3.1.4 Possible Legal Treatment of VCCs Under English, US and German Law

As set out in section 3.1.1, the legal nature of VCCs must currently be determined by reference to national laws. In many cases (including under English law), the prevailing view is that the law should be capable of accommodating VCCs as a form of intangible property.

For many jurisdictions, there may be no authoritative statement directly relating to VCCs, even if one exists for carbon credits used in mandatory carbon markets such as EU Allowances (EUAs). To the extent there is any actual or perceived residual uncertainty in the market, certain steps could be taken that have proven effective in comparable contexts, including the development of authoritative legal statements, legislative amendments and/or regulatory guidance for a particular jurisdiction.

England and Wales

EUAs have been recognized as a form of intangible property under English law²³ (despite not clearly falling into either of the two traditional types of personal property²⁴), so English law should be capable of accommodating VCCs as intangible property. However, the position has not yet been determined by an authoritative statement of law (in statute or court precedent). The reasoning given in *Armstrong v Winnington* at first instance was focused on the existence of a statutory regime to draw parallels with milk quotas, which may allow it to be distinguished. Helpfully, it is arguable that the distinction between voluntary and mandatory carbon markets is diminishing (see Annex I).

Parallels can also be drawn with digital assets²⁵. In the context of VCCs, this raises the prospect that certain systems implemented by way of distributed ledger technology (DLT)²⁶ could seek to alleviate any residual uncertainty over the characterization of VCCs as property if the VCCs recorded to the ledger share the features of digital assets as intangible property.

Notwithstanding the flexibility of English law, it remains the case that, pending an authoritative statement, there is currently a degree of perceived or residual uncertainty over the characterization of VCCs.

Beyond the mere question of whether VCCs are capable of being the object of property rights, there are certain technical questions that may arise (for example, over the type of property a VCC may be). This affects the way in which ownership arises and is transferred (for example, whether formalities for a statutory assignment are required to be met). These are not merely theoretical concerns: they affect the circumstances in which a transferee obtains good title to the VCC on a transfer and the requirements for taking proper security, among other things (see section 4).

²³ *Armstrong v Winnington* [2012] EWHC 10, [2013] Ch 156

²⁴ English law has historically recognized only two types of personal property: things in action and things in possession *Colonial Bank v Whinney* (1885) 30 Ch D 261, 285

²⁵ *Ion Science Ltd v Persons Unknown* (unreported, 21 December 2020); *AA v Persons Unknown* [2019] EWHC 3556 (Comm)

²⁶ Distributed ledger technology (DLT) enables the operation and use of a digital store of information or data, shared among a network of participants. ISDA (in collaboration with various partners) has published a number of whitepapers exploring various issues in connection with the use of DLT and smart contracts in the derivatives markets. These whitepapers are available at: www.isda.org/2019/10/16/isda-smart-contracts/

US

In the US, there is no overarching federal regulation that addresses the legal nature of VCCs. However, it is likely VCCs would be considered commodities given the broad definition of that term set out in Section 1a(9) of the Commodity Exchange Act (CEA), which means VCCs would be subject to the jurisdiction of the CFTC²⁷.

Under the CEA, the definition of a commodity is quite broad, extending from physical commodities like corn, wheat, oil and gold to financial instruments, such as interest rates or foreign currency. This suggests the same principles that guide the development of market oversight provisions for other markets should apply for carbon markets.

Likewise, the basic features that are generally necessary to facilitate efficient, transparent, and secure markets (for example, robust participation, liquidity, information and effective oversight) are also needed for carbon markets, and the general issues considered when establishing the regulatory framework for carbon markets would be the same as those present in other markets under CFTC jurisdiction. It is therefore likely that a VCC, representing a credit for carbon usage, would fall within the remit of the CFTC and be characterized as a commodity under the CEA.

So far, the most notable action taken by US regulators relating to the carbon markets has been the CFTC's approval of the Nature-Based Global Emissions Offset (N-GEO) and Global Emissions Offset (GEO) futures contracts by allowing self-certification by exchanges under the Commodity Futures Modernization Act (CFMA)²⁸. With its certification of GEO futures on February 11, 2021²⁹ and subsequent certification of N-GEO futures on July 16, 2021³⁰, CME Group was able to offer the first exchange-listed offset derivatives in the US.

Although the CFTC has reviewed and allowed exchange self-certification of GEO and N-GEO futures, financial regulators are still at a very early stage of developing regulations for carbon markets. In particular, the CFTC is continuing to study the structure of these markets in order to propose core principles for market infrastructure. At a meeting on September 15, 2021, the CFTC Energy and Environmental Markets Advisory Committee (EEMAC) recommended the formation of a subcommittee to report on guiding principles for carbon markets.

The new EEMAC subcommittee will report on the design of derivatives and underlying cash markets for environmental products intended to address greenhouse gas (GHG) emissions, including carbon allowances and offsets. As such, the EEMAC report may provide a clearer idea about how regulation will be imposed on VCCs and other carbon instruments.

²⁷ Section 1a(9) of the Commodity Exchange Act (CEA) broadly defines a commodity to mean "wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain sorghums, mill feeds, butter, eggs, Solanum tuberosum (Irish potatoes), wool, wool tops, fats and oils (including lard, tallow, cottonseed oil, peanut oil, soybean oil, and all other fats and oils), cottonseed meal, cottonseed, peanuts, soybeans, soybean meal, livestock, livestock products, and frozen concentrated orange juice, and all other goods and articles, except onions (as provided by section 13-1 of this title) and motion picture box office receipts (or any index, measure, value, or data related to such receipts), and all services, rights, and interests (except motion picture box office receipts, or any index, measure, value or data related to such receipts) in which contracts for future delivery are presently or in the future dealt in"

²⁸ Commodities Futures Modernization Act of 2000, 7 U.S.C. § 1 (2000) (CFMA). Passed in 2000, the CFMA introduced a self-certification process that allows exchanges to bring new rules into effect almost immediately, including rules applicable to the terms and conditions of new contracts, provided the proposed rule adheres to the CEA and Commodity Futures Trading Commission (CFTC) regulations. Self-certification allows designated contract markets (DCMs) to list any new contract for trading and approve any new rule or amendment by providing a written certification to the CFTC that the new contract, rule or rule amendment complies with the CEA and CFTC regulations

²⁹ CME Group, CFTC Regulation 40.6(a) Certification. Notification Regarding the Initial Listing of the Physically-Delivered CBL Global Emissions Offset Futures Contract (11 February 2021), www.cftc.gov/sites/default/files/filings/ptc/21/02/ptc021621nymexdcm001.pdf

³⁰ CME Group, CFTC Regulation 40.2(a) Certification. Initial Listing of the Physically-Delivered CBL Nature-Based Global Emissions Offset Futures Contract (16 July 2021), www.cftc.gov/sites/default/files/filings/ptc/21/07/ptc072921nymexdcm001.pdf

Germany

There is no specific legislation specifying the legal nature of VCCs under German law and the debate in German legal literature on those topics is just beginning, driven by increased demand for VCCs. The starting point for an attempt to specify the legal status of VCCs under German law would be a detailed analysis of each of the relevant carbon standard and registry rules and any complementary contractual arrangements and terms governing their creation, transfer and retirement. This is necessarily a complex exercise that is unlikely to have a clear and certain outcome.

When analyzing the applicable framework for a specific type of VCC, more than one legal regime may apply, giving rise to a conflict-of-laws analysis (for example, conflict of contract, in rem, securities or insolvency laws). This would have to be taken into account when assessing, from a German perspective, whether German or non-German law applies to a particular legal issue.

A statement providing clarity over the legal nature of a VCC under German law would significantly simplify this analysis. For example, the characterization of VCCs for the purposes of licensing requirements under the German Banking Act (if VCCs become securities/financial instruments) may differ from their characterization under contract, in rem, accounting, tax, securities or insolvency laws.

Similar to other jurisdictions, a German analysis would need to consider whether VCCs qualify or are deemed to qualify as property (for example, because their terms and/or the type of registration and certification allow qualification as a security) or as contractual rights.

The German legal debate on the qualification of EUAs in connection with implementation of the EU ETS Directive in 2003 shows that the trading of innovative assets is assisted by greater legal certainty. For example, one controversial discussion related to transfer of title requirements in cases where EUAs are 'stolen' following phishing attacks on accounts. To increase legal certainty, the German Emissions Trading Act (TEHG) contains a provision stating that if EUAs are registered in a person's account, then the account is deemed to be correct and that person has legal title to the EUAs. In addition, the EU Regulation 2019/1122 (as amended) (EU Registry Regulation) contains specific statements about legal ownership of allowances and the finality of transactions.

4. KEY LEGAL ISSUES

As set out in earlier sections, the legal nature determines how ownership rights in VCCs as a fungible instrument can be created and transferred. It also affects what type of security may be taken and enforced and how that can be achieved, as well as how VCCs would be treated following an insolvency (including with regard to netting).

Greater certainty over the legal treatment of VCCs would contribute to a more robust market as it governs not only their creation, transfer and retirement but also impacts broader considerations such as fungibility, security of transfer and the treatment of VCCs in an insolvency situation.

Next Steps

- The definition of minimum standards to ensure broad fungibility of VCCs.
- Locating registers in jurisdictions that provide clarity over the legal treatment of VCCs so there is greater legal certainty over where the VCCs are located.
- Targeted legislative amendments in jurisdictions where the enforceability of close-out netting arrangements and efficacy of security arrangements are dependent on a statutory regime.

4.1 Ownership and Fungibility

It is often noted that ensuring broad fungibility of VCCs is key to driving deep, liquid markets. By this, it is meant that VCCs should, as far as possible, be interchangeable for the purposes of satisfying obligations between market participants to transfer VCCs.

Legally, fungibility is not a feature of the asset itself. Instead, it depends on the context in which it is being assessed. Banknotes, for example, are fungible to satisfy monetary obligations, but can be regarded as specific items of property (each note is serialized) for other purposes, such as tracing. Similarly, the identification of VCCs by way of unique serial numbers does not preclude VCCs from being fungible. Instead, the issue is whether and in what circumstances the market is willing to treat different VCCs as interchangeable for the purposes of settlement obligations.

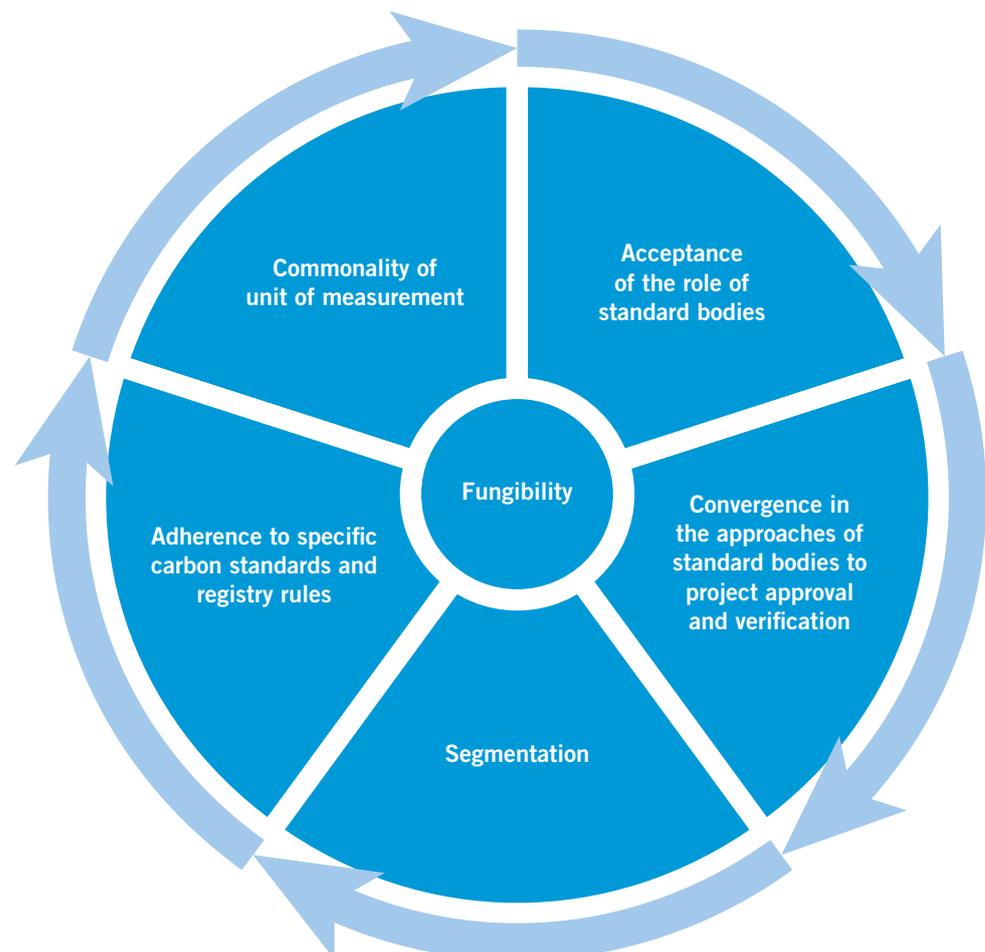
In practical terms, the key issue is to determine the minimum parameters required for VCCs to be considered equivalent for the purposes of discharging an obligation to transfer a VCC (for example, under relevant trading documentation). Parallels can be drawn with other markets – notably, commodities, where variances in the quality of the relevant commodities are disregarded for the purposes of discharging settlement obligations, so long as certain quality and grading thresholds are met³¹. For VCCs, these thresholds may include the type and location of the underlying project, depending on the preferences of the parties to the transaction.

³¹ This is the case, for example, in relation to the metals markets (for commodities deliverable in respect of contracts traded on the London Metal Exchange) and soft commodities markets (for soft commodities deliverable in respect of contracts traded on the Intercontinental Exchange (ICE))

Efforts to define minimum standards in this area are therefore welcome. There are several factors that need to be taken into consideration.

- **Commonality of unit of measurement:** Generally, each VCC corresponds to one tCO₂e reduced or removed from the atmosphere. There is therefore a degree of uniformity in the core unit of measurement represented by a VCC.
- **Acceptance of the role of standard bodies:** Further market acceptance of standards for setting requirements for projects capable of generating VCCs would help market liquidity.
- **Convergence in the approaches of standard bodies to the approval and verification of projects.**
- **Segmentation:** If convergence is not achieved, segmentation of the market based on how standard bodies have approached project approval and verification would assist the market.
- **Adherence to specific carbon standards and registry rules:** A practical impediment to the free circulation of VCCs is the need to sign up and adhere to specific registry rules. VCCs recorded in an account at one registry cannot currently be transferred to an account at another registry. Various efforts are under way to develop master registers that provide interoperability across registers for this purpose.

Figure 2: Factors For Fungibility



4.2 Security of Transfer

Market participants want to ensure they obtain good title to assets upon a transfer and the assets will not be subject to claw back in certain circumstances, such as the insolvency of their counterparty. To avoid parties needing to establish a good chain of transfer, market infrastructures have evolved to provide assurance on these issues.

Beyond financial markets, specific statutory rules exist in some jurisdictions³² that ensure the purchaser of goods can rely on certain presumptions based on the apparent state of affairs (such as their counterparty's possession of the goods) to obtain good title without having to further investigate the chain of ownership. Specific rules also exist for the transfer of negotiable instruments (such as bearer securities), which make clear that the transferee obtains good title even in circumstances when the party transferring the instrument doesn't have good title itself. Rules of this type help foster confidence and liquidity in the markets by ensuring settled transactions are not subject to unexpected challenge.

Clarity over the legal nature of VCCs will bring greater certainty on security of transfer. In the meantime, steps can be taken to mitigate uncertainty through appropriate legal structuring – for example, within a multilateral contractual framework (via the rules of an exchange, trading venue or central counterparty) that seeks to resolve such issues through agreement between all participants.

If participants are from different jurisdictions, multiple laws may need to be considered. One solution (adopted in certain other markets) is to coordinate conflicts-of-laws rules so the treatment of the asset is determined by reference to the location of a feature of the asset³³.

In the case of VCCs, the jurisdiction or the location of the register would be one possible candidate. Pending the adoption of such a multi-jurisdictional coordinated approach, targeted legislative amendments could be made on a jurisdiction-by-jurisdiction basis to clarify the position of VCCs, particularly if: (i) the relevant register is located in that jurisdiction; or (ii) the insolvency laws of that jurisdiction apply upon the insolvency of a party to a transaction involving VCCs.

4.3 Intermediation

Greater certainty on intermediated relationships would also be helpful – for example, when an investor transacts in VCCs but is not a direct counterparty to the relevant registry rules and has an intermediary acting on its behalf. There are various models of intermediation, and it tends to arise more frequently in the context of secondary market structures than primary market issuance.

Uncertainties relating to the legal nature of VCCs give rise to questions over the nature of the interest of any investor, including whether it has a proprietary entitlement to an asset that is insolvency remote from the intermediary. As with security of transfer, it may be possible to adopt legal structuring solutions to address these issues, but this will need to be recognized as effective in each jurisdiction of the participants accessing the intermediary.

³² For example, the Sale of Goods Act 1979 in England and Wales

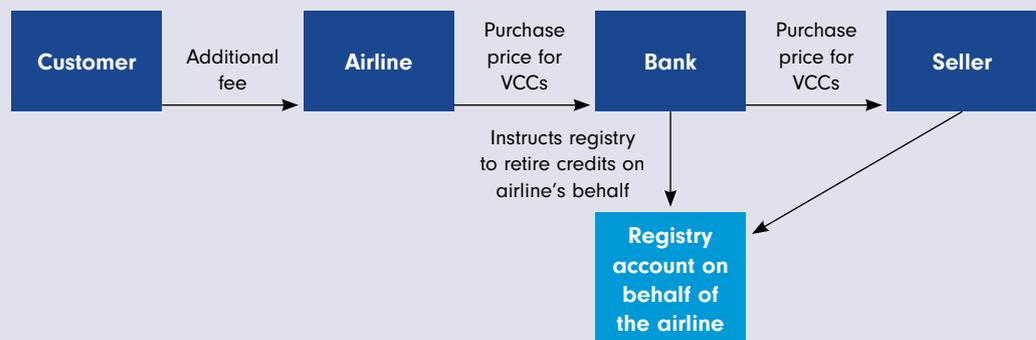
³³ Certain questions arise in determining the location of a register, albeit these are often encountered in other contexts, such as registered assets

Case Study

An airline offers its customers the ability to pay an additional fee that will be used to purchase VCCs, which will be retired to offset the emissions of the customer's flight. The airline pays a bank to act as its intermediary and purchase and retire the VCCs in its name and on its behalf.

If the airline goes insolvent between the purchase of the carbon credits and their retirement, what rights does the customer have? There is a question over whether the customer will have a proprietary right in the VCCs that go through the chain on trust. However, the customer may have a contractual right against the airline based on the airline's promise to apply the additional fee to offset the customer's flight emissions.

Figure 3: Example Purchase of VCCs



4.4 Conflicts of Laws, Netting and Security Arrangements Following an Insolvency

Insolvency law is another area that would benefit from greater certainty over the legal nature of VCCs.

4.4.1 Conflicts of Laws

The legal nature of VCCs may determine the law applicable following an insolvency. In the EU³⁴ and UK³⁵, certain matters are exempt from the overriding provision that the applicable law will be that of the jurisdiction where insolvency proceedings are opened. Rights in rem are one such exception. Whether a right is a right in rem is determined in accordance with the national law of the jurisdiction where the asset is situated. Not only, therefore, is the characterization of VCCs as personal or in rem uncertain, but that uncertainty is currently compounded by difficulties in identifying the law that appropriately determines that question. In theory, there are several potential different jurisdictions that could apply:

- i) The jurisdiction of the register on which the VCCs are recorded;
- ii) The jurisdiction of incorporation of the registrar;
- iii) The governing law of the carbon standard rules and/or registry rules; and
- iv) The law of the location of the project from which the VCCs are generated.

³⁴ Under Regulation (EU) 2015/848 on Insolvency Proceedings (as amended) (EIR)

³⁵ Under the EIR as it forms part of 'retained EU law'

In many cases, the jurisdictions will be the same, particularly in relation to points (i), (ii) and (iii). If legal certainty is achieved in one of the relevant jurisdictions (for example, the jurisdiction of incorporation of the registrar), then this could encourage the market to ensure other aspects (such as the jurisdiction of the register and the governing law of the carbon standard and registry rules) are subject to the laws of the same jurisdiction. This would create greater legal certainty overall regarding the law applicable following an insolvency. But while a specific jurisdiction-by-jurisdiction approach would improve legal comfort, it can risk fragmentation. Additional complex considerations may also arise when there are chains of intermediaries involved (see section 4.3).

4.4.2 Netting

An obligation to transfer a VCC is likely to be characterized as a delivery or performance obligation. In jurisdictions where the enforceability of set-off and netting arrangements following insolvency relies on the obligations being monetary in nature, it will be necessary to provide for an effective close-out mechanism.

For those jurisdictions where the enforceability of close-out netting arrangements depends on a statutory regime, it is necessary to determine whether an obligation to transfer a VCC falls within the scope of that regime. In the case of a statutory regime that implements the Financial Collateral Directive (FCD)³⁶, the absence of VCCs from the list of financial collateral raises questions about the efficacy of netting arrangements involving obligations relating to VCCs. The European Commission has recently consulted on the potential inclusion of emission allowances within the scope of financial collateral under the FCD³⁷, which ISDA supports. Any uncertainty over the inclusion of VCCs within the scope of ‘emission allowances’ for these purposes may affect confidence in the availability of enforceable netting arrangements that include VCC transactions in certain jurisdictions.

The US Bankruptcy Code contains numerous safe harbor provisions that, taken together, are designed to neutralize the impact of a bankruptcy filing on non-debtor counterparties. Among other things, these safe harbor provisions permit a non-debtor counterparty to exercise set-off rights under securities, commodities, forward and repurchase contracts, swap agreements, master netting agreements or similar instruments. The non-debtor party can also exercise contractual or exchange specific rights to liquidate, terminate or accelerate these protected contracts, and exempt prepetition settlement payments, margin payments and certain transfers made in connection with the protected contracts from avoidance as a preference or a constructive fraudulent conveyance.

VCCs are not expressly included in the enumerated list of transactions and agreements set out in the definitions of swap agreement, forward contract or commodity contract under the US Bankruptcy Code. As a result, a US bankruptcy court would have to decide whether transactions referencing VCCs should be treated as a swap agreement, forward contract, commodity contract or other agreement that is entitled to similar treatment under the US Bankruptcy Code’s safe harbor provisions. While there is no immediate reason to doubt that contracts referencing VCCs would be able to benefit from the safe harbors³⁸, it would nevertheless help to confirm that netting arrangements on VCC contracts are enforceable in bankruptcy.

³⁶ Directive 2002/47/EC (as amended)

³⁷ European Commission, Targeted consultation on the review of the Directive on financial collateral arrangements (February 12, 2021), https://ec.europa.eu/info/consultations/finance-2021-financial-collateral-review_en

³⁸ The legislative history of the safe harbor provisions suggest that Congress intended the definition of swap agreement to apply expansively, and existing case law supports the conclusion that the physical delivery of a commodity to a purchaser does not preclude a finding that an agreement constitutes a ‘commodity forward agreement’. In re Nat’l Gas Distributors, LLC, 556 F.3d 247 (4th Cir. 2009)

4.4.3 Security Arrangements

Targeted legislative amendments could also increase legal certainty when it comes to the creation and enforcement of security arrangements over VCCs.

For example, where the efficacy of security arrangements relies on a particular statutory regime, the scope of that regime could be assessed to determine whether it extends to VCCs and requires amendment.

As with netting, where the efficacy of security arrangements relies on a statute that implements the FCD, the absence of VCCs from the list of financial collateral will compromise the availability of the beneficial treatment available under that regime. Any distinction between VCCs and emission allowances could materially impair the development of certain structures involving VCCs, notably secured financing arrangements.

More generally, greater certainty over the legal nature of VCCs would allow parties to determine how and what form of security should be taken over VCCs.

5. STEPS TO FURTHER LEGAL CERTAINTY

The legal issues considered in this paper are common to developments in other relatively nascent markets, and there are a number of actions available to address perceived or actual residual uncertainties.

Increasing certainty over the legal nature of VCCs would enhance the continued development of an effective, liquid voluntary carbon market, including an OTC derivatives market. ISDA is engaging with various market stakeholders on this issue, including with inter-governmental bodies and regulators.

The steps identified in this section could progress in parallel, given the likely different time frames within which they may be achieved.

5.1 Publication of an Authoritative Legal Statement

Issuance of an authoritative market-wide legal statement in a particular jurisdiction would provide comfort to the market pending (or in the absence of) statutory or judicial developments. There are precedents for this in other markets, including credit derivatives³⁹ and digital assets⁴⁰.

Although an authoritative legal statement on the legal nature of VCCs would not have binding legal effect or precedential value, such a statement could be highly persuasive, which would help to create greater market confidence in the face of certain perceived or residual uncertainties.

5.2 Targeted Legislative Amendments and Regulatory Guidance

In the absence of global standards, clarifications can be made on a jurisdiction-by-jurisdiction basis through targeted legislative amendments and regulatory guidance. Although this risks a degree of fragmentation (which is common in other financial markets), it would nevertheless be beneficial in driving further legal certainty. The lead time for targeted (including technical) legislative amendments or guidance can often be significantly less than achieving a globally coordinated approach. In a regulatory context, guidance can also be an appropriate means of achieving greater certainty where relevant.

In nascent markets, these initiatives can encourage a ‘race to the top’: addressing perceived or residual uncertainties through such measures could create incentives for market participants to opt for the laws of those jurisdictions where legal certainty is perceived to be highest.

5.3 Creation of Global Standards

Global legal standard-setters such as UNCITRAL and UNIDROIT have a strong track record of working with other inter-governmental bodies and regulators to produce legislative guidance on a range of substantive law issues. The development of a global standard by UNCITRAL and/or UNIDROIT that recognizes VCCs as a form of intangible property would increase legal certainty across all adopting jurisdictions. This, in turn, would facilitate the issuance of positive legal opinions and associated contractual documentation. It would also help clarify the tax and regulatory treatment of VCCs.

Given the time it would likely take to develop a global standard, ISDA recommends that action be taken on a jurisdiction-by-jurisdiction basis in the interim.

³⁹ ISDA, Credit Derivatives Opinion (June 24, 1997), www.isda.org/a/IYTD/CreditDerivativesOpinion051997.pdf

⁴⁰ UK Jurisdiction Taskforce (UKJT), Legal Statement on Cryptoassets and Smart Contracts (November 18, 2019), <https://technation.io/lawtechukpanel/>

6. DOCUMENTATION

Standardized documentation is a cornerstone of safe and efficient derivatives markets. It allows market participants to transact with confidence, using clearly defined provisions for business-as-usual execution and settlement and setting out mechanisms to resolve different asset- and market-related risk scenarios.

Documentation standards also help to minimize unintended basis risk in otherwise similar products and reduce counterparty credit risk (with corresponding reductions in regulatory capital) by providing the contractual ability to net exposures. In this way, standardized documentation promotes greater liquidity, better efficiency and reduced market and credit risk.

Since its inception, ISDA has worked with the derivatives industry to develop global standards and documentation for multiple asset classes. This includes emissions, and ISDA has published several template documents for use in the mandatory carbon market.

In order to progress standard OTC derivatives documentation for secondary market trading in VCCs, ISDA will host special member meetings starting in December 2021 to discuss the best approach for creating template documentation, and to consider the provisions and elections market participants require. Greater legal certainty would assist, but not prevent, the development of standardized documentation.

The exchange-traded market has contributed to the development of derivatives markets in other nascent markets, including by enabling firms to hedge using exchange contracts. ISDA supports the continued development of standardized contracts by exchanges, such as the N-GEO and GEO futures contracts jointly developed by Xpansiv and CME Group in 2021.

Furthering the market's understanding of the legal nature of VCCs in different jurisdictions, and taking the steps outlined in this paper to achieve further legal certainty, will help build the common legal foundations that will underpin the development of VCC derivatives markets.

7. THE ROAD AHEAD

Many of the legal issues raised in this paper are common to developments in the context of intangible assets more generally and can be addressed through concrete steps at both a jurisdictional and global level and by the development of standardized documentation.

The most important issue to be addressed by legislative or regulatory guidance is the legal treatment of VCCs. ISDA recommends that VCCs should be recognized as a form of property (in many jurisdictions, as a form of intangible property).

There are instructive comparisons in other markets. For example, at a jurisdictional level, the UK Jurisdiction Taskforce's statement on the status of crypto assets and smart contracts⁴¹ provided legal certainty under English law that crypto assets are capable of being owned. The statement also addressed issues of perceived legal uncertainties with respect to these new technologies. A similar statement with respect to VCCs would be a welcome development.

Similarly, at a global level, work is under way at UNIDROIT⁴² to provide legislative guidance and principles relating to the legal nature, transfer and use of digital assets. The scope of work includes tackling questions over the characterization of digital assets as proprietary, as well as the applicable law in cross-border transactions, insolvency and the legal position of intermediaries. Other UNCITRAL work includes the Model Law on Electronic Transferable Records⁴³, which aims to enable the legal use of electronic transferable records both domestically and across borders.

Greater certainty over the legal nature of VCCs will help address many of the key legal issues discussed in this paper. This, in turn, will facilitate the legal certainty needed to support the further development of a robust, well-governed and transparent voluntary carbon market, as well as support the issuance of legal opinions and associated contractual documentation by industry bodies.

⁴¹ UK Jurisdiction Taskforce (UKJT), Legal Statement on Cryptoassets and Smart Contracts (November 18, 2019), <https://technation.io/lawtechukpanel/>

⁴² A UNIDROIT working group has been established with the objective of developing a future legal instrument containing principles and legislative guidance in the area of private law and digital assets, www.unidroit.org/work-in-progress/digital-assets-and-private-law

⁴³ Further information regarding UNCITRAL's Model Law on Electronic Transferable Records can be found at https://uncitral.un.org/en/texts/ecommerce/modellaw/electronic_transferable_records

ANNEX I: STRUCTURE AND CHALLENGES OF THE VOLUNTARY CARBON MARKET

1. Terminology and Types of VCCs

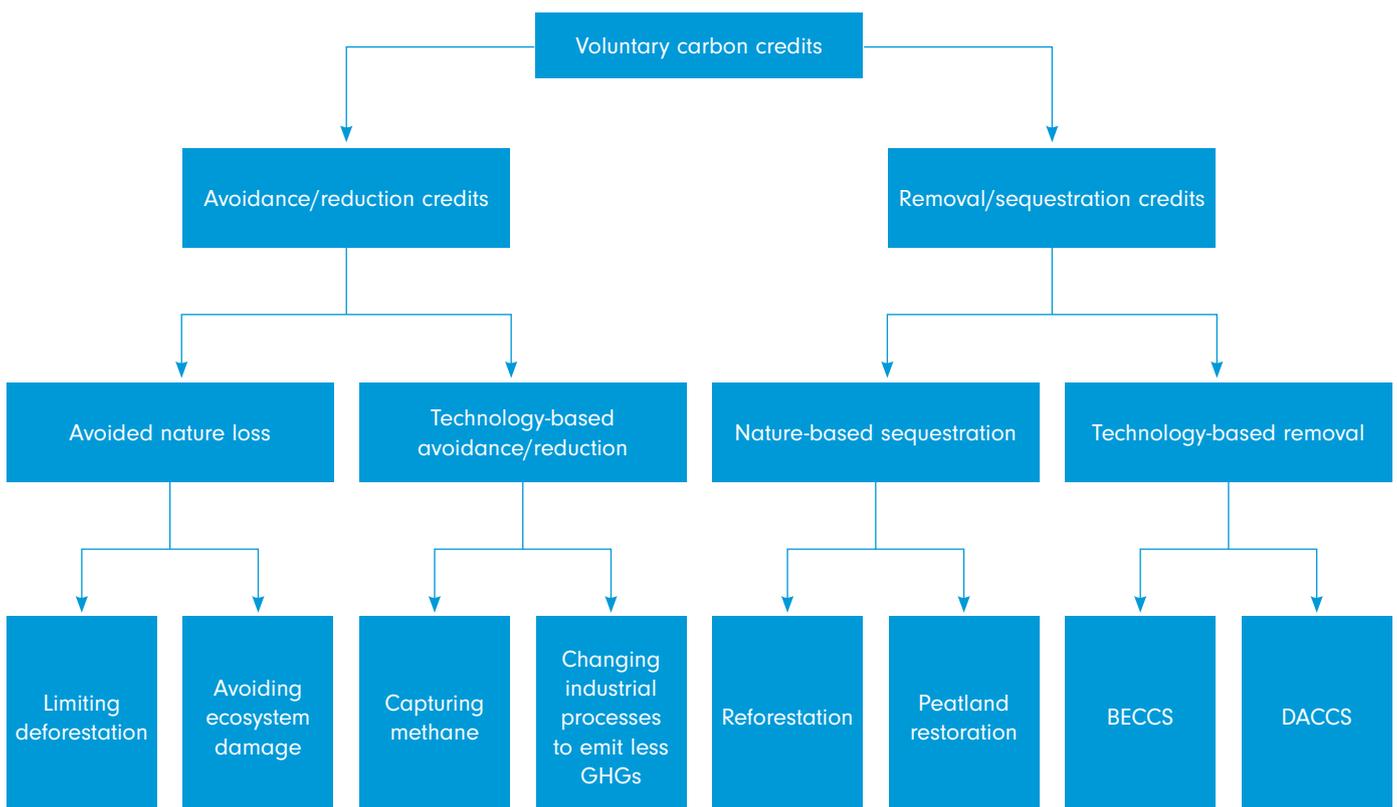
Voluntary carbon credits (VCCs) broadly fall into two main categories.

- Reduction or avoidance credits that aim to reduce emissions from current sources through projects like limiting deforestation or funding the transition to renewable energy; and
- Removal or sequestration credits that take carbon dioxide out of the atmosphere and either use or store it via reforestation or technology-based removal (for example bioenergy with carbon capture and storage (BECCS) and direct air capture with carbon capture and storage (DACCS)).

VCCs are referred to in different ways within the voluntary carbon market, with terminology often used loosely and interchangeably. The term voluntary emissions reductions (VERs) is used to refer to both reduction/avoidance credits and removal/sequestration credits. This paper uses the term VCCs to refer to voluntary carbon credits generally, of which reduction/avoidance credits and removal/sequestration credits are specific types.

As in the mandatory carbon market, the common unit of measurement in the voluntary carbon market is one metric ton of carbon dioxide equivalent (tCO₂e). One VCC is issued for each tCO₂e reduced or removed from the atmosphere. While some of the newer technological removal methodologies have challenged this unit of measurement, this paper uses tCO₂e as the standard.

Figure 4: Structure of the Voluntary Carbon Market



2. How VCC Programs Work

VCCs are issued by multiple distinct issuing bodies globally, known as carbon standards. Each carbon standard has unique rules that all projects must follow in order to be certified. Examples of current carbon standards include the Verified Carbon Standard (VCS/Verra), the Gold Standard, the American Carbon Registry and Climate Action Reserve.

For a project to generate carbon credits under any carbon standard, it must typically demonstrate the GHG reductions or removals are real, measurable, permanent, additional, independently verified, unique and traceable. Projects also need to demonstrate that appropriate safeguards are in place to assess and mitigate any other potential environmental or social risks relating to the project.

Projects are assessed using a methodology set out in the rules of the relevant carbon standard, which may be specific to the project type. Once projects have been certified, the project developers can be issued tradable VCCs for each tCO₂e reduced or removed, which can then be sold on the open market.

VCCs are recorded on different registries, each with different rules. These are centralized recordkeeping systems of all registered projects for which VCCs are issued. The registry tracks the generation, issuance, transfer, retirement and cancellation of VCCs.

As VCCs are issued for a specific project with a specific profile, the methodology, location and social and environmental benefits all have a direct impact on the quality of the resulting VCC (and the price at which the VCC will be marketed).

Many corporate buyers purchase VCCs in order to cancel or retire⁴⁴ the VCC as a means to offset their own emissions. Once cancelled or retired, a VCC is removed permanently from circulation and cannot be further traded or used to offset further emissions.

3. Structural Differences Between the Mandatory and Voluntary Carbon Markets

The main difference between the mandatory and voluntary carbon markets is that there is no statutory or other legal framework creating voluntary carbon units or mandating their purchase and surrender to meet regulatory requirements. Instead, the carbon standards exist to ensure consistent monitoring and verification of the quality and validity of VCCs that are issued and then traded in the voluntary carbon market.

VCCs also differ from the credits that are traded on the mandatory carbon markets. Under the EU Emissions Trading System (ETS), EU Allowances (EUAs) are created and allocated to covered installations in a (decreasing) proportion or auctioned in the market. Installations can then trade the EUAs within the EU ETS.

An EUA entitles the registered owner to emit one ton of carbon dioxide in a given year from a regulated facility holding a license, without penalty. If a participant does not have enough EUAs to surrender at the end of the year to cover its emissions, it is subject to heavy penalties. If a participant reduces its emissions below the number of EUAs it holds, then it can utilize the spare EUAs in future compliance years or sell them in the mandatory carbon market. EUAs are created as homogenous and there is no distinction between EUAs based on quality.

⁴⁴ The terms 'cancel' and 'retire' are often used interchangeably in this context

In contrast, the voluntary carbon market is not subject to a comparable statutory framework, so there are no requirements to retire or surrender VCCs to avoid equivalent fines. However, there is increasing crossover into quasi-mandatory carbon markets, as certain VCCs may be recognized for compliance purposes in some statutory regimes.

4. Use of VCCs in the Mandatory Carbon Markets

Certain VCCs can be used both for compliance purposes under certain mandatory regimes and under voluntary regimes (typically when organizations want to meet net-zero targets), suggesting the distinction between voluntary and mandatory carbon markets is diminishing.

For example, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) is a compulsory scheme, and the EU ETS will be applied if airlines do not comply. Certain VCCs will also now be recognized for compliance under some national carbon trading schemes (for example, in South Africa and California).

However, there is a distinction between a VCC that can be used directly for compliance and one that can be swapped for a government-issued compliance unit. In the latter, the activity may facilitate compliance with the scheme, but a distinct legal instrument is being surrendered upon compliance. It may still be argued that the fact the government has recognized the VCC in the swap is nonetheless supportive of the VCC's status.

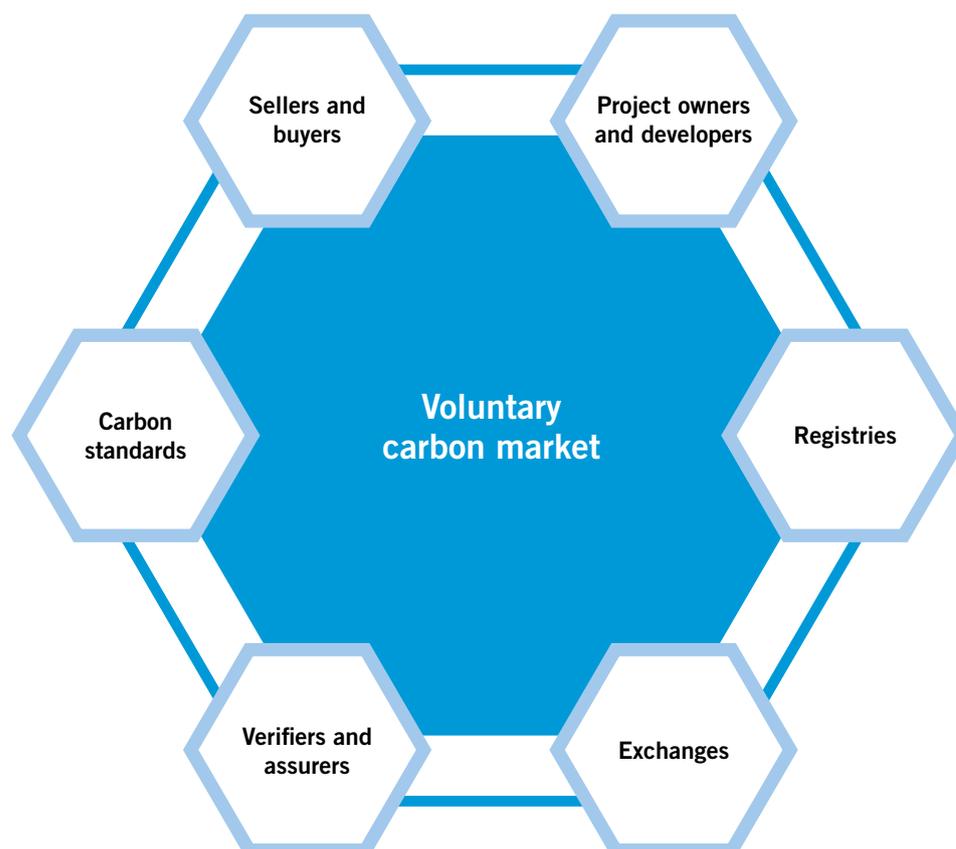
5. Participants in the Voluntary Carbon Market

There are several key participants in the voluntary carbon market, as well as other intermediaries with a more indirect role – for example, marketing agents for a project or for specific VCCs. Key participants include:

- Project owners and developers: They develop the projects relating to the VCCs and sell them in the market. These can be public or private entities;
- Carbon standards: They set the rules and requirements;
- Registries: They store information and track the VCCs throughout their life cycle;
- Sellers and buyers: These can be financial institutions, traders, compliance entities, corporates, governments, non-government organizations and individuals;
- Verifiers and assurers: They develop quality assurance programs and are independent of the project developers; and
- Exchanges: Certain commodities exchanges offer spot and forward contracts.

Financial intermediaries are ramping up their participation in the voluntary carbon market.

A significant proportion of voluntary carbon market trading has so far been conducted over the counter (OTC), but some exchanges now offer voluntary carbon market products, including AirCarbon Exchange, Xpansiv and CME Group. The creation of exchange-traded products provides market participants with the opportunity to hedge OTC positions, improving liquidity in the market.

Figure 5: Key Participants in the Voluntary Carbon Market

6. Scaling Up the Voluntary Carbon Market

In September 2020, the Taskforce on Scaling Voluntary Carbon Markets (TSVCM)⁴⁵ was established to help scale up the voluntary carbon market. The TSVCM published its phase one report⁴⁶ in January 2021, which set a blueprint for creating a large-scale, transparent carbon credit trading market. Following a public consultation that received more than 130 expert responses, a phase two report⁴⁷ was published in July 2021. This report proposed:

- i) A new governance body to oversee growth of the voluntary carbon market;
- ii) The development of legal principles and contracts; and
- iii) The establishment of core carbon principles (CCPs) to ensure high integrity of VCCs.

Proposal (i) was achieved on September 21, 2021 with the launch of an independent governance body, the Integrity Council for Voluntary Carbon Markets (ICVCM). The ICVCM has been tasked with driving the primary mission of the TSVCM – to scale high-integrity voluntary carbon markets. This includes assessing which carbon standards may issue CCP credits, determining which methodology types may issue CCP credits and defining the additional attributes that CCP credits must be tagged with⁴⁸.

⁴⁵ The TSVCM is a private-sector initiative sponsored by the Institute of International Finance

⁴⁶ TSVCM, Phase I Report (January 2021): https://www.iif.com/Portals/1/Files/TSVCM_Report.pdf

⁴⁷ TSVCM, Phase II Report (July 8, 2021), www.iif.com/Portals/1/Files/TSVCM_Phase_2_Report.pdf

⁴⁸ TSVCM, Update to FCGW (November 3, 2021), <https://www.canr.msu.edu/fccp/Engagement-ORL/FCWG-Learning-Exchange-Series-Files/2020-21-FCWG-Files/211103%20FCGW%20panel.pdf>

7. Challenges Within the Voluntary Carbon Market

7.1 Quality

VCCs are not homogenous and the quality of each VCC depends on the quality of the underlying project. Buyers typically require substantial comfort and transparency over the quality of the VCCs they purchase given concerns about ‘greenwashing’ and the use of offsets to meet GHG targets generally. Concerns typically include the particular project methodology used to generate the VCCs and the environmental and social impact of projects. This makes the standardization of primary market contracts challenging given the diversity of issues raised by individual projects.

7.2 Double Counting

Double counting describes the scenario where the benefit of a single GHG reduction is claimed under more than one regime. This could occur when a ton of GHG reduced is used to create a VCC that is sold to a third party for the purpose of VCC offsetting and is also included in an account or inventory to avoid the requirement to purchase carbon credits under a mandatory carbon regime or where parallel schemes cover the same activities, such as renewable energy certificates and carbon offsets.

7.3 Limited Price Discovery

Price discovery enables buyers and sellers to set the market prices of tradeable assets. As a result, price discovery is linked with finding equilibrium prices that facilitate the greatest liquidity for that asset. The lack of reliable, transparent price discovery in the voluntary carbon market to date has hindered both buyers (that need comfort over whether they are paying the right price) and sellers (that often need to finance projects through to the end sale), increasing transaction costs and limiting participation.

7.4 Interaction with Article 6 of the Paris Agreement

Article 6 of the Paris Agreement aims to establish a new international carbon market. Essentially, Article 6 enables countries to meet climate targets set under their nationally determined contributions under the Paris Agreement through the trading of emissions reductions (referred to as internationally transferred mitigation outcomes (ITMOs)). Similar to most cap-and-trade systems, an international carbon market would enable countries to purchase emissions reductions from other jurisdictions that have already sufficiently reduced their emissions to meet their own target.

The COP26 conference in Glasgow in October and November 2021 resulted in agreement on the text of Article 6⁴⁹, which sets the rules on the transfer of ITMOs between countries, including the potential to establish linked emissions trading schemes between jurisdictions (the Article 6.2 mechanism). Article 6 also establishes a process for trading carbon credits from emissions-reduction projects in various locations (the Article 6.4 mechanism). Meanwhile, Article 6.8 establishes a work program for non-market approaches, in the form of a framework for cooperation aimed at countries that aren’t active in trading – for example, through development aid.

Article 6 requires adjustments to be made following all first transfers of emissions reductions under the Article 6.2 and 6.4 mechanisms to ensure no double counting of units occurs.

⁴⁹ For more information, see <https://ukcop26.org/cop26-keeps-1-5c-alive-and-finalises-paris-agreement/> and <https://unfccc.int/process-and-meetings/conferences/glasgow-climate-change-conference-october-november-2021/outcomes-of-the-glasgow-climate-change-conference>

How the adjustments work will be a function of the laws of the country in which the emissions-reduction activity is located and the nature of the activity. The end use of the generated carbon credit may also influence the extent to which an adjustment is required. The implications for voluntary carbon markets will be clearer after the rules are further developed by the UN.

Given most developing countries currently lack the technical infrastructure to implement these adjustments, whether VCCs should be treated as ITMOs is a medium-term issue. However, as the Article 6 rules have clarified that an adjustment is required under the accounting rules of the Paris Agreement, this complexity will likely reduce the voluntary carbon market and adversely affect the supply of VCCs, ease of transacting and liquidity.

7.5 Fragmented Market

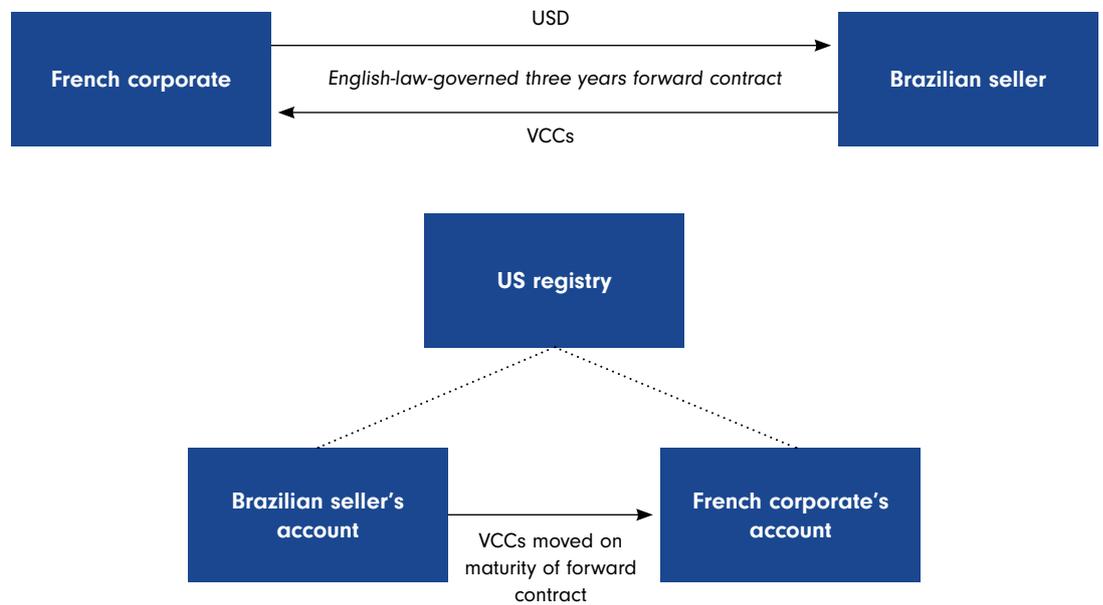
The fragmented nature of the voluntary carbon market (across geographies, schemes, registries, carbon standards and methodologies, and the heterogeneity of VCCs themselves) adds significant complexity to the process for standardization and the development of an effective, liquid voluntary carbon market more generally.

ANNEX II: EXAMPLE TRANSACTIONS INVOLVING VCCs

Scenario 1

A French corporate wants to purchase voluntary carbon credits (VCCs) to offset those emissions it will be unable to abate over the next three years. The French corporate thinks the price of VCCs will go up, so enters into an English-law-governed forward contract with a Brazilian seller. At maturity, the French corporate will pay the Brazilian seller, and the US registry – where the VCCs are recorded – will move the VCCs to the French corporate’s registry account. The French corporate will then ask the registry to retire the VCCs.

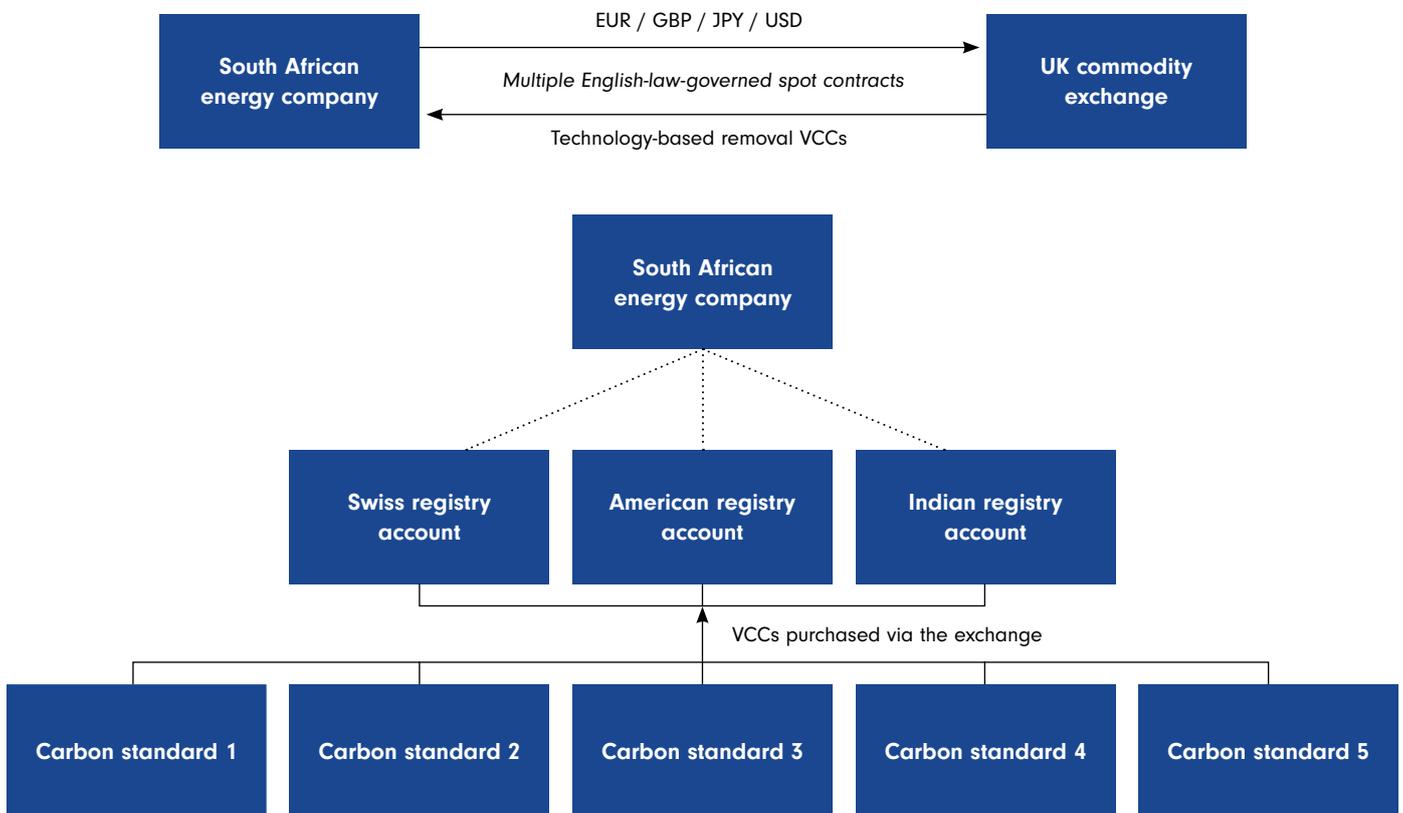
Figure 6: Purchase of VCCs by a French Corporate



Scenario 2

A South African energy company purchases VCC spot contracts on a UK commodity exchange to offset its emissions, with the aim of purchasing fewer VCCs as it reduces its emissions. As required by the exchange, the South African energy company has accounts with three different registries, each located in a different jurisdiction. The South African energy company buys VCCs certified by multiple different carbon standards across all three registries to ensure it buys technology-based removal credits to align with its carbon-neutral commitments.

Figure 7: Purchase of VCCs by a South African Energy Company



ANNEX III: GLOSSARY

BECCS: Bioenergy with carbon capture and storage

Carbon standard rules: The rules and requirements of a carbon standard

Carbon standards: The independent bodies that certify VCCs

CCPs: The core carbon principles

CEA: The US Commodity Exchange Act

CFTC: The US Commodity Futures Trading Commission

CFMA: The Commodity Futures Modernization Act

CORSIA: The Carbon Offsetting and Reduction Scheme for International Aviation

DACCS: Direct air capture with carbon capture and storage

DCM: Designated contract market

DLT: Distributed ledger technology

EEMAC: The CFTC Energy and Environmental Markets Advisory Committee

EIR: Regulation (EU) 2015/848 on Insolvency Proceedings (as amended)

EU ETS: The European Union Emissions Trading System

EUAs: EU Allowances

FCD: Directive 2002/47/EC of the European Parliament and of the Council on financial collateral arrangements (as amended)

GHGs: Greenhouse gases

ICVCM: The Integrity Council for Voluntary Carbon Markets

ITMOs: Internationally transferred mitigation outcomes

MIFID II: Directive 2014/65/EU (as amended)

NDCs: The nationally determined contributions submitted by countries every five years under the Paris Agreement

Paris Agreement: The legally binding international treaty on climate change adopted by 196 parties at COP 21 in Paris on December 12, 2015, which entered into force on November 4, 2016

Registry rules: The contractual framework of a registry (including any terms of use or rule book of the registrar)

tCO₂e: A ton of carbon dioxide equivalent

TEHG: The German Emissions Trading Act

TSVCM: The Taskforce on Scaling Voluntary Carbon Markets

UK ETS: The UK Emissions Trading Scheme

UNICTRAL: The United Nations Commission on International Trade Law

UNIDROIT: The International Institute for the Unification of Private Law

VCCs: Voluntary carbon credits

VERs: Voluntary emissions reductions

VVBs: Validation/verification bodies approved by Verra

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