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The Legal Character of Voluntary Carbon Credits:
A Way Forward

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AUTHORS

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SIM Ting
General Counsel, GenZero

Adrian ANG and **TAY Yong Seng**
Partners, Allen & Gledhill LLP

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Danielle Yeow
Adjunct Senior Research Fellow and Lead, Climate Change Law and Policy, Centre for International Law; Adjunct Associate Professor (MSc (Environmental Management) Programme), Faculty of Law
National University of Singapore

Joyce Lai
Executive Director
Group Legal and Compliance – Sustainability / ESG Lead
DBS Bank Ltd

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FOREWORD

The world is not on track to maintain global warming at 1.5 °C above pre-industrial levels.

Climate finance needs to scale by a magnitude of at least five-fold annually, as quickly as possible, to avoid the worst impacts of climate change.

As the world strives to meet ambitious targets under the Paris Agreement, the role of carbon markets, especially the voluntary carbon market, has emerged as a significant catalyst for potential investments in climate action.

New technologies and methodologies for carbon reduction and removal like direct air capture, biochar, and enhanced weathering are expanding the scope of projects eligible for carbon credits. While many of these solutions promise carbon reductions with a high degree of permanence, they are nascent and require significant capital. We believe that the voluntary carbon market can potentially be the catalyst to crowd in financing for climate action.

At the same time, given the urgency of the Paris Agreement targets, significant investments in near-term abatement solutions are also required. These are offered by nature-based solutions such as afforestation, reforestation, and revegetation projects. However, many of these projects have limited viability without climate finance.

Carbon markets can help bridge the financing gap for both nature-based and technology-based climate solutions. However, the growth and potential of the carbon markets are tethered closely to the clarity and robustness of their governing frameworks and standards, including the underlying legal framework. Without legal clarity, carbon markets (taken as a whole) face fragmentation, inefficiency, and diminished trust among participants, undercutting their strength as a tool for driving climate action.

In this paper, we aim to raise awareness of how clarity as to the legal character of voluntary carbon credits can enable the scaling of the voluntary carbon market and climate finance. We explore some of the underlying legal principles and recent case law applicable in Singapore. In light of these, we argue that clarity on the legal characterisation of voluntary carbon credits is not only desirable but necessary. More needs to be done by the regulators in each jurisdiction to clarify the legal character of voluntary carbon credits. We hope that the Singapore Government will articulate a position and provide further guidance on this issue.

SIM Ting
General Counsel

Adrian ANG and **TAY Yong Seng**
Partners

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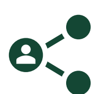
EXECUTIVE SUMMARY

Clarity in the legal character of voluntary carbon credits (VCCs) is crucial for the scale-up of the voluntary carbon market. For principals that transact in VCCs, primary concerns include transferability of legal title and their ability to exercise proprietary rights over these VCCs, particularly where they are in the custody of a third party. Without clear legal characterisation, the market for VCCs faces risks of fragmentation, inefficiency, and diminished trust among market participants. This undercuts the enormous potential of the voluntary carbon market as a tool for driving climate action. In this paper, we focus on the rationale for, and impetus behind, having a clear legal characterisation of VCCs. We suggest that Singapore has the legal tools available to articulate a position to give clarity to this question.

VCCs are unlikely to trigger licensing or other financial regulatory requirements under Singapore law. VCCs are unlikely to fall under the definitions of (a) "commodity" under the Commodity Trading Act 1992, (b) "capital markets products" under the Securities and Futures Act 2001, or (c) "digital payment tokens" under the Payment Services Act 2019. Hence, VCCs and sale transactions relating to them are not subject to licensing and other regulatory requirements under such legislations. Be that as it may, regulatory classification is distinct from the legal characterisation of VCCs. A clear legal characterisation of VCCs is still relevant and necessary.

Legal characterisation of VCCs as *intangible property* can be supported by principles gleaned from existing case law. VCCs are definable and identifiable, have a degree of permanence and stability, and are capable of being assumed by third parties. This will provide market participants a sound commercial basis on which to transact and help them navigate any lack of clarity in the following key areas:

Buying and Selling VCCs



When market participants purchase VCCs directly or through intermediaries, they can definitively claim that VCCs belong exclusively to them. They would be able to enforce their property rights against anyone who may attempt to interfere with them. If VCCs were a bundle of contractual rights, holders of VCCs may only be able to enforce rights against those with whom they contract (e.g., the party from whom they had purchased VCCs).

VCCs as Collateral for a Loan

When financial institutions provide a loan, they can take VCCs as collateral with more certainty that the security over VCCs will be enforceable and have priority on insolvency over the borrower's unsecured debts.

For example, while security over property may take the form of a charge or pledge, a security over a bundle of contractual rights tends to be by way of assignment. If financial institutions can be confident of the kind of security to take over VCCs, this may encourage more financing activity. Exchanges on which VCCs are traded can also accept VCCs as collateral.

Trusts, Property, and Insolvency

When a project developer undertakes a carbon project, it can declare a trust over VCCs arising out of that project for the benefit of the local community.

Where a security agent holds VCCs on trust for a company or funder of a project (the **beneficiary**), the beneficiary has certainty that its claim over the VCCs will be prioritised over unsecured creditors of the agent if it goes insolvent.

By contrast, if VCCs were a bundle of contractual rights, enforcing a claim becomes complicated where there is no direct contractual relationship between the two parties.

International consensus is ideal but unlikely in the near term. While international consensus on the legal characterisation of VCCs is ideal, this may be hard to achieve in the near to midterm as there does not presently appear to be a straight path to harmonisation across different jurisdictions.

Carbon ecosystem participants will welcome legal clarity. It will enable convergence and facilitate transactions across different jurisdictions. Guidance from relevant authorities on a definitive characterisation of VCCs as *intangible property* would be welcomed by all ecosystem participants, including banks, investors, corporates and end-users, professional advisors, service providers, brokers, intermediaries, and exchanges. It is acknowledged that different registries and participants in a carbon value chain may reside in different jurisdictions and have varied views. There is a strong tendency for market participants to converge around jurisdictions with a high degree of legal clarity. It is the authors' hope that Singapore articulates a position. This could accelerate greater harmonisation across the carbon ecosystem. Providing clarity in the legal character of VCCs is certainly a start in the right direction.

Singapore can provide leadership by articulating a position. This will provide clarity on the treatment of VCCs and position Singapore at the forefront of legal discourse on this matter. It will set the foundations towards achieving Singapore's ambitions as a leading carbon trading and services as well as a sustainable finance hub.

With demand for voluntary carbon credits set to rise by a factor of 15 by 2030, a clear position on the legal character of voluntary carbon credits would spur the further scaling up of the voluntary carbon market, which serves as an important tool for companies to drive climate action.

Danielle Yeow
Adjunct Senior Research Fellow and Lead, Climate Change Law and Policy, Centre for International Law; Adjunct Associate Professor, (MSc (Environmental Management) Programme), Faculty of Law
National University of Singapore

In the evolving voluntary carbon markets, clarity of the character of voluntary carbon credits is a crucial cornerstone for growth. We hope this paper sparks new impetus to achieving such legal clarity in Singapore.

Joyce Lai
Executive Director
Group Legal and Compliance – Sustainability / ESG Lead
DBS Bank Ltd

1. IMPORTANCE OF LEGAL CLARITY

Carbon markets allow investors and corporations to trade carbon credits.[1] The ultimate goal of carbon credits and carbon markets is to incentivise the reduction of emissions into, and the removal of greenhouse gases from, the atmosphere.

Today, carbon markets are seen to be at an inflexion point due to a confluence of global factors. We highlight a few of these factors:

- **The heightened awareness of climate change, which drives the demand for high-integrity carbon credits.** Climate finance from public and private sectors in all countries is increasing globally. Annual average climate finance flows doubled from 2019/20 to 2021/22 to reach US$1.3 trillion.[2] However, this is still significantly below the estimated US$5 to 11 trillion per year needed to tackle climate action. Climate finance must increase by at least five-fold annually, as quickly as possible, to avoid the worst impacts of climate change.[3]

- **Emerging convergence of compliance and voluntary carbon markets as driven by standards and regulators.** Under Article 6 of the Paris Agreement, principles are set out for countries to use VCCs to meet their climate targets or Nationally Determined Contributions (**NDCs**) and to trade emission reductions and removals with one another through bilateral or multilateral agreements. Some jurisdictions also permit certain VCCs to be used for compliance.

- **Increase in scrutiny over the "quality" of certain types of carbon credits.** Some projects are alleged to be over-crediting. Human rights abuse scandals and greenwashing claims have sparked criticisms of the efficacy of carbon markets to deliver real climate impact.

Having legal clarity on the treatment of VCCs helps crowd in investment into the underlying emissions reduction or carbon removal projects from which VCCs are issued. The legal characterisation affects whether VCCs can be treated as instruments capable of being assumed by third parties, including whether they can be transferred, encumbered, collateralised, or constitute property under a trust.[4] Such an approach would treat VCCs similarly under personal property law as other assets or items of property such as gold or silver, or shares in a company. Similar approaches to financing, security, and securitisation could be applied to VCCs thus increasing investment flows into underlying carbon projects.

[1] Carbon credits referred to in this paper are:
(a) a representation or certification that one metric tonne of carbon dioxide (or carbon dioxide equivalent) has been avoided, reduced, or removed from the atmosphere; or
(b) the right to emit the amount of greenhouse gases (measured in carbon dioxide or carbon dioxide equivalent) into the atmosphere under allowance- or quota-based regulatory emissions trading markets.
Refer to ANNEX 5 – NOTES ON TERMINOLOGIES USED.
[2] Climate Policy Initiative (2023): *Global Landscape of Climate Finance 2023*, p. 5.
[3] Ibid., p. 3.
[4] A legal arrangement where the property subject to a trust is managed by a person or entity (the trustee) for the benefit of a defined community or set of persons (beneficiaries).

For principals that transact in VCCs, primary concerns include transferability of legal title and their continued ability to exercise proprietary rights over these VCCs. A lack of clarity in the legal characterisation of VCCs (particularly in relation to issues of title) raises questions over the rights that a principal would retain where VCCs are in the custody of, or warehoused by, a third party. These issues are perhaps most pronounced when the question of insolvency or imminent insolvency arises.[5] The same lack of clarity raises questions for a financial institution that has taken VCCs as collateral. Where a project developer subsequently defaults on loan repayment or becomes insolvent, the question faced by the financial institution is whether it has a claim against the VCCs ahead of other unsecured creditors of the project developer.

Various international bodies have been considering the issues related to carbon markets and have noted the common thread that the lack of legal clarity in relation to VCCs is an impediment to the scaling of carbon markets.[6]

We first address the issue of whether any financial regulatory implications arise out of activities relating to VCCs in the Singapore context. This does not affect the question of the legal character of VCCs but directly relates to whether the purchase and sale of VCCs is a regulated or licensable activity.

Overview of Voluntary and Compliance Carbon Markets
There are two distinct and separate kinds of carbon markets. The first is the *voluntary market* where participation is not mandatory. VCCs[7] are used by organisations or individuals on a voluntary basis to compensate for their carbon footprint and contribute to climate action. These credits are generated from projects that reduce or remove greenhouse gas emissions.[8] Companies can purchase VCCs to meet voluntary pledges to reduce or offset their emissions. The second is a *compliance market*, set by "cap-and-trade" systems or regulations that permit the use of carbon credits towards a regulatory obligation. Compliance carbon markets are generally confined to the jurisdictions or schemes under which such mechanisms are created. Compliance carbon markets can also be formed where VCCs are used towards regulatory obligations.[9] For example, Singapore allows taxable facilities to use eligible VCCs to reduce their carbon tax liabilities.[10] Under Article 6 of the Paris Agreement, guidance is also set out for countries to use carbon credits (including VCCs) to meet NDCs.

Table 1: *Overview of Voluntary and Compliance Carbon Markets*

[5] International Swaps and Derivatives Association (2022), *The Legal Nature of Carbon Credits: France, Japan and Singapore*: https://www.isda.org/2022/11/22/the-legal-nature-of-voluntary-carbon-credits-france-japan-and-singapore/ (2021 ISDA Report) at p. 18, section 4.3: "*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*".

[6] Refer to ANNEX 3 – INTERNATIONAL BODIES AND COMMENTARY ON LEGAL CLARITY.

[7] A VCC refers to a representation or a certification by a registry or standard body that one metric tonne of carbon dioxide (or carbon dioxide equivalent) has been avoided, reduced, or removed from the atmosphere.

[8] Refer to ANNEX 1 – THE CARBON CREDITS LANDSCAPE. For more on the specific process of how VCCs are issued, refer to ANNEX 2 – LIFE CYCLE OF VCCS.

[9] Examples include the Singapore's carbon tax, Mexico's carbon tax and Colombia's carbon tax, Korea's Emissions Trading Scheme (Korea ETS) and California's Cap-and-Trade Program (California ETS).

[10] See the eligibility list for international VCCs in relation to the Singapore Carbon Pricing Act 2018.

2. FINANCIAL REGULATORY CLASSIFICATION IN SINGAPORE

*If I buy or sell VCCs, or if I provide a service as custodian for VCCs or as a trustee, do I need a licence from any regulator in Singapore (e.g., the Monetary Authority of Singapore (**MAS**)? Do I need to comply with any ongoing financial regulatory compliance requirements? Do I need to report my activities to any regulator?*

Activities relating to VCCs are unlikely to trigger licensing or other financial regulatory requirements under Singapore law. We set out further details below:

- VCCs are not "physical and tangible" (a quality of a type of regulated "commodity" under the Commodity Trading Act 1992 (**CTA**)). VCCs are also not prescribed as an intangible "commodity" by Enterprise Singapore or MAS.[11] As such, VCCs do not fall under the ambit of the CTA and dealing in or providing custodial services for VCCs is unlikely to trigger licensing or other regulatory requirements under the CTA.

- VCCs are also not "capital markets products" (and consequently should not be regulated) under the Securities and Futures Act 2001 (**SFA**). They do not appear to exhibit the characteristics of traditional capital markets products, such as equity securities, debt securities, derivatives.[12] This means that dealing in or providing custodial services for VCCs is unlikely to trigger licensing or other regulatory requirements under the SFA.

- Finally, it is unlikely that VCCs fall within the definition of regulated digital payment tokens (**DPT**) under the Payment Services Act 2019 (**PS Act**). VCCs do not appear to have all the characteristics that are typically associated with DPTs under the PS Act.[13] Unlike cryptocurrency or legal tender, VCCs are not and are not intended to be, a medium of exchange (a) as payment for goods or services or (b) for the discharge of a debt. This means that dealing in them is unlikely to trigger licensing or other regulatory requirements under the PS Act.

Notwithstanding an analysis that VCCs are not subject to the current financial regulatory regimes in Singapore, there remains a need for clarity on the legal character of VCCs as these are distinct concepts.

[11] Enterprise Singapore and MAS are the entities responsible for prescribing what constitutes a commodity or a commodity derivative under the CTA and SFA respectively.
[12] The term "capital markets products" is defined under section 2(1) of the SFA to mean any securities, units in a collective investment scheme, derivatives contracts, spot foreign exchange contracts for the purposes of leveraged foreign exchange trading, and such other products as MAS may prescribe as capital markets products.
[13] The term "digital payment token" is defined under section 2(1) of the PSA to mean any digital representation of value that: (a) is expressed as a unit, (b) not denominated in any currency, (c) is, or is intended to be, a medium of exchange, (d) can be transferred, stored, or traded electronically, and (e) satisfies such other characteristics as MAS may prescribe.

3. IMPLICATIONS OF ACHIEVING LEGAL CLARITY

3.1 CONFIDENCE IN THE PURCHASE OR TRADE IN VCCs

When I purchase VCCs, do I have title[14] to the VCCs? Can I point to each VCC with a unique serial number[15] and say that it is mine? Can I exercise proprietary remedies to protect my title to them (e.g., obtain an injunction)?

Existing case law supports the characterisation of VCCs as *intangible property*[16] in Singapore. We consider characterisation of VCCs as *intangible property* in Singapore to be defensible by reference to principles gleaned from existing case law in relation to other intangible assets.[17]

To help consider the issues of legal characterisation, we set out the following case study:

- A Singapore company named Utama Pte. Ltd. (**Utama**) buys 50 VCCs from a Japanese project developer. The registry (located in Singapore) moves the VCCs from the project developer's registry account to Utama's registry account.
- Does Utama in fact own the VCCs or only a contractual right to sue the project developer under the sale documentation?

Whilst there are no precedents directly addressing this point in Singapore, we can look to principles and cases from other common law jurisdictions.[18] Singapore Courts have found foreign precedents of persuasive value in informing the development of the law.[19]

The English High Court in the ***Armstrong Case***[20] held that EU carbon emission allowance (**EUA**), a type of compliance carbon credit (**CCC**), constitutes property which could be subject to proprietary remedies.

[14] Good title means having the legal right to own and use the property with no defects, burdens or disputes from other parties who may claim an interest in the property.
[15] Refer to ANNEX 2 – LIFE CYCLE OF VCCS on creation and serialisation of VCCs.
[16] A class of legally recognised property without corporeal substance, such as intellectual property rights, or book debts.
[17] For instance, emissions allowances or digital assets.
[18] For instance, the United Kingdom, Australia, and New Zealand.
[19] *Re Asia Development Pte Ltd* [2019] SGHC 181 at [13]. See also Goh Yihan & Paul Tan, "An Empirical Study on the Development of Singapore Law" 2011, *Singapore Academy of Law Journal*, Vol. 23, p. 176, at [95] where it was found that in the studied areas of law consisting, inter alia, property law and commercial law, the Singapore Courts have recently been citing an increasing number of foreign cases. However, this was not because the Singapore Courts were "*blindly following the approach of any one particular foreign jurisdiction*". Rather, it was suggested that Singapore Courts were building a Singaporean jurisprudence through the "*careful selection and amalgamation of the best practices and norms from a wide range of jurisdictions.*"
[20] *Armstrong DLW GmbH v Winnington Networks* [2012] EWHC 10 (Ch).

The Court considered, amongst others, the following features of EUAs:

- The EUA was definable;
- The EUA was identifiable through a unique serial number;
- The EUA was permanent and stable due to its continued existence in a specialised EUA Registry until transferred out for sale; and
- The EUA was capable of assumption by a third party – they are transferable, and when transferred, the total rights and entitlements attaching to the EUA were transferred onto the transferee.

Similar to EUAs,[21] VCCs can be treated as *intangible property* to the extent that —

- VCCs are definable and identifiable (whether through a unique serial number or otherwise);[22]
- There is a degree of permanence and stability in a VCC once issued – it remains on the registry account of the holder in the relevant VCC registry until it is retired[23] by the holder or it is transferred to a buyer;[24] and
- VCCs are capable of assumption by a third party (i.e., under the contractual documentation governing its issue and where there are no legislative obstacles). VCCs can be transferred, and when transferred, the rights and entitlements to the VCC are also transferred to the transferee. This is evidenced by the ability to trade VCCs within registry frameworks.

There is no case authority as yet which contradicts the position that VCCs be treated as *intangible property*.

[21] Notwithstanding that EUAs are defined by statute and regulations, our view is that VCCs share broadly similar characteristics, and we can draw an analogy to the treatment of EUAs to clarify the legal character of VCCs.
[22] 2021 ISDA Report at p. 9, section 3.1.1: "*VCCs can be seen as representing exclusive access to a finite resource – namely, certification that the holder 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 […] 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.*"
[23] Retirement of a VCC involves the permanent removal of the VCC from circulation in the relevant registry in accordance with the relevant Carbon Standard rules and the relevant registry rules. Some market participants may purchase VCCs intending to retire them to offset their own emissions. Once retired, the VCC is permanently removed from circulation and can no longer be traded or used to offset further emissions.
[24] At present, VCCs issued by a given standard and stored in a registry managed or retained by a standard (e.g., Verra) cannot be transferred to a VCC registry of a different standard (e.g., Gold Standard).

Proprietary Right	Personal Right
Right against the "world at large" – a "negative right" to exclude others from access to assets (whether they consent to that exclusion).	Right against specific persons (e.g., based on a contractual relationship or a duty under tort law). It is usually a right against a person to perform a legal obligation, which may or may not relate to a particular asset.[25]
The right-holder can enforce their interest against whoever infringes the right, regardless of whether the person has entered into a contract or owes a duty of care to the right-holder.	Infringement of a personal right gives the right holder a right against a specific person or a specific class of persons.
Proprietary rights are tied to the existence of the asset.[26] If the asset ceases to exist, such proprietary rights cannot be enforced in relation to the asset (which no longer exists).	Personal rights continue to exist even if the asset ceases to exist. If the asset ceases to exist, a personal right accruing to the person who held the asset can still be enforced (e.g., against a person who has made a misrepresentation relating to the asset).[27]
During insolvency, owners and secured creditors can exercise direct claims on specific assets from the insolvent estate's pool of assets, which they own or over which they have security.[28]	During insolvency, the unsecured creditors have no direct claim on specific assets from the insolvent estate's pools of assets. Instead, their interest ranks lower in priority to the interest of secured creditors. As such, the amount that the unsecured creditors can claim is limited to whatever remains after other persons have exercised their proprietary rights.[29]

Table 2: *Difference between Proprietary Right and Personal Right*

[25] Bridge, Michael, *The Law of Personal Property* (Gullifer, Louise, Low, Kelvin F.K & McMeel, Gerard) (Sweet & Maxwell, 3rd Ed, 2022) at [1-056].
[26] Ibid., at [1-007].
[27] Ibid., at [1-007].
[28] Ibid., at [1-057].
[29] Ibid., at [1-057].

Implications

Legal clarity gives market participants confidence that they receive good title for VCCs which they purchase. The implications are that:

- Holders of VCCs do not just have "personal rights" (*in personam*)[30] against the seller or the registry, but also "proprietary rights" (*in rem*) against the world at large[31] to exclude others from such VCCs (e.g., using a proprietary injunction). One is better assured of obtaining good title when they purchase VCCs; and

- Holders of VCCs would bear ownership and rights to title of VCCs (e.g., in the registry account where VCCs are held in the name of the holder).

Characterisation of VCCs as *intangible property* is preferred over VCCs as *a bundle of contractual rights.* If there is no legal clarity that VCCs are treated as *intangible property*, an alternative characterisation of VCCs is as a *bundle of contractual rights*. Under this characterisation, holders of VCCs may only be able to enforce rights where there is a contractual relationship, for example, against those from whom they had purchased VCCs. The characterisation of VCCs as *intangible property* is therefore preferred as:

- **VCCs may be subject to different terms under a contract.** Inconsistencies could arise as to how different types of VCCs are treated, particularly where the nature of the documentation and terms used by registries differ from each other. For instance, some registries may draft their documentation in a manner which would tend towards a legal interpretation that only the party contracting with the registry has rights to VCCs issued under that registry.[32]

- **Holders of VCCs can access a fuller suite of proprietary remedies if VCCs are considered property rather than only personal rights (e.g., contractual rights).** While VCCs can still be "sold and traded", if they are categorised as a bundle of contractual rights, secondary buyers, or secondary takers of collateral (where the loan is subsequently traded) may not have the full suite of remedies available to the primary buyer.

[30] For more on the difference between these two types of rights, see Table 2 – Difference between Proprietary Right and Personal Right.
[31] Proprietary rights against the world at large can be simplistically understood as such: an owner of a property (e.g., a house or car) has the right to deal with and exclude other parties from using or interfering with their property. The owner has the sole authority to decide how to use and dispose of their property. For further discussion, see Table 2 – Difference between Proprietary Right and Personal Right.
[32] International Institute for the Unification of Private Law (UNIDROIT), *Summary Report of the First Session of the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits* (UNIDROIT Working Group Report), at paragraph 63: "*Gold Standard was not set up to create a series of claims that could be made against somebody other than the contractual counterparty with whom one was trading. Thus, the only way that the holder of a Gold Standard could get back to the original project developer or the project owner was simply suing all the way down the chain. These were features of contractual personal rights, not features of proprietary rights, because proprietary rights should not depend on there being a series of contractual claims.*" For more information on the distinction between these two types of rights, see Table 2 – Difference between Proprietary Right and Personal Right.

Consider the following example:

Toy Car Illustration. A toy store sells a toy car to a toy car collector. Before the toy store sells the car, it signs a piece of paper representing to the toy car collector that the car is in good shape, the wheels are screwed on tightly, and the plastic windscreens and windows are scratch proof.

Illustration 1: *Collector purchases Toy Car from Toy Store*

(i) **Rights and remedies in relation to toy car are proprietary in nature.** Once the toy car has been delivered into the collector's possession, the collector has property rights over the toy car. If a third party steals the toy car, the collector can exercise remedies against the thief, based on the proprietary rights that the collector has over the car, even if there is no contractual relationship between the two. We will focus on civil liability and property law issues in this paper and will not analyse criminal liabilities in this example.

The collector can potentially pursue proprietary remedies such as (a) a proprietary restitutionary claim (to recover the collector's property or its value) [33], (b) an unjust enrichment claim[34] (on the basis that the thief has been unjustly enriched by stealing the car), or (c) the tort of conversion (a common law action that arises as the thief has dealt with the car in a manner that is inconsistent with the collector's title over the car at common law). It may also be possible for the collector to apply to court for an interim proprietary injunction to stop further disposals of the car, based on the collector's proprietary rights. [35]

[33] *Armstrong DLW GmbH v Winnington Networks* [2012] EWHC 10 (Ch). See also TANG, Hang Wu and TAY, Yong Seng, *Singapore Academy of Law Annual Review of Singapore Cases*. [2019], p. 455-476 at footnote 37.
[34] *Armstrong DLW GmbH v Winnington Networks* [2012] EWHC 10 (Ch). See also *Zaiton bte Adom v Nafsiah bte Wagiman and another* [2022] SGHC 189 at [203].
[35] *CLM v CLN* [2022] SGHC 46 at [39] to [46] is an example based on cryptocurrencies.

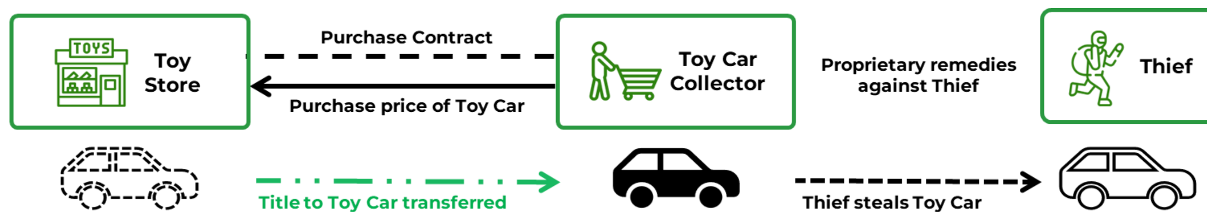


Illustration 2: *Where Toy Car is construed as property*

Collector has no contractual claim against thief if toy car is just a bundle of contractual rights. The toy collector will not have the proprietary remedies against the thief or any third party if the toy car is not *property*. He may have a claim on the basis of terms under a contract between him and the toy store but not with a third party or thief with which it does not have a contractual relationship. As a side note, it is only the toy collector that can exercise claims against the store arising out of the representations that the store made with respect to the condition of the toy car. A subsequent buyer will not have a direct recourse against the store as there is no direct contractual relationship between the two.

(ii) **Same principles of rights and remedies apply to VCCs.** Replacing the toy car with VCCs, the toy store with the registry, the collector as a primary buyer of VCCs, if VCCs are considered property and a thief were to steal VCCs from the owner (e.g., if the thief hacks into the registry to "steal" VCCs by transferring out of the victim's account), the owner (i.e., the primary buyer of the VCCs or a secondary buyer) may be able to obtain a declaration from the Court that VCCs with certain serial numbers belong to that owner and that the VCC registry should recognise it as such. This is available to the owner notwithstanding that the VCCs are now in the account of the thief. It is worth clarifying that the legal characterisation affects the rights and remedies that apply to VCCs, but this is a separate issue from claims on the "quality" of carbon credits and the issue of a claim for purposes of emissions accounting.

By contrast, if VCCs are viewed only as a bundle of contractual rights, it is unlikely for the owner of VCCs to be able to obtain proprietary remedies against third parties with which it has no contractual relationship. As such, taking the view that VCCs are a bundle of contractual rights (only) may have adverse implications on the scaling of VCC markets arising from this characterisation.

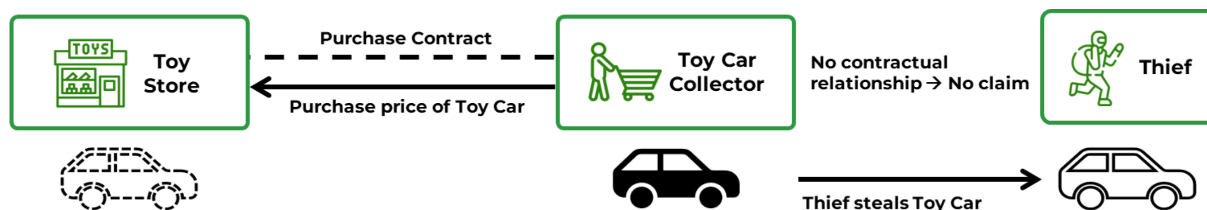


Illustration 3: *Where Toy Car is construed as a bundle of contractual rights*

Coming back to the Utama case study, if the VCCs are construed as *intangible property*, a court would have the legal tools necessary to recognise Utama's claim as the owner of the VCCs, regardless of the solvency of the project developer or whether a transfer has been lodged with the registry.

If VCCs are not property and no title is transferred, Utama may only have a contractual action against the project developer[36] to require the project developer to lodge the change of "ownership" with the registry. Further, if the project developer goes insolvent in the intervening period, Utama would only have a personal claim as an unsecured creditor of the project developer.

[36] Assuming that this right is provided for in the contractual documentation with the project developer.

3.2 CERTAINTY IN THE USE OF VCCs AS COLLATERAL

When I lend someone money, can I take VCCs as collateral or security over VCCs? Is there a risk that I cannot enforce the collateral/security?
Can exchanges on which the VCCs are traded accept those credits as collateral on margin accounts?

Clarity enables financial institutions to effectively structure financing solutions. If there is legal clarity on the character of VCCs, there will be more commercial certainty relating to:

- How to structure an enforceable security;
- How to enforce security interest over VCCs as collateral; and
- How to perfect the security.

For instance, consider the following extension of the Utama case study:

- Utama subsequently enters a loan and security arrangement. Under the arrangement, Utama borrows S$20 million from a Singapore bank for operating purposes. The collateral offered includes VCCs. The loan and security documents are governed by Singapore law.
- When Utama becomes insolvent, the Singapore bank wants to enforce its security over the VCCs. Utama has other creditors, apart from the Singapore bank.
- Further, the Japanese project developer has identified an additional plot of land to undertake an Afforestation, Reforestation and Revegetation project (**ARR Project**), and is looking for financing and seeks to use the additional VCCs to be issued under the ARR Project as part of the collateral.

In addition to traditional forms of collateral such as land or other assets like equipment, intellectual property or receivables, a financial institution may consider taking security over VCCs as part of the collateral package. The primary concern for the financial institution in each of the situations outlined in the case study above is the enforceability and priority over other unsecured creditors for the collateral. This impacts the risk and exposure assessments the financial institution makes in providing the loan.

Ability of VCCs to be taken as collateral is supported by case law. We refer to another English case that relates to intangible allowances. In the ***Dairywise Case***[37], the English High Court upheld a security arrangement, where a lender lent money to milk farmers that used milk quotas as collateral. A milk quota gave the holder (a milk farmer) an exemption from a levy which would otherwise be payable.

We have discussed how the principles of the ***Armstrong Case*** should apply to give VCCs the character of *intangible property*. Similar principles to the ***Dairywise Case*** should apply to the taking of VCCs as collateral. There is no case authority as yet which contradicts this position.

With reference to the Utama case study, the Singapore bank would be able to take a security arrangement over the 50 VCCs and the project developer would be able to use the additional VCCs arising out of the ARR Project as part of the collateral in its financing.

Implications

Financial institutions are more likely to provide more financing where they are better able to assess risk in taking security over VCCs.

The implications of having such clarity are that:

- A "proprietary" analysis assures parties that they can own title to VCCs they hold.
- Financial institutions would have clarity on the formalities needed to perfect their security. If VCCs are categorised as property, the form of security is likely to be a charge[38] or pledge. If VCCs are categorised as a bundle of contractual rights, financial institutions typically take an assignment of a bundle of contractual rights as security. For a valid and enforceable assignment, there are certain formalities to be satisfied, such as notice in writing to the parties to the underlying contract.
- A financial institution would be able to better assess the risk in providing a loan and taking security over VCCs (either held or to be issued in respect of a project). This will in turn enhance the availability of capital to borrowers (e.g., the project developer or Utama in the case study) to undertake climate projects. Similarly, in the secondary markets, margin lenders would be better able to assess the risks of taking VCCs as collateral and may be more inclined to provide leverage, contributing liquidity and price transparency in the secondary markets.

[37] *Swift v Dairywise Farms* [2000] 1 WLR 1177.
[38] A charge against the lender's assets needs to be registered under section 131 of the Singapore Companies Act.

3.3 ASSURANCE IN THE CREATION OF TRUSTS AND IN INSOLVENCY

If I am a project developer starting a project in a local community, can I declare a trust[39] over VCCs to be issued under that project, for the benefit of that local community? Are the underlying assets of the trust identifiable and is the trust valid and enforceable?
Can I use a security agent to hold the VCCs on trust for funders of the project? What happens if the security agent or the registry itself becomes insolvent? Does my claim rank in priority over other unsecured creditors?

Scenarios of trust, intermediaries and insolvency require legal clarity on characterisation of VCCs. Being able to transact with VCCs is helpful, but the risk of insolvency is always present. This risk increases when there are intermediaries involved. A company may wish to buy VCCs from a carbon trader that in turn buys VCCs from other businesses or project developer. The company may require the carbon trader or marketing agent to hold the VCCs in the registry account of the trader/agent in a "warehouse". What happens if the carbon trader or marketing agent goes insolvent? Additionally, the enforceability of netting arrangements[40] will be impacted in relation to VCC contracts in the face of insolvency/bankruptcy.

In the context of a trust arrangement, the lack of clarity on the legal character of VCCs could adversely affect the interests of beneficiaries when it comes to enforcing their rights under the trust. In a mature carbon market or in certain project constructs, parties can play the part of a custodian to hold carbon credits on trust for funders of the project and to sell the carbon credits for the benefit of the funders.

There are principles that can be gleaned from existing case law to support the view that VCCs are property capable of being held on trust. The relevant case law authorities support the view that VCCs can be treated as *intangible property* capable of being held on trust:[41]

- In the ***Ruscoe Case***,[42] the New Zealand High Court held that: "*carbon credits [are] …tradeable rights [which] can form the subject matter of a trust and where that happens the asset falls outside the estate of an insolvent trustee. There is a large body of case law that confirms such rights are a type of property and subject to normal property protections*".

[39] A legal arrangement where the property subject to a trust is managed by a person or entity (the trustee) for the benefit of a defined community or set of persons (beneficiaries).
[40] An arrangement where financial obligations owed between parties are offset against each other to arrive at a 'net' obligation due and settled in accordance with the payment terms of the relevant netting contract.
[41] There is no case law authority as yet which contradicts this position.
[42] *Ruscoe v Cryptopia Ltd (in liq)* [2020] NZHC 728, p. 89.

- In the Singapore context, the recent landmark High Court decision in the ***ByBit Case***[43] recognised cryptocurrencies as property capable of being held on trust. The decision appears to suggest that it is possible to "identify and segregate" cryptocurrencies (i.e., in the context of proposed regulations to implement segregation and custody requirements). This supports the view that it is legally possible to hold such intangible assets on trust.

- To be clear, the verification and issuance mechanisms, as well as the purpose and market uses, of VCCs are significantly different from those of cryptocurrency.

- However, the reasoning in the ***ByBit Case*** (i.e., that it is possible to identify and segregate such intangible assets for the purposes of creating a trust) for cryptocurrencies can be extended to apply to VCCs. VCCs (like digital payment tokens) can similarly be "identified and segregated". In turn, it should similarly be legally possible to hold VCCs on trust.

Implications

VCCs as *property* are capable of being held in trust and title in them can be enforced at insolvency. The implications are that:

- Where Party A holds VCCs for the benefit of Party B and Party A becomes insolvent, the VCCs can be construed as being held by Party A on trust for Party B;

- Companies can undertake businesses of "warehousing" VCCs (i.e., providing custodial services in relation to VCCs) without their customers worrying about whether they would be able to reclaim their VCCs when the custodial company goes insolvent, or is at risk of going insolvent (whether real or imagined); and

- Where there is a chain of transactions transferring the VCCs, parties who transact in VCCs have certainty and confidence that they obtain good title to the VCCs.

Going back to the Utama case study, not only would it be possible for the Singapore bank to enforce its security over the VCCs where Utama becomes insolvent, it would also be possible for the project developer to create a trust over a portion of the VCCs issued by the project for the benefit of the local community.[44]

[43] *ByBit Fintech Ltd v Ho Kai Xin and others* [2023] SGHC 199.
[44] Subject to other formalities required under trust arrangements.

4. BUILDING INTERNATIONAL CONSENSUS AND INTEROPERABILITY

There is currently no international consensus on the legal treatment of VCCs. While such international consensus is ideal, this may be hard to achieve in the near to midterm.

With a variety of legal systems treating emissions and VCCs differently, there does not appear to be a path to harmonisation across different jurisdictions. There is work to be done, and the lack of uniform governmental oversight is part of the challenge in arriving at an international consensus.

Building international consensus is important. Common law jurisdictions may find consensus in recognising VCCs as a form of *intangible property*. More needs to be done by each jurisdiction to clarify the legal character of VCCs. We argue that this can include regulators or agencies publishing statements of authority, guidance notes, or analysis on how to treat VCCs.[45]

In this regard, the 2021 ISDA Report has noted expressly that developing a standard that recognises VCCs as a form of *intangible property* would increase legal clarity across all adopting jurisdictions.[46] While there may be limitations in some jurisdictions where such concepts are not recognised, most other jurisdictions, particularly common law jurisdictions, recognise intangible property as a form of property. These jurisdictions may find consensus in recognising VCCs as *intangible property*.

Harmonisation is beneficial for carbon markets. Harmonisation of standards and treatment of VCCs has obvious benefits, for example to lower friction costs and crowd in financing. However, a jurisdiction-by-jurisdiction approach is inevitable in the interim. In view of that, Singapore can help to lead the way to build a thriving carbon market ecosystem by providing clarity for transactions where the laws of Singapore are the governing or applicable law.

This clarity would benefit all carbon market participants, from banks and investors to corporates and end-users, to other ecosystem players like traders, professional advisors, brokers, researchers, and data providers.

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[45] Board of the International Organization of Securities Commissions (IOSCO), *Voluntary Carbon Markets* (IOSCO Report), at p. 60, CR06/2023, section 6.1: "*Nonetheless, while financial market regulators may lack authority to regulate all facets of VCMs, such as the environmental standards by which carbon credits are certified, there is much that financial regulators in parallel and/or in collaboration with other authorities, regulated entities, private sector initiatives, and other market participants can do to encourage and facilitate improvements that will safeguard VCM integrity, foster greater liquidity and transparency, strengthen these markets, and allow them to scale up as needed in support of GHG emission reductions goals.*"

[46] 2021 ISDA Report, p. 22: "*The development of a global standard by UNCITRAL and/or UNIDROIT that recognises 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.*"

It is acknowledged that different registries and participants in a carbon value chain may reside in different jurisdictions and have varied views. There is a strong tendency for market participants to converge around jurisdictions with a high degree of legal clarity. It is the authors' hope that Singapore articulates a position. This could accelerate greater harmonisation across the carbon ecosystem. Providing legal clarity in the character of VCCs is certainly a start in the right direction.

> *While international bodies are engaged in important and timely work to achieve consensus around the key attributes and characteristics of voluntary carbon credits in order to facilitate the application of property rights, complete harmonisation of the legal treatment of voluntary carbon credits is unlikely given the number of jurisdictions and legal systems involved in voluntary carbon market transactions.*
>
> *In the absence of global convention, jurisdictions can reduce risk in voluntary carbon market transactions by clarifying the legal nature of voluntary carbon credits and their respective treatment in the context of relevant financial, tax, securities, and insolvency law.*
>
> **Holly Pearen**
> ***Lead Counsel***
> Environmental Defense Fund

Singapore can be a convergence point. There are already steps being taken toward building a Singapore ecosystem and a future where carbon credits can be used in different systems or jurisdictions. In December 2023, the National Climate Change Secretariat (**NCCS**) announced a collaboration with Verified Carbon Standard (**Verra**) and Gold Standard (**Gold Standard**) to develop a "playbook" to outline consistent and streamlined standard operating procedures [47] to facilitate interoperability with Singapore's national registry (i.e., enabling verified VCCs for those standard bodies to be traced for national accounting, and capable of corresponding adjustment under Article 6 of the Paris Agreement).

[47] https://www.nccs.gov.sg/media/press-releases/singapore-verra-and-gold-standard-partner-to-develop-playbook-for-cc/.

Discussions on the legal characterisation of VCCs is topical given the strong focus placed on climate change by the Singapore government.[48] Singapore has already taken bold steps to implement a rising carbon tax. It is also one of the first countries to allow companies to use carbon credits compliant with Article 6 of the Paris Agreement towards their carbon tax liabilities. In terms of international arrangements under Article 6,[49] Singapore has recently concluded its first implementation agreement with Papua New Guinea and memorandums of understanding with other countries (such as Bhutan, Costa Rica, Fiji, Kenya, Peru, Rwanda, and Vietnam). All these pave the way for a more active global environment for trading of VCCs.[50]

Singapore has not shied away from taking steps such as adapting regulations and frameworks to support its relevance as a hub in other areas of importance, such as dispute resolution, restructuring and insolvency proceedings, and maritime law.[51] By taking a clear position on the legal character of VCCs, Singapore can play a pathfinder role to build momentum towards convergence and international consensus.

[48] Singapore Green Plan 2030: https://greenplan.gov.sg.

[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.

[50] https://www.businesstimes.com.sg/esg/singapore-rushes-ink-carbon-credit-deals-cop28.

[51] Singapore's work towards being a dispute resolution hub, and in 2021 the Singapore International Arbitration Centre (**SIAC**) being ranked as the "*most preferred arbitral institute in Asia-Pacific and 2nd in the world*". SIAC press release, 7 May 2021: https://siac.org.sg/wp-content/uploads/2022/07/Press-Release-SIAC-is-Most-Preferred-Arbitral-Institution-in-Asia-Pacific-and-2nd-in-the-World.pdf.

5. CONCLUSION AND CALL-TO-ACTION

Pulling the threads together, our view is that there are existing legal tools for VCCs to be appropriately documented, and thus more actively financed and traded. In other words, VCCs can be characterised as *intangible property* based on Singapore's legal principles gleaned from existing case law.

Following on from this, **we offer the following calls-to-action:**

- **First, governments and regulators should aim for clarity on the legal characterisation of VCCs.** This is to ensure that direct market participants and the wider ecosystem have a sound legal and commercial basis on which to transact and manage risk. This will help scale up carbon markets, which in turn can contribute to global efforts to help mitigate the worse effects of climate change.

- **Second, in the Singapore context, treating VCCs as *intangible property* is an ideal commercial outcome.** Based on principles gleaned from existing Singapore case law, viewing VCCs as *intangible property* arguably presents a logical step. Singapore can play a catalytic role in the carbon markets by articulating a clear position on the legal character of VCCs. This is in line with its ambition to be a carbon services [52] and a sustainable finance hub.[53]

[52] As it stands, there are a few players in the Singapore market which operate VCC exchanges, including Climate Impact X and AirCarbon Exchange, in addition to numerous other players operating across the value chain: https://www.straitstimes.com/business/singapore-s-climate-impact-x-launches-global-carbon-spot-trading-exchange.
[53] https://www.greenplan.gov.sg/targets/ and https://www.greenplan.gov.sg/files/media-release-annex.pdf.

ANNEX 1 – THE CARBON CREDITS LANDSCAPE

1. Compliance Carbon Credits

Given that externalities are borne by society and not the polluter, the economic incentive to pollute is often greater than the incentive to reduce pollution. With this difficulty in mind, the question in climate action is how to incentivise the reduction or removal of greenhouse gases (**GHGs**) emissions, usually expressed in units of metric tons of carbon dioxide or carbon dioxide equivalent).

This has resulted in regulators and supranational bodies trying to create disincentives (as a means to cap polluting activity), as well as incentives to spur environmentally positive activity.

In this regard, under the Kyoto Protocol countries agreed to international emissions targets for GHGs by implementing several mechanisms; including emissions trading, where emissions allowances or quotas are unitised into a tradeable good or asset.[54]

The Kyoto Protocol has since been effectively superseded by the Paris Agreement, which came into force in November 2016. Article 6 of the Paris Agreement allows countries to voluntarily co-operate with one another to achieve and go beyond their NDC ambition. Article 6.2 and Article 6.4 are market-based approaches, while Article 6.8 sets out guidelines for non-market co-operation.

At the regional, national, and sub-national levels, governments have implemented emissions trading systems as a tool to reduce domestic emissions and to meet climate commitments. To the extent such systems are "created" with reference to a legislative mandate, they are generally referred to as compliance markets. These are governed by internal regulatory regimes (i.e. sub-national/national/supranational authorities), and the usage/trading of such emissions allowances or quotas is based on an emitter's carbon footprint relative to the regulatorily mandated allowance. Compliance carbon markets are also formed when governments allow voluntary carbon credits to be used to offset or be used in respect of a portion of carbon tax or emissions allowances.

2. Voluntary Carbon Credits

Apart from the Kyoto Protocol and the Paris Agreement, private registries (i.e. non-governmental organisations) have also played a role in setting up and participating in markets for the trading of carbon credits.[55] The voluntary carbon market is neither mandated by law nor regulated. Instead, they are "self-governed". Participants are not

[54] United Nations Framework Convention on Climate Change, website (https://unfccc.int/process/the-kyoto-protocol/mechanisms/emissions-trading): "*Emissions trading, as set out in Article 17 of the Kyoto Protocol, allows countries that have emission units to spare [...] to sell this excess capacity to countries that are over their targets.*"
[55] Refer to ANNEX 5 – NOTES ON TERMINOLOGIES USED.

mandatorily required to reduce their emissions. Instead of a "cap-and-trade" allowance or quota-based system, the voluntary carbon market does not have a finite supply of allowances.

Whilst both the compliance and voluntary carbon markets complement one another, the focus of this paper is on VCCs traded on "voluntary" markets (i.e., VCCs), as opposed to those used/traded on "compliance" markets (i.e., CCCs).

Indeed, recent developments in emissions trading have focused on the proliferation of VCCs, where non-government registries are able to play a far greater role in contributing to their growth.[56]

In our view, VCCs and the voluntary carbon market play an important role in climate finance solutions, in tandem with green loans and other types of debt financing and co-financing, grants, and equity or venture capital fund investments, to address climate change at large today.

	Voluntary carbon markets	Compliance carbon markets
PURPOSE	Enable corporates to compensate for their emissions to achieve net-zero and carbon neutral ambitions	Policy instrument (e.g., cap-and-trade or carbon tax) to reduce GHG emissions and raise revenue
HOW IT WORKS	• Represents abatement of one metric ton of CO_2 (or equivalent GHG) • Issued from projects designed specifically to reduce or remove carbon emissions • The carbon credit can be used towards voluntary targets	**Cap-and-trade** • A certificate or permit that represents the legal right to emit one metric ton of CO_2 (or equivalent GHG) • Issued to companies required to comply with certain regulations in mandatory carbon markets (often addressing only subset of industries) • Any excess allowances are traded **Carbon tax** • Compliance carbon market formed when government allows carbon credits to be used towards carbon tax obligations
EXAMPLES	Reforestation, energy efficient cookstoves, fuel switching, avoided deforestation	**Cap-and-trade:** EU ETS, California ETS, Korea ETS **Carbon tax:** Singapore carbon tax, South Africa carbon tax

Table 3: *Difference between Voluntary and Compliance carbon markets*

[56] As at the end of 2023, the global VCC market was worth around S$1.1 billion: https://www.straitstimes.com/business/singapore-s-climate-impact-x-launches-global-carbon-spot-trading-exchange.

3. Fixed-Price Carbon Credits and International Carbon Credits under the Singapore Carbon Tax Scheme

We note that there are certain cases in which "credits" are issued by a regulator for a fixed price or prices, for an express purpose (generally to offset carbon taxes). These are separate from the "cap-and-trade" or "baseline-and-credit" allowance or quota-based emissions schemes.

In Singapore, the National Environment Agency (**NEA**) administers the Carbon Pricing Act 2018 (**CPA**). Under it, fixed-price carbon credits (**FPCCs**) can be purchased by a taxable facility to "pay" for the applicable carbon tax, based on a schedule of determined prices set out in the CPA. Apart from being used to "pay" for the applicable carbon tax, a FPCC cannot be sold, transferred, assigned, or otherwise disposed of unlike VCCs in the traditional sense or CCCs issued under emissions trading schemes:

- Under section 16(1) of the CPA, "*[a] tax, called the carbon tax, is charged on the total amount of reckonable GHG emissions of a taxable facility of a registered person in a reporting period*". Section 17(2) of the CPA further provides that payment of such tax "*must be made (a) by the surrender of carbon credits; or (b) if, at the time of payment, the registry account for the taxable facility in relation to which the tax is charged is suspended or closed, in the form and manner required by the [NEA]*". This is provided, pursuant to section 16(2) of the CPA, that the total amount of reckonable GHG emissions is at least 25,000 CO_2e, being the "second emissions threshold" under Part 1 of the Second Schedule to the CPA.

- Section 27(1) of the CPA provides that "*[NEA] must credit into the registry account for a taxable facility of a registered person, such number of carbon credits that the registered person applies and pays for, in relation to that registry account*". Section 28(1) of the CPA provides that "*a registered person may surrender one or more carbon credits in the registry account for a taxable facility of the registered person, in payment of the tax payable by the registered person in relation to the taxable facility*." Upon such surrender, section 28(2) of the CPA provides that NEA will "*remove the carbon credit from the registry account*".

- Accordingly, where a "registered person" is liable to pay tax on its greenhouse gas emissions, it must —

  (i) first, apply for, and pay to NEA the price of the fixed-price credits which are then credited into the person's registry account; and

  (ii) thereafter, surrender the fixed-price credits in the account in payment of the carbon tax and the fixed-price credits will then be removed from the registry account.

From 1 January 2024, under the CPA regime, companies may also use certain prescribed eligible high-quality "international carbon credits" (**ICC**) to offset up to 5% of their taxable emissions from 2024.

An ICC is "a certificate representing one tonne of GHG emissions reductions or removals measured in tCO2e, generated from any project or programme outside Singapore".[57] The ICCs are not a separate category from VCCs. The effects of this recent development mean only that VCCs that adhere to the Eligibility Criteria[58] and are on the Eligibility List[59] can also be used to offset up to 5% of tax liabilities under the CPA regime; not that fresh "ICCs" are issued by NEA.[60]

[57] Section 33B(3) of the CPA.
[58] Eligibility Criteria set as part of the International Carbon Credit (ICC) Framework, https://www.nea.gov.sg/media/news/news/index/singapore-sets-out-eligibility-criteria-for-international-carbon-credits-under-the-carbon-tax-regime.
[59] The Eligibility List has been published on Singapore's Carbon Markets Cooperation website, at www.carbonmarkets-cooperation.gov.sg.
[60] Section 33A of the CPA.

ANNEX 2 – LIFE CYCLE OF VCCS

1. A decarbonisation project may involve the avoidance or reduction of activities resulting in release of greenhouse gas emissions (such as the avoidance of deforestation) or the removal or sequestration of carbon (such as reforestation or direct air capture). Where a project developer is undertaking such a project, it may choose to register the project with a registry for the validation and verification of the project's carbon-reduction. A VCC registry is a third party such as the Climate Action Reserve, Gold Standard, or Verra. The VCC registry issues, on the basis of such validation and verification by independent third parties, the corresponding amount of VCCs to the project developer. The project developer may then on-sell such VCCs to other parties (including, financiers of the project).

2. Through the project life, a project developer will need to ensure that the project complies with the methodology and quality assurance principles of the validation and verification process. In the ordinary course, a VCC registry will only issue VCCs if, based on its validation and verification process, the project meets the requisite requirements and standards.

3. Once VCCs are issued, the legal character of that VCC should not alter and is not dependent on the quality of that VCC. By way of example: "*Under [Verra's Verified Carbon Standard] Program, projects are issued unique carbon credits known as Verified Carbon Units or VCUs. Each VCU represents a reduction or removal of one tonne of carbon dioxide equivalent (CO_2e) achieved by a project. VCUs are characterised by a number of quality assurance principles which are confirmed through the project validation and verification process and Verra's review and approval*".[61]

4. Following on from this, where there are subsequent questions arising as to the integrity of the VCCs issued by any VCC registry, it is for the VCC registry along with the project developer to address according to the rules of the programme under which the VCCs are issued. These could be questions as to whether the validation and verification remains valid in light of new information.

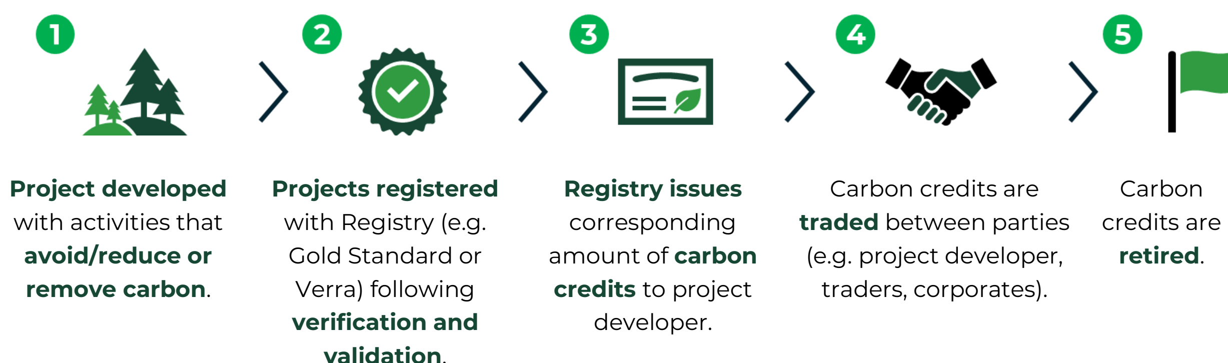

Illustration 4: *Life cycle of voluntary carbon credits*

[61] https://verra.org/programs/verified-carbon-standard/verified-carbon-units-vcus/.

ANNEX 3 – INTERNATIONAL BODIES AND COMMENTARY ON LEGAL CLARITY

1. International Swaps and Derivatives Association (ISDA)

ISDA is an advocate for standardised documentation (on an international level) to promote legal clarity and maximise risk reduction in the markets in which it has an interest.

In December 2021, ISDA released a report (**2021 ISDA Report**)[62] which noted that a growth in market size and complexity would benefit from steps taken (whether at a national or international level) to better comprehend the legal characterisation of VCCs.

In addition, to the extent VCCs may be the subject of derivatives contracts (i.e., where the underlying are VCCs), ISDA also noted that derivatives markets play a critical role in facilitating how "green" capital is raised and allocated and in risk management.[63]

ISDA followed this up with a supplemental paper the year after, in November 2022 (**2022 ISDA Report**), where it set out further thoughts specific to France, Japan and Singapore.

ISDA has recognised the lack of legal clarity in relation to VCCs as an impediment to scaling carb on markets and advocates for standardisation and harmonisation in relation to the approach to the legal characterisation of VCCs to facilitate the scaling up of carbon markets.

2. International Institute for the Unification of Private Law (UNIDROIT)

UNIDROIT has as its purpose: "*to study needs and methods for modernising, harmonising and co-ordinating private and in particular commercial law as between States and groups of States and to formulate uniform law instruments, principles and rules to achieve those objectives*".[64]

In this regard, UNIDROIT acts on "Work Programmes" for defined periods, the prevailing period being 2023 to 2025. In advance of the adoption of the current "Work Programme", ISDA (subsequent to its own reports, discussed above) submitted a proposal to UNIDROIT advocating for a project to determine the legal character of VCCs. The UNIDROIT Governing Council voted unanimously in favour of the inclusion of such a project with high priority,[65] signifying the importance of this issue.

[62] ISDA (2022), *The Legal Nature of Carbon Credits: France, Japan and Singapore*: https://www.isda.org/2022/11/22/the-legal-nature-of-voluntary-carbon-credits-france-japan-and-singapore/.
[63] 2021 ISDA Report, p. 4.
[64] UNIDROIT website, https://www.unidroit.org/.
[65] UNIDROIT Governing Council, Item No. 7 on the agenda: *Update on certain high-priority projects on the 2023- 2025 Work Programme*: https://www.unidroit.org/wp-content/uploads/2023/05/C.D.-102-14-Legal-nature-of-Voluntary-Carbon-Credits.pdf.

In October 2023, the first session of the UNIDROIT Working Group on the Legal Nature of Voluntary Carbon Credits concluded in a report (the **UNIDROIT Working Group Report**)[66] that: "*in order for the [voluntary carbon markets] to scale, VCCs would need to be capable of being the subject of proprietary rights.*"[67] However, the discussion as to whether to apply a "substance" or "form" approach—in determining whether the rights attached to VCCs were "proprietary" in nature—was exploratory, and a second session of the Working Group is expected to be convened on or around April 2024. The process and summary of the Working Group's findings would therefore only likely be available when the current Work Programme concludes in 2025.

3. Board of the International Organization of Securities Commissions (IOSCO)

Established in 1983, IOSCO is widely seen as a "global standard setter for securities market regulation"[68] and is an association of regulators with supervisory oversight over more than 95% of the world's securities markets.

In relation to carbon credits, the consultation report on voluntary carbon markets (**IOSCO Report**)[69] issued by the Board of IOSCO identifies issues affecting the development of the voluntary carbon market. Consistent with the papers put forward by the other international bodies discussed in this paragraph, the IOSCO Report discussed legal clarity in relation to VCCs as one of such issues.

In this regard, IOSCO noted that voluntary carbon markets could benefit from legal clarity as to, among other matters, bankruptcy treatment for carbon credits. In particular, it noted that: "*it is critical to understand the legal treatment for various purposes of carbon credit (i.e., what it is as a matter of law in the relevant jurisdiction – is it property or some other kind of right) and the regulatory characterisation (i.e., whether it is regulated as a security, a commodity or some other kind of instrument).*"[70]

[66] UNIDROIT Working Group Report: https://www.unidroit.org/wp-content/uploads/2024/01/Study-LXXXVI-W.G.1-Doc.-3-Report.pdf.
[67] UNIDROIT Working Group Report, paragraph 86.
[68] IOSCO website: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD749.pdf.
[69] IOSCO, *Voluntary Carbon Markets*, CR06/2023: https://www.iosco.org/library/pubdocs/pdf/IOSCOPD749.pdf.
[70] IOSCO Report at p. 52, section 4.8.

4. Asia Securities Industry and Financial Markets Association (ASIFMA)

A regional trade association, ASIFMA comprises financial institutions and capital markets services providers with a focus on promoting "*the development of liquid, deep and broad capital markets in Asia*".[71]

In October 2023, ASIFMA released a report titled "Upscaling Carbon Markets Across APAC" (the **ASIFMA Report**), which noted the importance for each jurisdiction in Asia-Pacific to prioritise giving clarity to the legal and regulatory classification of carbon instruments and that such legal clarity is relevant to the issue of standardisation across markets.[72]

In this regard, ASIFMA characterised this lack of legal clarity as a gating issue of scaling of carbon markets: "*Uncertainty risks inhibiting the growth of carbon markets (by limiting the extent to which key stakeholders are willing to participate, hold positions in, or manage portfolios that include, carbon instruments)*."[73]

[71] ASIFMA (2023), *Upscaling Carbon Markets Across APAC*: https://www.asifma.org/wp-content/uploads/2023/10/asifma-white-paper-upscaling-carbon-markets-across-apac-october-2023.pdf.
[72] ASIFMA Report, p. 25.
[73] ASIFMA Report, p. 25.

ANNEX 4 – POSITIONS IN OTHER JURISDICTIONS

1. The legal character of VCCs is currently a jurisdiction-specific question that must be determined by reference to applicable laws in that jurisdiction.

2. We set out below a summary of some of the positions explored in the 2021 ISDA Report and 2022 ISDA Report across certain jurisdictions:

COUNTRY	POSITION ON LEGAL CHARACTER OF VCCS
England and Wales	Not defined – pending authoritative pronouncement
USA	*Commodity* based on Commodity Exchange Act's broad definition
Germany	Not defined – pending authoritative pronouncement
France	Intangible property
Japan	Not defined – pending authoritative pronouncement
Australia	Not defined – pending authoritative pronouncement. Australian carbon credit units (ACCUs) construed as personal property

Table 4: *Positions on legal character of VCCs in other jurisdictions (as of March 2024)*

- Under **English law**, pending any authoritative pronouncement (whether by the Courts or by the Government),[74] there is some degree of uncertainty at present (perceived or residual) over how VCCs are characterised.[75]

- Under **US law**, while no general federal law addressees the issue of VCCs' legal characterisation, comments by the Commodity Futures Trading Commission (**CFTC**)[76] suggest that VCCs are likely to be considered *commodities* given the broad definition of that term set out in section 1a(9) of the Commodity Exchange Act subject to the CFTC's jurisdiction.[77]

[74] There have been recommendations in the United Kingdom (UK) that VCCs should be treated as personal property, but existing in a "third category of thing", akin to treatment for digital assets. Refer to the UK Law Commission report, *Digital asset: Final report*, 2023: https://s3-eu-west-2.amazonaws.com/cloud-platform-e218f50a4812967ba1215eaecede923f/uploads/sites/30/2023/06/Final-digital-assets-report-FOR-WEBSITE-2.pdf.

[75] 2021 ISDA Report, p. 13. This conclusion was adopted and corroborated by the UK Law Commission in its report on Digital Assets at paragraph 4.68.

[76] Keynote Remarks of Commissioner Kristin N. Johnson at Rice University's Baker Institute for Public Policy Annual Energy Summit, 5 October 2023 (https://www.cftc.gov/PressRoom/SpeechesTestimony/opajohnson7): "*Carbon offsets are viewed as contracts of sale of a commodity in interstate commerce, and thus within the anti-fraud jurisdiction of the CFTC pursuant to Section 6(c)(1) and Regulation 180.1(a).*" Following this, the CFTC issued proposed guidance regarding the listing of VCC derivatives on CFTC-regulated exchanges on 5 December 2023, which outlines certain factors that an exchange should consider when addressing applicable regulatory requirements in relation to contract design and listing (https://www.cftc.gov/PressRoom/PressReleases/8829-23).

[77] 2021 ISDA Report, p. 14.

- Under **German law**, there is similarly no specific law setting out any conclusive comments on the legal characterisation of VCCs, and commentators are also only beginning to pick up the issue given the increased demand for VCCs.[78]

- Under **French law**, at least from the perspective of legal characterisation, VCCs are considered *intangible property* with their own economic utility for its owner.[79]

- Under **Japanese law**, there is no specific legislation on the legal character of VCCs. Discussions on the topic are nascent,[80] and the legal character of VCCs remains unclear.[81]

3. To our knowledge, the relevant authorities in **Australia** have not gone as far as to make a conclusive statement on VCCs.[82] There is a scheme administered by the Clean Energy Regulator known as the "Australian Carbon Credit Unit" issued for GHG abatement activities undertaken as part of the Australian Government's Emissions Reduction Fund. While section 150 of the Carbon Credits (Carbon Farming Initiative) Act 2011 governing Australian Carbon Credit Units states that the units would be construed as "personal property", this is specific to the Australian statutory regime[83] and cannot be assumed to apply to VCCs.

[78] 2021 ISDA Report, p. 15.
[79] 2021 ISDA Report, p. 8. The report also sets out some comments from a regulatory perspective which we have not included for the purposes of economy.
[80] 2022 ISDA Report, p. 10.
[81] 2022 ISDA Report, p. 11.
[82] https://www.cleanenergyregulator.gov.au/OSR/ANREU/types-of-emissions-units/australian-carbon-credit-units.
[83] https://www.cleanenergyregulator.gov.au/OSR/ANREU/types-of-emissions-units/australian-carbon-credit-units#23.

ANNEX 5 – NOTES ON TERMINOLOGIES USED

1. **Difference between "credits" and "offsets":** We note that there are fine distinctions to be made between "credits" and "offsets". In the UNIDROIT Working Group Report, it was stated: "*Working Group participants also observed that [among other things] the term "credits" should not be used interchangeably with the term "offsets", the former referring to the instrument and the latter connoting a claim against the certificate*".[84] Notwithstanding that this distinction can be made justifiably, there does not appear to be any immediate legal implication from defining an "offset" separately from a "credit" (provided that the commercial intent behind the usage of the term is understood amongst the relevant stakeholders), save that it may be more accurate to say that the "unit" being traded at a given point in time is a "credit" if it is the certificate itself and an "offset" if it is a claim *against* a certificate.

2. **Broad use of the term "carbon":** while GHGs include a variety of gases beyond carbon dioxide, the specific element "carbon" is often used as a synecdoche with reference to GHGs.

3. This paper does not purport to engage in a detailed semantic inquiry in relation to each of these terms (save to note that in some cases the specific contractual terms of the issuance of a "unit" may affect its legal characterisation in some jurisdictions). Instead, to avoid confusion, we have used the loose term "carbon credits" (CCs) to refer collectively to all types of units traded on an emissions trading market (which may variously be called "certificates", "carbon offsets", "credits", "permits", or "allowances").

[84] UNIDROIT Working Group Report, paragraph 45.

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