FAIR CLIMATE FUND

FROM 30 CENTS TO 25 EUROS

The price of a tonne CO_2

Introduction

One of the best-performing commodities at the moment is CO_2. At the beginning of 2018, the price of European emission rights, the right to emit one tonne of CO_2, was around 8 euros. A year later the price is already at 25 euros. Carbon credits, which can be exchanged for emission allowances under certain conditions, have long been traded for less than 30 eurocents. And companies that voluntarily compensate their carbon footprint with carbon credits, pay prices that range from less than 1 euro to more than 20 euros per tonne. What is the difference between these tradable tonnes of CO_2 and why the big differences in price? In this article we try to clarify this.

Different types of emission allowances

For a better understanding, it is important to first understand the difference between rights to emit CO_2 (emission allowances) and rights to claim already reduced CO_2 (carbon credits). In addition, there is a difference between purchasing these rights on a voluntary basis or due to an obligation. We also need to place this in the context of the international climate agreements that ultimately laid the foundation for the lively trade in greenhouse gases.

Type	Emission allowance	Carbon credit	
Utilization	The right to emit 1 tonne of CO_2	Rightful claim to 1 tonne CO_2e reduction within the Kyoto Protocol	Verified claim on 1 tonne CO_2e reduction realized for voluntary compensation
Examples and prices	EU ETS - **European Union Allowance (EUA): €25** Korea ETS - **Korean Allowance Unit (KAU): €25** California Cap and Trade Program - **California Carbon Allowance (CCA): €14** Shanghai Pilot ETS - **Shanghai Emissions Allowances (SHEA): €5** *Rounded prices in may 2019	Clean Development Mechanism (CMD) projects - **Certified Emission Reduction (CER): €0,23*** Joint Implementation (JI) projects - **Emission Reduction Unit (ERU)** Land Use, Land Use Change and forestry (LULUCF)- **Removal Unit (RMU)** *Forward CER December 2019 price	Credits of projects with a voluntary standard: **Verified Emission Reduction (VER)** **- Gold Standard: €4*** **- VCS: €2*** **- CMD: €3,50*** **- REDD+: €4** **- Fairtrade minimum-price: €8,10 - 13,00** *Average prices - Ecosystems Marketplace - State of the Voluntary Carbon Markets 2017

FairClimateFund, 2019

Emission allowances

Following the reports of the Intergovernmental Panel on Climate Change (IPCC), the United Nations Framework Convention on Climate Change (UNFCCC) was established in 1992. The aim of this climate convention: "to stabilize the concentration of greenhouse gases in the atmosphere to such a level that a dangerous human influence on the climate is prevented". This treaty has since been signed by 197 countries. Every year all countries meet at the Conference of the Parties (COP) to discuss the progress and ambition with regard to climate change.

The Kyoto Protocol was signed at the third COP in 1997. The implementation of this treaty regulates greenhouse gas emissions from western industrialized countries, the so-called "Annex I countries". The treaty finally entered into force in 2005 after sufficient countries had signed and ratified the treaty.

All Annex I countries in the treaty have been granted emission targets for a first period (2008-2012) and second period (2013-2020). For the second period, 37 parties have committed themselves, the EU and its 28 member states, Australia, Belarus, Iceland, Kazakhstan, Liechtenstein, Norway, Switzerland and Ukraine. The United States, Canada, Japan, Russia and New Zealand have made no commitment for the second period and also China and India have no obligation within the Kyoto Protocol.

The treaty is enforced by allocating allowances for each period, Assigned Amount Units (AAUs). One AAU stands for the right to emit 1 tonne of CO_2e (CO_2 or equivalent greenhouse gas) during that period. Part of the protocol is that these rights may be traded, one of the so-called flexible mechanisms. Countries that need fewer AAUs than allocated can sell AAUs to countries that need more. Since the start of the second period, this international emissions trading has only been used to a very limited extent. Instead, we see emissions trading mainly taking place at regional, national or local level.

By far the largest emissions trading system in the world is the European Union Emission Trading System (EU ETS) that has existed since 2005. The EU ETS must ensure that the European Kyoto targets are met: 20% reduction of greenhouse gases in 2020 compared to the level in 1990 The EU ETS regulates emissions from around 11,000 companies in the energy sector, industry and aviation (45% of total emissions in the EU). For the other sectors, each European country is individually responsible for achieving the climate goals.

Emission allowances within the EU ETS, European Union Allowances (EUAs), are partly allocated to companies. Companies that emit more must purchase EUAs. The total number of allowances is being phased down, so that the total emissions are reduced. Allowances are traded through an auction system and sold to the highest bidder. If a company cannot provide enough emission allowances, a fine will follow.

The idea behind this system is that, due to market mechanisms, reduction measures take place where they are most cost-efficient. Because there is supply and demand in emission allowances, CO_2 emissions get a price. Companies make their own decisions on the cheapest options: purchase emission allowances or take emission-reducing measures. Other such "cap and trade" systems are found in South Korea, California and Canada, among others, but also China and Colombia are working on the implementation of an ETS and more countries are expected to follow.

Fluctuating prices of emission allowances

In the early years of the EU ETS (2005-2008) the price of the EUA was between 20 and 30 euros. From 2008, when the economic crisis started, prices have fallen to under 10 euros. Due to reduced economic activity, there was a surplus of emission allowances. Because these allowances can be saved, this also had an effect in the years following the crisis. The ETS was faced with considerable criticism, because the low price of the EUA would not motivate companies enough to emit less CO_2.

However, in 2018 there was a change in the price of the EUA. The improved economic climate, but especially the withdrawal of a surplus of allowances by the EU (market stability reserve), has led to this change. Due to the rising demand for emission allowances and the limitation of supply, we saw a sharp rise in the price of the EUA in 2018. In 2019, the price of the EUA even increased to 25 euros and it is expected that this might go towards 40 euros. Factors that will play an important role in this regard are the developments regarding Brexit and specific policy measures with regard to the market stability reserve of the EU ETS.

Carbon credits

Compliance market

In addition to emissions trading, there is another flexible mechanism within the Kyoto Protocol, the Clean Development Mechanism (CDM). Within the CDM, countries with a reduction obligation may achieve part of their target in non-Annex I countries. The idea behind this is that it is often more cost efficient to achieve reductions in poorer non-industrialized countries. One can think of projects in the field of renewable energy, reforestation, waste processing or energy saving. Every tonne of carbon emissions avoided within a CDM project results in a Certified Emission Reduction (CER). A CER gives the right within the Kyoto framework to claim a tonne of CO_2e reduction achieved in a non-Annex I country, or in other words "to get the credits for it".

These carbon credits can be traded just like emission allowances. CERs can be used up to a certain maximum, 2% for most countries, to meet the Kyoto obligations. Also within the EU ETS, these credits may be used instead of EUAs until 2020, under a number of strict conditions and up to a maximum. When a CER is used, it is canceled in the CDM register (retirement) and can no longer be traded.

In addition to the CDM, there is also the less well-known Joint Implementation (JI), this mechanism regulates carbon reduction projects in Annex I countries and produces Emission Reduction Units (ERUs). The third type of carbon credits within the Kyoto Protocol are Removal Units (RMUs). RMUs stem from carbon capture in Annex I countries due to forest growth or land use change.

Voluntary market

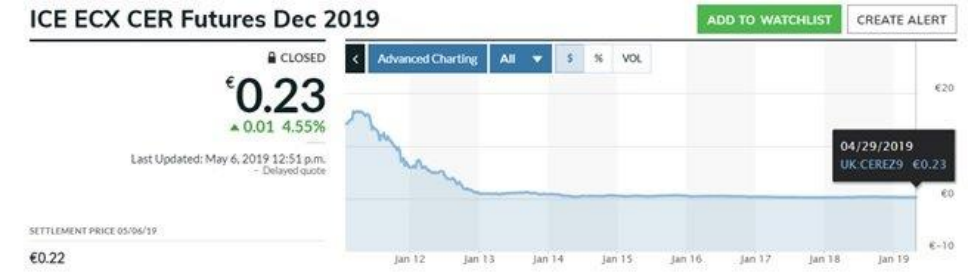
CERs are not only used to meet the reduction targets within the Kyoto Protocol, but also for voluntary carbon compensation. Buyers are usually companies or other organizations that want to mitigate their climate impact on a voluntary basis, we also call this offsetting or compensation. In addition to Certified Emission Reductions (CERs), which originate from CDM projects, in this market use is also made of Verified Emission Reductions (VERs). VERs are carbon credits that are generated by carbon offsetting projects that are specifically aimed at the voluntary market, also known as voluntary emission reductions.

Commonly used standards for this are Gold Standard and VCS (Verified Carbon Standard). Gold Standard was founded in 2003 by WWF and other international NGOs to ensure that CDM projects also contribute to sustainable development. The VCS standard is the most widely used standard and has been developed by the World Economic Forum (WEF) and the World Business Council for Sustainable Development (WBCSD), based on an effective standard with limited administrative burdens and criteria comparable to CDM.

Prices carbon credits

Compliance market

CERs have undergone the same price development for a long time as European emission allowances. Like the EUA, CERs made a free fall after the crisis. Where the EUA has recovered, it became clear in 2011 that CERs could only be used to a limited extent in phase 3 (2013-2020) of the EU ETS. Because the EU ETS was always the largest buyer of CERs, this led to a large surplus, causing prices to fall further below 1 euro. Today, CERs are traded in the compliance market for less than 30 cents.



Voluntary market

In the voluntary market, however, completely different prices apply for carbon credits, both for VERs and for CERs. The reason for this is that VERs are seen to a lesser extent as a commodity. In addition to price, qualitative aspects of a project also play an important role. For example, in addition to carbon reduction, a project can also focus on social impact or nature conservation. An example of this are clean cooking projects that, in addition to carbon reduction, also have a positive impact on health and poverty reduction. The extent to which buyers are willing to pay for these qualitative aspects, play an important role in the realization of the price of these credits.

Prices range from less than 1 euro for, for example, large-scale sustainable energy projects to prices that can go up to 20 euros for, for example, small-scale cookstove projects or reforestation. The average price in 2017 was around 3 euros, which is more than ten times as high as the market price for CERs.

However, even in the voluntary market the offer of credits is so high that the price is under pressure. The price of a carbon credit generally does not reflect the actual costs of reducing that tonne of CO_2. In addition to revenues from carbon credits, projects are often dependent on other sources of income, such as grants or donations from NGOs or governments. This not only undermines the sustainability of projects, but also the claim that the buyer of the carbon credit is 100% responsible for reducing that tonne of CO_2.

Fairtrade International has developed in cooperation with Gold Standard, the Fairtrade Climate Standard, an add-on to the Gold Standard. This voluntary standard sets a minimum price for carbon credits, based on the actual cost of reducing a tonne of CO_2 within a project. The minimum price must guarantee sufficient carbon revenues for the project to cover the total costs of the project. In addition, a Fairtrade premium is paid, which is used for social purposes within the local community such as climate adaptation activities.

Further price development carbon credits

Not much is expected from the market price of CERs, which now stands at 23 eurocents. The most important reason for this is the huge supply compared to the demand for CERs. In addition, it appears that CERs may no longer be used in the EU ETS after 2020. Specific types of CERs that meet certain criteria, such as those permitted within the Korean ETS, are expected to be traded for higher prices. Contracts are currently being concluded that vary between 4 and 8 euros.

Within the international aviation sector, there is currently talk of climate-neutral growth from 2021, the "Carbon Offsetting and Reduction Scheme for International Aviation" (CORSIA). If the sector is dependent on carbon credits for this, this would mean a substantial increase in the demand for both CERs and VERs. However, if all types of carbon credits are allowed, the expected impact on the price is still limited. The more specific the criteria that are set for these credits, the higher the impact on the price will be for the credits that meet those criteria.

Another determining factor for carbon credits are the National Determined Contributions (NDCs). It was agreed in the Paris climate agreement that from 2020 all countries must make their contribution to the reduction of greenhouse gasses, the Kyoto era is coming to an end. The NDC reflects the objectives of a country with regard to reducing greenhouse gas emissions and how these reductions will be achieved.

If it appears that emission reductions from offsetting projects are counted within the NDC of the country where the project is located, it is no longer possible to sell the emission reductions as carbon credits to foreign buyers. After all, the reductions have already been claimed by the host country and the sale of credits would mean a double counting of emission reductions. Determining policy decisions are, among other things, which sectors will be designated as NDC sectors and the possibilities not to include reductions

The introduction of a possible carbon tax could also have an impact on the demand for and price of carbon credits, in particular in the voluntary market. The question is whether companies that fall under the carbon tax will also voluntarily compensate and whether carbon credits up to a certain level may be used as an alternative to a carbon tax.

Finally, for the voluntary market much depends on the awareness of organizations and companies of the impact they have on the climate and the willingness to do something about it. We are seeing an increasing number of companies that strive for climate-neutral or even climate-positive business operations, products and services and the need to contribute to the Sustainable Development Goals (SDGs). For this reason, we therefore expect a continuing need for high-quality climate projects, which also contribute broadly to sustainable development in the long term.