

The Aircraft Leasing Community and the Carbon Markets

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Introduction

With sustainability at the centre of discourse within the aviation community in recent years and annual ESG reporting becoming more widespread for industry participants, market observers are applying increasing levels of scrutiny to detect and callout greenwashing, lack of true ambition and impactful action and investment. This paper sets out an approach that participants should consider.

The sustainability challenges faced by the aviation industry are well-known, but the following major points are worth reciting in brief:

- aviation is responsible for approximately 2.5% of global CO₂ emissions¹;
- the commercialisation and scaling of hydrogen fuel-cell or battery powered aircraft is approximately 15 years away²;
- sustainable aviation fuel, or “SAF”, is a scarce resource and is currently very expensive to produce (and will not, in any event, achieve 100% emissions reductions)³; and
- procurement of carbon offsets often leads to negative press and association with greenwashing⁴.

The intentions of the industry are good. In 2021 the International Air Transport Association (“IATA”) committed to achieve net zero carbon emissions by 2050 – a goal that was reaffirmed as the long-term aspirational goal of the International Civil Aviation Organisation (“ICAO”) at its assembly meeting, which ended on 7 October 2022.

Additionally, this year’s inaugural Global Aviation Sustainability Day held by Aircraft Leasing Ireland in Dublin announced its “Sustainability Charter” – the first set of ESG and climate-aligned principles for the aviation industry promoting collaboration and ambition amongst the lessor community. However, critics have pointed out that although the Sustainability Charter’s strong focus on the “S” and the “G” is welcome and important, this cannot hide the more difficult and expensive climate

¹ Global Carbon Project (2019). It should also be noted that a recent study published in the journal Nature (link: <https://www.nature.com/articles/s41558-022-01404-7>) reports that the non-CO₂ climatic effects of aviation (due the chemical composition of contrails) are responsible for approximately two-thirds of aviation’s impacts on the climate. The paper demonstrates that these non-CO₂ climatic effects would by themselves cause up to 0.4°C additional warming if no action is taken to mitigate or reduce their impact. These non-CO₂ climatic effects are currently excluded from the aviation industry’s climate mitigation efforts.

² See, for example, IATA’s milestones towards net zero, which indicates that the industry’s expectation is for these technologies to be available for regional markets in 2035: <https://www.iata.org/en/iata-repository/pressroom/fact-sheets/fact-sheet---iata-net-zero-resolution/>.

³ See, for example, IATA’s milestones towards net zero, which indicates SAF will not reach 5% of fuel until 2030: <https://www.iata.org/en/iata-repository/pressroom/fact-sheets/fact-sheet---iata-net-zero-resolution/>.

⁴ See, for example, Greenpeace: <https://www.greenpeace.org.uk/news/golden-age-of-greenwash/>.

issue hidden within the “E”. Furthermore, the EU’s Corporate Sustainability Reporting Directive will soon require certain companies to report on how their activities impact the environment, human rights and social standards, bringing the “E” home to the Irish lessors’ front door.⁵

The pathway for the aviation industry to achieve net zero emissions by 2050 is difficult and relies on significant technological improvements in the medium-long term. The industry must discuss the significant investment needed into research and development of key technologies that is required to truly transform the emissions trajectory of commercial aviation in an impactful way, how best to remove legacy emissions from the atmosphere and equitable sharing of the burden of decarbonising the sector with airlines.

Other global industry sectors, like tech and pharma, have made major leaps in advancing their decarbonisation strategies, from investing into non-core business sectors⁶ to signing long-term renewable energy power purchase agreements⁷ to investing in high-quality and high-integrity carbon projects to remove legacy emissions. The level of investment emphasises the intent of those sectors to decarbonise.

The aircraft leasing community owns approximately half of the world’s operating aircraft.⁸ This means about 1.25% of the world’s CO₂ emissions fall within the leasing communities’ scope 3 emissions⁹. This proportion will increase if overall emissions of the sector continue to grow, particularly if the industry is unable to decarbonise in parallel with other sections.

The pressure on the industry to decarbonise will increase, but there are good reasons for it to take the required steps anyway. Doing so will not only help participants’ ESG credentials, but will also help them provide a compliance solution to their airline customer base. The market mechanisms needed already exist – the industry must learn how to leverage the existing mechanisms in a strategic and impactful way to help unlock the methods that participants will need to deploy to achieve net zero by 2050.

This paper focuses specifically on carbon markets. Some in the aviation community may still consider the carbon-investment space as an inexpensive way to make customers feel better about flying and, in some cases, have intentionally moved away from buying carbon offsets to protect their reputation from accusations of greenwashing. Other industry participants are moving away from offsetting programmes to focus on other decarbonisation strategies¹⁰.

It’s our view that this narrative must be reversed, as the carbon market must play an integral role in any genuine effort by the aviation sector to achieve net zero; net zero cannot be achieved without it. The carbon market continues to evolve at a rapid pace with many efforts being made to develop and/or establish standards that provide for integrity and quality, as well as opportunity to scale nature-based and technological solutions that can help remove legacy emissions and provide a pathway to make technologies such as hydrogen and sustainable aviation fuels economically viable in the medium to long term.

The purpose of this paper is to explore some of the developments in the carbon markets with the hope that the leasing

⁵ <https://www.europarl.europa.eu/news/en/press-room/20221107IPR49611/sustainable-economy-parliament-adopts-new-reporting-rules-for-multinationals>

⁶ For example: (1) Amazon has been acquiring a range of renewable energy assets: <https://www.aboutamazon.com/news/sustainability/amazon-is-making-big-global-investments-in-renewable-energy>, and (2) BASF, a major chemicals company, acquired a stake in one of the largest offshore wind farms in the world: <https://www.basf.com/global/en/media/news-releases/2021/09/p-21-297.html>.

⁷ For example, RE100 now has over 300 corporate members who have committed to procuring 100% renewable electricity to power their business operations, predominantly by entering into corporate power purchase agreements: <https://www.there100.org/about-us>.

⁸ See, for example, KPMG: <https://home.kpmg/ie/en/home/insights/2022/01/aviation-industry-leaders-report-2022/airline-leasing-proven-resilience.html>.

⁹ Scope 3 emissions of an organisation are, broadly speaking, all indirect (value-chain) emissions associated with that organisation’s business operations (see here for more detail: <https://ghgprotocol.org/standards/scope-3-standard>). In the case of aircraft leasing companies, the emissions of the aircraft which it owns and which are operated by its airline customer are likely to be categorised as the aircraft leasing companies’ scope 3 emissions (whilst simultaneously being a scope 1 emission-type for the airlines).

¹⁰ For example, Easyjet: <https://www.easyjet.com/en/sustainability>

community will take a fresh look at the carbon markets and leverage the advantages they provide in an effort to cut the aviation industry's emissions in the transition to net zero and beyond.

Net zero and why the carbon market must be part of the solution

Net zero can only be achieved at a planetary (and at a stakeholder/corporate) level when there is a balance between greenhouse gas (“GHG”) emissions and removals. Even if industries decarbonise across their operations as much as technologically possible, there will always be a degree of residual or unavoidable emissions in their value chains. As such, carbon-removal projects will be needed to achieve the balance required for net zero. In the context of aviation, if and when SAF is fully scaled, SAF will work to cut emissions by up to 80%, meaning that there will always be a margin of emissions that will need to be removed through other means to achieve equilibrium.

In recognition of the role that the carbon market must play in achieving “Paris-aligned” net zero targets, the 194 parties to the Paris Agreement finally agreed on a set of rules for Article 6 of the Paris Agreement at COP26 in Glasgow. Article 6 allows countries to transfer carbon credits (or “mitigation outcomes”) and effectively establishes a new carbon market, with safeguards in place to ensure higher integrity than the market mechanisms that preceded it under the Kyoto Protocol. This Article of the Paris Agreement is discussed in more detail below, but it is worth noting at this juncture that one of its constituent parts, Article 6.4, will serve (if implemented as intended) as an enabler of private sector engagement in a carbon project marketplace that will replace the Kyoto protocol era's Clean Development Mechanism.

The types of project activities and mitigation outcomes that will be included in the Article 6.4 mechanism will be decided by project developers, host country governments and the investment community, within parameters adopted by parties to the Paris Agreement and the mechanisms' Supervisory Body¹¹. The stated purpose of Article 6.4 is “to contribute to the mitigation of GHG emissions and support sustainable development”. To achieve this purpose, the Article 6 Rules (as defined below) prescribe that baseline setting and methodological design for each project activity will need to be approved by the Supervisory Body. One of the Supervisory Body's functions is to ensure that the mechanism facilitates the long-term goals of the Paris Agreement and as such, the baselines and methodologies which it approves will need to be aligned with this objective.

CORSIA

CORSIA, or the Carbon Offsetting and Reduction Scheme for International Aviation, is the market-based mechanism that represents the aviation industry's effort, acting through the auspices of ICAO, to mitigate the effects of climate change arising from increasing emissions from international travel. This mitigation is to be principally achieved by offsetting emissions that exceed a baseline level.

As industry participants will be aware, we are currently in the “Pilot Phase” (2021-2023), which will lead into the “First Phase” of CORSIA (2024-2026). Both phases are voluntary and 118 states currently participate, or have signed up to participate from 2023, including many of the world's largest aviation markets¹².

As much of the world exited the COVID-19 pandemic, there was significant discussion amongst the parties about the level of annual emissions that ought to be set as the baseline given the interruption to the industry caused by the pandemic. Last year this was determined to be 2019 levels and this year's ICAO assembly agreed that the baseline for the First Phase would be 85% of 2019's emissions.¹³ Airlines will have to offset any eligible emissions over this limit, representing a real outlay for them to comply.

This liability – to purchase sufficient offsets to comply with CORSIA obligations – will continue to grow, unless there is a significant reduction in emissions through technology or a reduction in the number of flights being undertaken. During the “Second Phase” (2027-2035), participation will no longer be voluntary for states, and large aviation markets such as Brazil, China and India will also participate, expanding the requirement for offsets further.

CORSIA Eligible Emissions Units

¹¹ It is possible, for example, that avoidance-based mitigation activities will be ruled out although a decision on this point is unlikely to be issued before COP28 in Dubai next year. See also footnote 27.

¹² As of October 2022, <https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-News.aspx>.

¹³ See paragraph 11(b) of Resolution A41-22: https://www.icao.int/environmental-protection/CORSIA/Documents/Resolution_A41-22_CORSA.pdf.

The most recent version of ICAO's document on CORSIA Eligible Emissions Units¹⁴ sets out the Emissions Unit Programmes that have been approved by the ICAO Council to supply CORSIA Eligible Emissions Units and identifies the registries designated by CORSIA Eligible Emissions Unit Programmes for the purpose of fulfilling the provisions set out in the CORSIA-related ICAO Standards and Recommended Practices¹⁵.

The two best-known voluntary carbon market registries are those of Verra and the Gold Standard. Importantly, not all programmes are accepted by ICAO. REDD.plus was rejected twice on the grounds that ICAO decided that it could not determine if REDD.plus had the necessary basic features of a crediting programme¹⁶.

What does this mean from a lessor-investment perspective? Essentially, provided that lessors invest in or buy credits from projects that fall within the eligibility criteria set by ICAO, these credits may (upon pass-through of title) be used by airlines for retirement (i.e. application as offsets) under and in compliance with the CORSIA requirements.

The scope of project types that can be supported by these investments is incredibly broad. Using the Gold Standard's GSF Impact Registry as an example, ICAO designates all Gold Standard verified emissions reductions ("VERs") issued to activities that started their first crediting period from 1 January 2016 as eligible, subject to the narrow range of limited exceptions expressed in the eligibility document linked above. This means that a lessor can support a carbon project or mitigation activity based on a tailored strategy that may include input from its customer base. What a lessor and its customers choose to support and finance will be for them to decide, but (the Gold Standard) examples include energy efficiency, soil carbon, agriculture, livestock and biogas-based projects¹⁷.

Other registries, such as the ART Registry, focus on carbon reduction and removal through forestry and nature-based projects. Gold Standard, Verra and others are currently developing methodologies for green hydrogen projects¹⁸. Verra and other registries are continuing to develop removal-based methodologies (i.e. those that focus exclusively on removing GHGs from the atmosphere). Some registries differ on attribution of co-benefit-based certification for projects¹⁹.

Irrespective of the type of investment that a lessor elects to make, the principle of additionality should be at the forefront of its decision making. This is a defining concept for carbon projects – to qualify as a genuine carbon offset, the reductions or removals achieved by a project need to be "additional" to what would have happened if the project had not been carried out (e.g. continued as business-as-usual)²⁰. Several initiatives are combining to enhance the integrity of the voluntary carbon market to ensure a means by which high-quality, impactful projects can be identified with relative ease.

Investment structures

In other global industries, the narrative of buying carbon offsets exclusively for the purpose of "cleaning" scope 3 emissions profiles is quickly dissipating. This is in part due to guidance from the Science Based Targets initiative²¹ to reposition

¹⁴ https://www.icao.int/environmental-protection/CORSIA/Documents/TAB/ICAO%20Document%202008_CORSIA%20Eligible%20Emissions%20Units_March%2022.pdf

¹⁵ This is a living document that is regularly updated, but the registries that are listed as eligible as of November 2022 are the American Carbon Registry, the ART Registry, China's Registry of the GHG Voluntary Emissions Reduction Program, the CDM Registry, the Climate Action Reserve Voluntary Offset Project Registry, the Global Carbon Council Registry, Gold Standard's GSF Impact Registry and the Verra Registry.

¹⁶ It is also likely that this document will in time be updated to account for developments around ITMOs and A6.4ERs (these instruments are described in more detail below).

¹⁷ The live listing of CORSIA-eligible Gold Standard VERs can be viewed at https://registry.goldstandard.org/projects?q=&page=1&has_corsia_eligible_credits=true.

¹⁸ See, for example, <https://www.southpole.com/sv/hydrogen-for-net-zero-initiative>.

¹⁹ For example, all Gold Standard accredited projects feature some combination of attributes from the UN-approved range of Sustainable Development Goals. Investing in these not only positively impacts GHG emissions but also supports local communities and habitats in an effort to secure a just transition to net zero.

²⁰ This is why Verra and Gold Standard, for example, no longer accredit grid-connected renewable energy projects in developed economies (non-LDCs).

²¹ See <https://sciencebasedtargets.org/>.

offsetting from being a contributor to corporate decarbonisation strategies to being seen as a complement, and in part due to a desire on the part of major corporates to immerse themselves in carbon projects by providing direct finance, acquiring an equity stake or committing money to a carbon-investment fund. This is a strategic measure deployed for high-integrity and high-impact projects that corporates assess as having the potential to unlock a long-term stream of quality carbon assets that is in some way linked to their industry sector, ESG goals and/or decarbonisation strategy. For many, this is also felt to be a much more powerful story to tell than simply buying carbon credits and is seen as providing security of supply over the medium- to long-term.

A clear example is SMBC Aviation Capital's recently announced investments²² in projects that will yield high-quality, globally certified carbon credits that align with the UN's Sustainable Development Goals. It is part of SMBC AC's strategy to have the yield from these investments help their customers with compliance with CORSIA. This affords SMBC AC the opportunity to say that they have made an impactful investment that has a positive impact on GHG emissions and benefits local communities whilst simultaneously helping their customers with a compliance issue.

Some of the climate/carbon investment structures that have been recently deployed by major actors in various industries include:

Pre-funding and forward purchasing

Investors identify credible project developers with experience in developing nature-based or technologically-focused carbon reduction or removal projects. The criteria that investors consider include track-record, creditworthiness, project-types, geographical focus, whether co-benefits are a feature and whether the credits to be issued for the project will be eligible for certain uses (such as for CORSIA). The investor agrees to provide up-front funding for the project to enable the developer to bring the project through various developmental milestones to accreditation with an eligible standard and issuance of the first volume credits. How the payments are structured will depend on the risk profile and the project type. In exchange for this pre-funding, credits are usually offered by the developer at some level of discount to market up to a certain volumetric threshold beyond which the investor may negotiate a right of first refusal. Whether there is some form of security over shares or assets or liquid security in the form of letters of credit or parent company guarantees is usually up for negotiation and will depend on the counterparties involved.

Pre-funding with a carbon stream

This emerging structure is similar to a forward purchase, but instead of locking in a discounted fixed price for future credits, the parties agree that title to the whole or partial volume of credits will pass (promptly after issuance by the relevant registry) to an investor. This investor is required to sell the credits in the open market with the possibility that the ultimate purchasers / end-users may be narrowed to a particular sector (e.g. aviation). The investor is incentivised to procure as high a price as possible, part of which will be passed through to the project developer.

Contracting through an intermediary

Some investors will rely on the expertise of an intermediary such as a carbon broker to pre-fund and contract with a variety of projects on its behalf through back-to-back emissions reductions purchase agreements. The advantage with this structure is a portfolio spread and a delegation of key responsibilities to industry experts. The disadvantage is that the intermediary retains a margin for its services that would otherwise be paid directly to the project developers / local communities.

Investing into a climate/carbon fund

Specialist funds have been and continue to be established with the purpose of pooling and harnessing corporate capital for high-impact carbon-based investments. The structures behind these funds are varied and are ultimately driven by the return expectations of their investors. Are the investors seeking a financial return or is their investment focused on procuring and taking title to high-quality carbon credits? The fund managers would typically have experience in international climate finance and carbon project development, and their investments may be focused to cater to the needs of their investor base (e.g. investments limited to CORSIA-eligible project activities and methodologies).

Investing directly into a project/taking an equity stake

An investor may decide to invest directly into a specific project or project developer based on a range of criteria and its own strategic goals. This is analogous to infrastructure project investment and may be documented via share purchase

²² <https://www.smbc.aero/esg/carbon.html>.

agreements, shareholder agreements, project development agreements or offtake agreements providing some combination of equity / debt funding. The deployment of this type of structure in the market is a sign of its maturity as it is demonstrative of experienced project developers of other asset-classes applying their skillsets and experience to carbon project development.

Lessor engagement with CORSIA and the carbon market

CORSIA-compliance, and compliance with CORSIA-like schemes²³ creates a requirement for offsets that is a known, measurable liability for airlines and lessors. Sophisticated tools exist that allow lessors to monitor the emissions of their customers and calculate liability to CORSIA and CORSIA-like schemes²⁴. As a result, lessors are able to monitor liability and manage risk, perceived or actual, with their airline customers, relying on their airline customers to update them on compliance with their offsetting obligations.

Alternatively, some lessors are participating in the carbon markets themselves²⁵ and provide carbon credits available for offset to airlines. This approach differentiates them from other lessors, perhaps provides a lower-cost solution to airlines that do not have great purchasing power and begins to tackle the difficult “E” of ESG reporting. Lessor engagement could also offer airlines respite from the need to rapidly climb the curve in the carbon investment space, which is complex and specialised, and which may require a significant human resources commitment.

Article 6: the new dimension and the opportunity

Background on Article 6

The Paris Agreement requires the submission of a nationally determined contribution (“NDC”) by each party to the Paris Agreement on a five-year cycle. An NDC sets out the level by which the applicable country is committing to reduce its national emissions and, in some cases, sets out (to varying degrees of detail) the measures that that country will take in order to achieve its emission reduction objectives. Every five years, and more regularly if they wish, countries are supposed to enhance their ambitions and submit updated NDCs to the secretariat. The purpose is to ensure that the global community remains on track to holding the increase in the global average temperature to “well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels”²⁶.

Article 6 of the Paris Agreement recognizes that some parties may “*choose to pursue voluntary cooperation in the implementation of their nationally determined contributions to allow for higher ambition in their mitigation and adaptation actions and to promote sustainable development and environmental integrity*”. It goes on to set out three principal methods for implementing this “voluntary cooperation”. The two methods that are most relevant to this paper are:

- (i) Article 6.2: cooperative approaches between parties or other entities that involve the use of internationally transferred mitigation outcomes (“ITMOs”). In simple terms, cooperative approaches will generally be bilateral or multilateral agreements between country parties to cooperate on the achievement of mitigation outcomes in the country that hosts the project activity. Effectively, it is one country financing a climate change mitigation project in another country in exchange for ITMOs that the financing country can then apply towards the targets set out in its own NDC. Article 6.2 also allows host countries to transfer ITMOs for use by non-governmental actors, including airlines under CORSIA or companies seeking to support a voluntary claim; and
- (ii) Article 6.4: a new mechanism which establishes the framework for the creation, transfer and use of unitised mitigation outcomes referred to as “A6.4ERs”. An A6.4ER can be traded on what is effectively a new carbon market through a registry that is currently in its design phase with the Supervisory Body (a new entity established at UN-level to oversee the Article 6.4 mechanism). An A6.4ER may constitute an ITMO and be authorised for use as part of a cooperative approach under Article 6.2.

Although the Article 6 text was agreed as part of the Paris Agreement itself in Paris in 2015, it took countries six years to

²³ For example, EU ETS, Swiss ETS and UK ETS.

²⁴ See, for example, <https://www.pace-esg.com/>.

²⁵ See SMBC AC above. According to its annual report, AerCap has also proceeded to “support two projects to offset these unavoidable emissions from our global office operations (Scope 2) and employee business travel (Scope 3)”. It is not clear if this is an investment or a purchase of offsets: <https://investors.aercap.com/environment-and-sustainability>.

²⁶ Article 2(a), Paris Agreement.

agree on the rules pursuant to which these mechanisms would be implemented (the “**Article 6 Rules**”) at COP26 in Glasgow. The rules are complex and detailed with some material gaps still remaining. Little additional clarity was provided at COP27 in Sharm El-Sheikh with many of the difficult topics²⁷ pushed to next year’s sessions of the Supervisory Body as well as to COP28 in Dubai. Capacity building under Article 6.2 has already commenced while hopefully the first A6.4ERs will be issued in the next few years with momentum picking-up quickly thereafter.

Key features of the Article 6 Rules

The Article 6.2 market mechanism and ITMOs

The Article 6 Rules set out that an ITMO must be a 2021-onward mitigation outcome that is “real, verified and additional” and may include an emissions reduction or removal (together with its co-benefits) but, until further clarity is provided on avoidance activities²⁸, may not be an avoidance of emissions. Once transferred internationally, such a mitigation outcome will constitute an ITMO. A host country (being the country in which the activity that generates the mitigation outcome) has the right to decide whether the mitigation outcomes achieved within its jurisdiction are authorised for use towards:

- (i) its own NDC or the NDC of another country (that of the buying/investing party); and/or
- (ii) international mitigation purposes; and/or
- (iii) for other purposes.

The terms “international mitigation purposes” and “other purposes” were deliberately left undefined to give countries the freedom to determine how they wish to leverage the benefits of the Article 6.2 framework. However, most commentators²⁹ understand that “international mitigation purposes” is intended to refer to schemes such as CORSIA and “other purposes” to, amongst other potential routes, the voluntary carbon market. Accordingly, a country with resources and/or an ambition to produce green hydrogen or sustainable aviation fuels could authorise these activities for other international mitigation purposes and generate ITMOs that could ultimately qualify for retirement under CORSIA. This could be considered a significant tool for contributing to a just transition in the Global South with the potential to unlock globally “in-demand” industries that will generate significant revenue streams for countries that are catching up on industrialisation, allowing them to reach their economic potential without continuing to extract fossil fuels.

ITMOs should, in time, be a coveted carbon asset as compared to other types of credits that have existed in the market to date. There are extensive provisions in the Article 6 Rules that require a host country to make what is referred to as corresponding adjustments to its national emissions ledger on the sale or transfer of an ITMO, irrespective of the “use” for which the host country authorises a particular mitigation outcome. This is integral to the market as it ensures the prevention of double-counting (the scenario where a mitigation outcome is sold and a claim to that outcome is made both by the host country and the buying entity) and is why some analysts³⁰ forecast that the value of ITMOs (including A6.4ERs) may, in time, prove to be significantly higher than the value of other credit-types.

The Article 6.4 market mechanism and A6.4ERs

The Article 6 Rules provide that, unlike with Article 6.2, the Article 6.4 mechanism is to be governed by the Supervisory Body whose role and function includes:

- (i) to develop and approve methodologies and standardised baselines;
- (ii) register activities as Article 6.4 activities, renew crediting periods and issue A6.4ERs;
- (iii) administer and maintain the registry for the mechanism; and

²⁷ These include the definition of “removals”, guidance on eligible methodologies, and eligibility of avoidance-based project activities.

²⁸ At COP27, the Subsidiary Body for Scientific and Technological Advice was tasked with considering whether Article 6.4 activities could include avoidance and conservation enhancement activities in its fifth session due to take place in November-December 2023,

²⁹ https://assets.ey.com/content/dam/ey-sites/ey-com/pl_pl/noindex/2022/ey_carbon_credit_rights_under_the_paris_agreement_november_2022.pdf.

³⁰ <https://www.greenbiz.com/article/what-passage-article-6-means-carbon-markets>.

(iv) promote the consideration of human rights, apply robust social and environmental safeguards and develop tools and approaches for sustainable development.

It is unclear what methodologies will be approved by the Supervisory Body³¹, but the expectation is that the Supervisory Body will consider both methodologies that currently exist within, and have been approved by, the many registries in the voluntary carbon market as well as the Kyoto-Protocol era's Clean Development Mechanism, as well as new activity types, including removals – which did not feature significantly under the CDM. Accordingly, the range of activities that may qualify is, if not unlimited (the inclusion of avoidance-based credits, for example,³² remains under consideration), then very broad provided that certain requirements are met – methodologies must encourage ambition over time; encourage broad participation; be real, transparent, conservative, credible and below business as usual; avoid leakage, where applicable; recognise suppressed demand; align to the long-term temperature goal of the Paris Agreement; and contribute to reducing emissions in the host country, and align with its NDC and long-term low GHG emission development strategy. Crucially, methodologies must also specify an approach to demonstrating additionality.

It is expected that private sector participation in the Article 6.4 mechanism will, together with progressive and necessary implementation of the mechanism by host countries, be key to driving and scaling this market.

Interaction with the voluntary carbon market

It is not yet entirely clear how the Article 6 market mechanisms and the current voluntary carbon market will interact, particularly if the former will subsume the latter or if the two will coexist. Standards such as Verra and Gold Standard intend to label credits on their registries that have been authorised for use under Article 6, and the market expectation is that these credits will yield a premium price due to the requirement on host countries to make corresponding adjustments³³. From a CORSIA perspective, guidance is awaited from ICAO on whether credits of 2021 (and subsequent) vintage will require a corresponding adjustment. If this is required, then the availability of CORSIA-eligible credits with a corresponding adjustment label may be limited until such time that the Article 6 mechanisms are fully operationalised.

Implications for the private investment community

The private investment community is expected to work with governments and project developers to encourage the rollout and implementation of the Article 6 mechanisms with haste. In the best-case scenario, these mechanisms will serve to provide critically needed finance to developing nations in the Global South that enable and unlock the types of nature-based and technological solutions that will, in time, pave the way for global industries to decarbonise their operations.

In line with this financing, the aircraft leasing community could pool its resources to finance and advance projects in developing nations that will ultimately yield the solutions that the aviation industry needs to decarbonise. Examples include projects that produce biochar³⁴ or the scaling of production and processing of SAF feedstocks. The market mechanisms exist. What is missing is resources, engagement, collaboration and application.

Scaling the market and ensuring integrity

The carbon market quadrupled in value in 2021 (from 2020) to approximately US\$2bn³⁵ and is forecast to grow to a valuation of US\$50bn by 2030 according to McKinsey. A BloombergNEF analysis noted that the “*price of offsets could rise significantly, creating a US\$190bn market as early as 2030*”^{36,37}.

In addition to rapid growth, there are several credible initiatives that are working to enhance transparency and integrity in the market, including the Voluntary Carbon Markets Integrity Initiative (the “**VCMI**”) and the Integrity Council for the

³¹ It is expected that the Supervisory Body will issue guidance on methodologies for consideration by parties at COP28 next year.

³² See footnote 27.

³³ Both standards have also taken initial steps to bring their credits into compliance systems under the umbrella of Article 6, through their eligibility for CORSIA as well as recognition under the Singaporean carbon tax regime.

³⁴ A charcoal produced from plant matter and stored in the soil as a means of removing carbon dioxide from the atmosphere.

³⁵ <https://www.ecosystemmarketplace.com/articles/the-art-of-integrity-state-of-the-voluntary-carbon-markets-q3-2022/>.

³⁶ <https://www.bloomberg.com/professional/blog/carbon-offsets-price-may-rise-3000-by-2029-under-tighter-rules/>.

³⁷ This does not necessarily account for the effect that Article 6 may have on the market.

Voluntary Carbon Market (the “**ICVCM**”).

The VCMI is developing guidance on defining an acceptable and meaningful approach to offsetting in the context of a company’s overall decarbonisation strategy, in an effort to provide transparency on the demand side. Its Provisional Claims Code (which has recently undergone public consultation) aims to provide guidance to buyers of offsets on what is appropriate from a claims perspective with reference to the buyer’s strategy and the type of credit being procured. The code should help investors avoid greenwashing accusations relating to their use of offsets as part of their broader decarbonisation strategies.

On the supply side, the ICVCM is developing its “Core Carbon Principles” and “Assessment Framework”, which is a standard for high-quality carbon credits that will build consensus and be applied uniformly across the globe. The draft Core Carbon Principles and Assessment Framework have also recently undergone public consultation and final versions are expected in 2023.

COP27 also saw the International Organization of Securities Commissions (“**IOSCO**”) launch a 90-day public consultation on (amongst other things) key considerations for enhancing the resilience and integrity of voluntary carbon markets. IOSCO described this consultation as “*an opportunity to consider a framework that promotes market integrity and drives investor capital to high integrity carbon credits in the voluntary carbon markets*”³⁸.

These initiatives, alongside the promise of the Article 6 mechanisms, should bring confidence to the market enabling increased investment volumes to flow to projects and communities that require funding and to encourage investment into nascent technologies that have not yet achieved the economies of scale that are necessary for them to flourish organically.

Integrating credits into leases

Lessors are increasingly including monitoring requirements in relation to EU ETS and CORSIA in leases, and integrating arrangements relating to lessor-generated offsets will be a natural fit for some, over time. But in the near term, if lessors do enter into more projects to generate their own offsets, care must be taken not to restrict the transferability of a lease to a pool of similar lessors. At least initially, we can expect the provision of offsets as a lessor product offering to sit outside of leases and either terminate upon the assignment or novation of a lease, or continue notwithstanding that the leasing arrangement has passed to a new lessor.

With time, and if the position of lessors generating their own offsets becomes more widespread, integration within lease agreements could become a more common lease feature. Financiers will then need to consider if it is appropriate to take security over the offsets generated by lessors, or source their own offsets for use following any enforcement action against a lessor, where the underlying lease remains intact.

Conclusion

The aircraft leasing community has significant capital, both human and financial. It is well-established and sophisticated with deep expertise in complex investment and leasing structures, including in developing countries.

The industry has, therefore, the great potential to assist with the problem that aircraft present in the green transition – there are major technological constraints for rapid decarbonisation.

The community has the opportunity to invest in and help develop the natural and technological resources needed to reach net zero, rather than relying on airlines and governments to lead this investment and development. Doing this whilst simultaneously solving a compliance problem for its airline customers should be a win-win.

We hope that the tools and market mechanisms identified in this paper provide guidance to the industry on how to participate more effectively in the carbon markets and assist in the transition to net zero.

Jordan Labkon – we hope and expect that many of the readers of this paper will be familiar with the work of our friend and colleague, Jordan Labkon. We worked with Jordan for many years and his recent passing was deeply saddening and shocking to us both. Jordan had a keen interest in ESG and CORSIA, and participated in much of the industry’s response to the regulatory issues raised. His work in this field mattered and will continue to matter, and this paper was prepared with his memory in mind. We, like many of you, miss his wisdom, kindness and generosity.

³⁸ <https://www.iosco.org/news/pdf/IOSCONEWS668.pdf>

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