



Gulf International Bank

Climate unlock or no-go: the elusive potential of carbon markets

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What is the carbon market?

Carbon markets refer to trading systems in which carbon credits are bought and sold.¹ Effectively, they try to assign property rights for the atmosphere.

The idea for carbon markets originated from the UN Framework for Convention on Climate Change in 1992, and was further conceptualized in the Kyoto Protocol in 1997 as trading at the country level. These so-called article 6 markets are yet to be fully operationalized, though some pilots have taken place.

Regulatory / compliance carbon markets followed such as the EU emissions trading system (ETS) in 2005 and the China ETS. In these markets, emissions are capped at a certain level and emitting entities may trade between themselves if they expect to go over their allocated emissions.

Voluntary carbon markets are a more recent phenomenon and refer to the buying / selling / issuance of carbon credits on a voluntary basis. The earliest exchange was the Chicago Carbon Exchange in 2003, but many others have been created in the past few years. Exchanges are often focused on specific industries (e.g. aviation) or regions, such as the Regional Voluntary Carbon Markets Company that was established by Saudi Arabia's Public Investment Fund in 2022 with a focus on the Middle East and Africa.

What are some examples of carbon credits?

Carbon credit projects can be split into those that eliminate CO₂ by: Reducing, Removing and Avoiding. They can also be divided into nature-based and engineeredⁱ. Examples include:

- Nature-based
- Emissions avoidance: preservation of forest land (to avoid it being converted to farmland)
- Carbon removal: regenerative agricultural practices that sequester carbon into soil
- Engineered
- Carbon reduction: energy efficiency projects, cookstove projects
- Carbon avoidance: carbon capture and storage / solar plants
- Carbon removal: direct air capture if emissions from the atmosphere are combined with storage

What's the difference between carbon credits and carbon offsets?

People often use the term carbon credit and carbon offset interchangeably, but the way we think about these two definitions is:

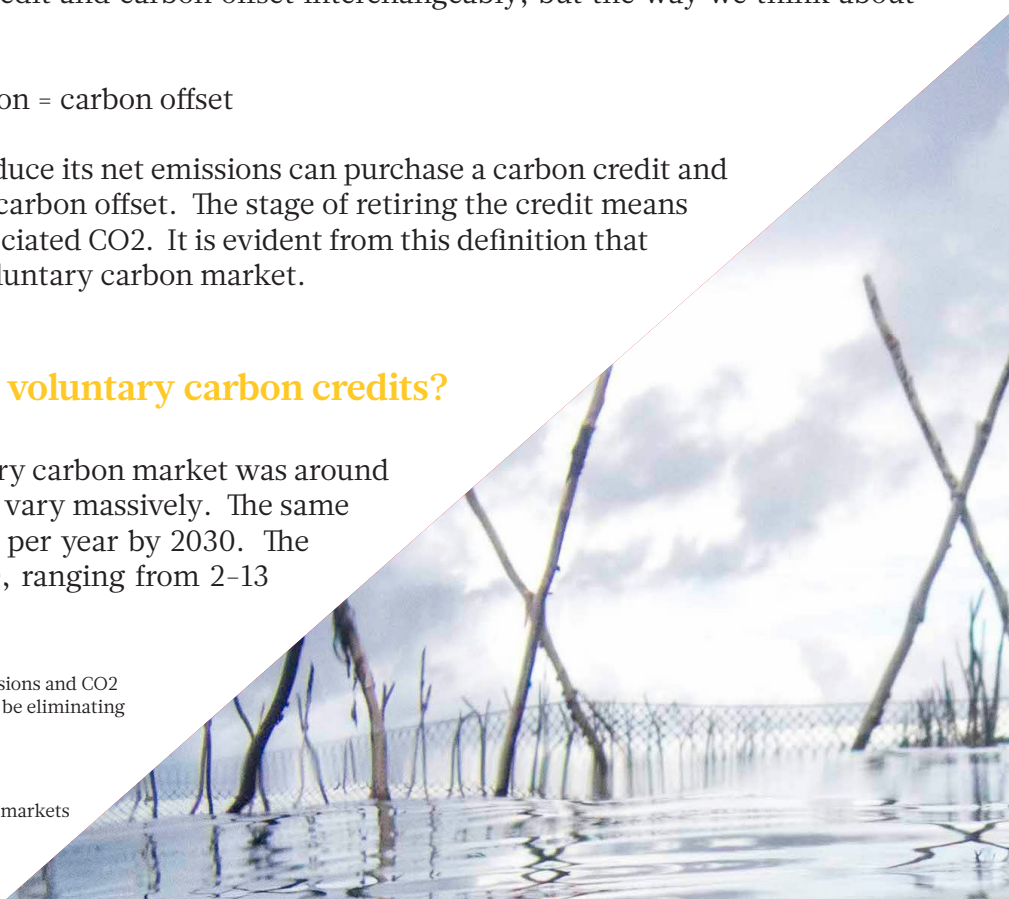
Carbon credit + entity emitting carbon = carbon offset

An emitting entity that wishes to reduce its net emissions can purchase a carbon credit and then retire it, thereby resulting in a carbon offset. The stage of retiring the credit means no-one else can lay claim to the associated CO₂. It is evident from this definition that carbon offsets always refer to the voluntary carbon market.

How high is the demand for voluntary carbon credits?

According to McKinsey, the voluntary carbon market was around 0.1Gt in 2020. Estimates for growth vary massively. The same study suggested a range of 0.2-2 Gt per year by 2030. The uncertainty is even higher for 2050, ranging from 2-13 Gt per year.

ⁱFor the purposes on this article, we refer to carbon emissions and CO₂ interchangeably for ease. In practice, carbon credits may be eliminating greenhouse gases other than CO₂



The driving idea behind the potential exponential growth is that countries will meet their legal obligations under the Paris Agreement and will require companies in their jurisdictions to play their part in this. There are three main uncertainties:

1. Whether countries will in fact act so as to meet the Paris Agreement – through their laws, regulations, guidance etc.
2. Whether there is a need for carbon credits to meet these goals.
3. Whether this will be enacted through voluntary carbon markets.

On the second point, research shows that carbon credits are likely to be important in helping achieve net zero emissions by 2050. While emissions reduction is the main way to achieve net zero, technology limitations and the fact that some emissions cannot be eliminated means that the emissions reduction pathway to a 1.5C world is generally accepted to require negative emissionsⁱⁱ.

On the third point, we think there will be a shift towards mandatory carbon offsetting over time.

As well as genuine demand drivers, speculation also plays a significant role in today's voluntary carbon markets. The data show a large gap between the volume of credits purchased and the numbers retired – suggesting that some market participants are holding carbon stocks. That is not surprising, given the expected increase in prices over time, although it is unclear whether that will be enough to compensate for price falls as carbon credit vintages age.

What drives pricing?

Although one kg of CO₂ is the same as any other, carbon credits are not in fact a commodity. The prices of voluntary carbon credits vary from a few cents per metric tonne of CO₂ emissions to over USD 300 per metric tonne of CO₂ emissionⁱⁱⁱ.

Factors that determine the price per metric tonne include^{iv}:

- Perceived quality of the carbon credit
- The type of projects associated with the carbon credit
- The market in which the carbon credit is traded on
- The standard used to issue the credit (more well-known standards such as the Gold Standard / Verra) tend to have a higher price than lesser known or newer standards)
- The year in which the credit was issued (in general terms, newer credits tend to have a higher price attached to them)
- The country and region in which the project is located (projects in the global north tend to have a higher price than projects in the global south)
- Additional benefits beyond carbon
- If the project is nature based or engineered (engineered projects tend to cost more)
- If the project is jurisdictional or project based
- If it's a carbon removal or avoidance project (carbon removal projects tend to cost more than carbon avoidance projects)

Furthermore, a lower price is not necessarily a good thing. Low pricing can indicate quality issues or controversies, including around the equitableness of the project (e.g. whether indigenous peoples' rights have been violated). Stories abound of appropriation of land to plant trees in developing countries, for example.

All this means that although traders might seek out opportunities for arbitrage, careful due diligence is needed to understand the nature of the underlying credits and it is unlikely to be appropriate to push down prices.

How do the current prices for carbon credits reflect the internal price of carbon emissions?

Internal Carbon Pricing (ICP) can be either implicit or explicit. Both refer to the cost of eliminating a unit of CO₂ through actions taken by the entity. This can be implicit – for example as calculated in a project to install LED lighting or solar panels or change a car fleet to electric. However, an increasing number of companies are setting carbon prices – these do not necessarily reflect the actual cost of eliminating carbon by internal methods, but instead are a management device.

The purpose of these ICPs is to encourage a reduction in CO₂ through factoring (at least some of) the cost of carbon into business decision-making, project management, risk management or to incentivize more sustainable choices. For example, as well as the traditional costs of opening a new office, additional carbon emissions because of the new premises would also be added to the cost/benefit analysis and decision-making. Similarly, when booking business travel, individuals might be presented with a cost associated with the carbon emissions for their flights. Some companies take this further with a carbon budget – i.e. a maximum volume of carbon emissions that cannot then be exceeded.

CDP asks companies about whether / when they anticipate adopting Internal Carbon Pricing. A study using these data looked at the top 100 companies by revenue in each sector in 2022, and found that while around 50% of companies in energy use ICPs, only 1% of healthcare companies do so. A study by McKinsey & Company found that even where companies have set ICPs, such price are below international guidance.^{vi}

How high is the credibility and integrity of carbon credits?

When considering an organization's carbon footprint, the primary goal should always be to reduce emissions. Hence there will always be a credibility question about companies buying from carbon markets. Views on the acceptability of using carbon credits to offset residual emissions varies. Specifically, if you have projects in place to reduce emissions over time, should you nonetheless offset the remainder today? Climate science says yes, as it is the stock of carbon in the atmosphere that matters.

The second credibility issue is with respect to the supply of projects. There have been many incidents that undermine confidence in the integrity of carbon credits. Issues often stem from several underlying issues.

Additionality. Projects need to demonstrate that the carbon elimination would not have happened were it not for the credits. This has been highlighted recently for renewable energy projects, with comments that they were commercially viable, and the incremental impact of the credits cannot be demonstrated.

Counterfactual. Several of the methodologies for assessing carbon elimination rely on the counterfactual (what would have happened anyway). An example is REDD+ (reducing emissions from deforestation and forest degradation), where project owners were accused of overstating emissions reductions associated with its 'avoided deforestation' credits. How can one generate a credit for protecting a forest that was never in any danger of being cut down?

The allegations claimed that only 6% of avoided deforestation credits represented real emissions reduction^{viii}.

In a similar example, cookstove projects are another common source of credits. These credits fund the provision of cookstoves that are cleaner / less energy intensive. These are distributed to communities that are traditionally reliant on dirty fuels (e.g. wood or kerosene) that cause premature deaths. However, a recent study found that “cookstove credits sold on the basis of some of the most popular methodologies in the market had led to at least 10 times fewer avoided emissions than claimed”^x.

The demand side of the market is eagerly awaiting the implementation of the Integrity Council for Voluntary Carbon Market’s Core Carbon Principles (CCP). The CCPs intend to establish fundamental principles for high-quality carbon credits that create a verifiable climate impact, based on the latest science and best practice. The initiative also issued programme-level assessment framework and assessment procedures to help carbon crediting programmes verify that credits issued comply with the CCPs.

However, suppliers are surely viewing the initiative with mixed feelings – given the added assessment and reporting burden and associated costs, and possibility that all the additional work will not translate into more demand or higher prices.

In recent years, companies have begun to shy away from talking about using carbon credits to offset their emissions, thereby reducing their net emissions. Sometimes referred to as ‘green-hushing’, this likely reflects concerns about whether enough has been done to first reduce absolute emissions and worries about the quality of the credits purchased. For example, Nestle announced in 2023 that they are moving away from the use of offsets and focusing instead on emissions reduction in their value chain^{xii}. Other companies include Gucci and EasyJet.

What is your forecast regarding voluntary carbon markets?

I am fundamentally optimistic – we will find a way to co-ordinate and deliver on our collective commitment to mitigate climate change and avoid the worst of its catastrophic impacts. This will underpin demand for carbon credits in far greater volumes than we see today.

It makes economic sense to specialise across the supply chain, and we expect this to prevail – and hence a role for buying and selling carbon credits. Trust is fundamental, and clearly needs to be improved. This will underpin the supply of credits. We expect a move towards removal only credits as per Science-Based Target Initiative (SBTi) guidance. That should help to eliminate some of the credibility issues already discussed.

We expect to see a blurring or merging of voluntary, mandatory and article 6 markets. If countries mandated all companies to have, and then meet, their net zero transition plans, for example, or if mandatory cap and trade schemes were expanded.

Similarly, we expect to see increasing market regulation. This is a common pattern – with a free market followed by industry-led guidance to formalize and standardize, and then ultimately crystallized in regulation.

Overall, we expect this to be a topic that we will still be talking about for many more years

References

ⁱWhat Every Leader Needs to Know About Carbon Credits (hbr.org)

ⁱⁱCarbon credits: Scaling voluntary markets | McKinsey

ⁱⁱⁱ<https://www.spglobal.com/commodityinsights/en/market-insights/blogs/energy-transition/061021-voluntary-carbon-markets-pricing-participants-trading-corsia-credits>

^{iv}<https://www.thallo.io/the-price-of-carbon-credits-an-overview/#:~:text=Carbon%20credits%20are%20unsurprisingly%20priced,in%20which%20it%20is%20traded>.

^vCarbon markets could protect nature and the planet, but only if the rights of those who live there are recognized too (theconversation.com)

^{vi}Prime Numbers: Internal carbon pricing is on the rise, but needs to rise higher (mckinsey.com)

^{vii}Revealed: top carbon offset projects may not cut planet-heating emissions | Carbon offsetting | The Guardian

^{viii}Millions of carbon credits are generated by overestimating forest preservation (cam.ac.uk)

^{ix}Carbon credits from cookstove emissions largely worthless, study finds (ft.com)

<https://www.spglobal.com/commodityinsights/en/market-insights/latest-news/energy-transition/010524-price-s slump-in-2023-clouds-outlook-for-voluntary-carbon-market#:~:text=Sharp%20declines%20in%20carbon%20credit,REDD%2B%20credits%20issued%20by%20Verra>

^xCarbon credits from cookstove emissions largely worthless, study finds (ft.com)

^{xi}<https://www.insideenergyandenvironment.com/2023/04/icvcm-launches-core-carbon-principles-for-voluntary-carbon-market/>

^{xii}Nestlé Moves Away from Carbon Offsets to Focus on Emissions Reductions Across Brands – ESG Today

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