20th July 2016

What consequences will Brexit have for the European carbon market?

Key Points:

- The United Kingdom has the second greatest greenhouse gas emissions in Europe (10% of emissions)
- Following the announcement of Brexit, the European carbon market dropped -20% in a few days, and has not really bounced back since
- Prices have fallen -45% since the start of the year, and the put-call spread is once again at its highest levels
- Investors are concerned about the ongoing reform process which is essential in order to improve the European carbon market
- Prices could recover if the United Kingdom negotiates to stay in the single market
- Any improvement in the economic situation, and in industrial production more specifically, will have a positive impact on carbon allowance prices
- Given the lack of immediate political vision, we are prioritising diversified investments in alternative energy

Brexit has pushed carbon prices down -20% in five trading sessions

The comments keep coming, and keep being repeated; the announcement of the United Kingdom's referendum result on 24th June was a surprise for investors. Polls gave a win for Remain, even up to a few hours before the results came in, and markets had already started to rally.

However, although the effect Brexit had on equity markets was brutal, it was nonetheless limited; most regional indices affected quickly recovered the losses caused by this change.

However, there is a market which remains deeply marked by the British people's decision to leave the European Union- the carbon market, which has been rather shaken up since the start of the year.

As a reminder, the carbon market was introduced in 2005 in order to help reduce greenhouse gas emissions in the European Union. The mechanism was designed as an extra support instrument for the energy transition, in addition to subsidies and national programmes. Born out of the success of the Kyoto Protocol, the Renewable Energy Directive (2009/28/EC) sets out figure-based targets by country for reducing greenhouse gas emissions, which are binding on member states. These country-specific figure-based targets aimed to ensure that by 2020 20% of the European Union's total energy consumption comes from renewable energy, and that greenhouse gas emissions are reduced by -20% as compared to 1990. Since inception, these objectives have been revised upwards, shooting for a -40% reduction in greenhouse gas emissions by 2030.

In Europe, the carbon market- the biggest carbon market in the world- was put in place as an "Emissions Trading Scheme" (ETS), otherwise known as a cap and trade system. It functions as follows:

1) **"Cap"**: the authorities set an absolute limit for CO_2 emissions authorised in the European Union. This limit is reduced over time in order to hit the thresholds set, first of all for 2020, and then for 2030.

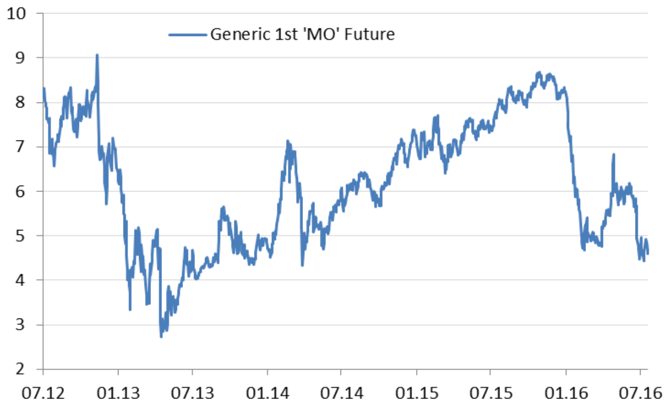
2) **"Trade"**: businesses then receive pollution "allowances" or "permits", the total volume of which is equal to the maximum CO_2 emissions limit set out above. These allowances grant businesses the "right to pollute" depending on the sector in which they operate. In order to stay on the right side of the law, businesses which do not manage to reduce their emissions must buy allowances on the carbon market from businesses that have managed to lower their emissions beyond the required limit. Compliance with the emissions quota is guaranteed by the threat of a hefty fine.

Why has the decision made on 24th June had such an impact on the carbon market?

After Brexit was announced, on the 24th June alone, ICE EUA futures contracts (expiry Dec16) fell -12.21%. Between

23rd June and 30th June, the correction hit -20.88%. This movement follows on from a -26.42% drop between the end of 2015 and the end of May 2016.

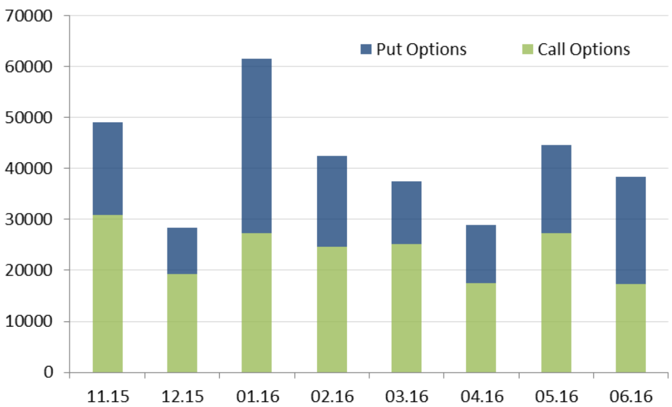
Price of Current Contracts (EU ETS – EUR/t)



Source: Bloomberg, BBGI Group SA

The volume of put options increased considerably, and the spread between put options and call options on the European Carbon Price Benchmark (Dec16) had not been so great (8.9 points) since the end of 2015.

Outstanding Positions (EU ETS)



Source : Bloomberg, BBGI Group SA

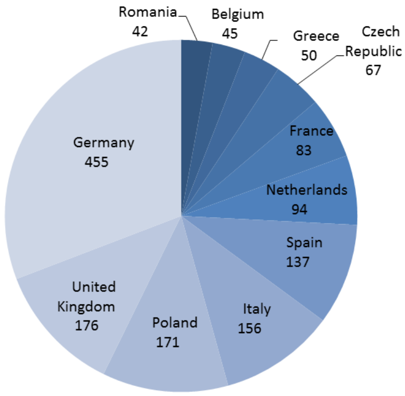
The United Kingdom, the second greatest greenhouse gas emissions in Europe

Although it may not really happen until 2019, the United Kingdom leaving the European Union implies serious consequences for the European carbon market. Indeed, the country's participation in the European carbon market is now seriously compromised.

The United Kingdom has the second greatest CO_2 gas emissions of the 31 countries participating in the European carbon market (Lichtenstein, Norway and Iceland also take part in the scheme without being EU members). Its emissions make up 10% of the total market, as compared to 26% for Germany.

According to Bloomberg's estimates, pollution allowance requests from the United Kingdom represented 48 million tonnes in 2014. If the country leaves the European carbon market, allowance requests will fall, and prices will take the first hit.

Top Ten CO_2 Emitting Countries (Million Tons)



Source: EU CITL, Bloomberg, BBGI Group SA

It should also be noted that most of the allowances are traded on the ICE Future Europe Exchange, based in London.

Brexit negotiations could stall carbon market reform

In our article dated 25/09/2015[1], we pointed out that the Environment Ministers of the 28 European Union member states adopted a decision on 18th September 2015, setting out the creation of a "Stability Reserve" for European greenhouse gas emissions allowances. This agreement, which is one facet of carbon market reform, will reduce surplus carbon credits available on the European market. This surplus has been driving low prices since 2009. Today, the number of surplus allowances is estimated at more than two billion. With the stability reserve, should the surplus head above a certain threshold, the excess allowances will be withdrawn from the market and placed in the reserve in order to avoid imbalances. The allowances can also be taken out of the reserve and placed back on the market.

There are still, however, many negotiations pending. In particular, the European commission is proposing to reduce the overall quantity of CO_2 quotas (pollution allowances) allocated between 2021 and 2030 by -21% as compared to the period 2013-2020. They are also suggesting prioritising auctions over free allowance allocations, with the latter being limited to "sectors at the greatest risk of their production activities being outsourced outside the European Union" (that is to say the reduction of industries eligible for 100% free allowances). However, for a long time now, these negotiations have been headed by Ian Duncan, a British member of the European Conservatives and Reformists Group in the European Parliament. Mr Duncan resigned as leading legislator for European carbon market reform in the wake of Brexit being announced. This has sparked fears among some observers that the ongoing reform process could be called into question.

The negotiations regarding the United Kingdom leaving the European Union, coupled with the rise of euro-

[1] *"Flash - Alternative Energy : The 28 EU member states agree to overhaul the carbon market : challenge and opportunities"*

scepticism, will certainly not help draw the necessary reform and negotiations to a quick conclusion.

Should we be concerned that alternative energy investment in Europe will be negatively affected?

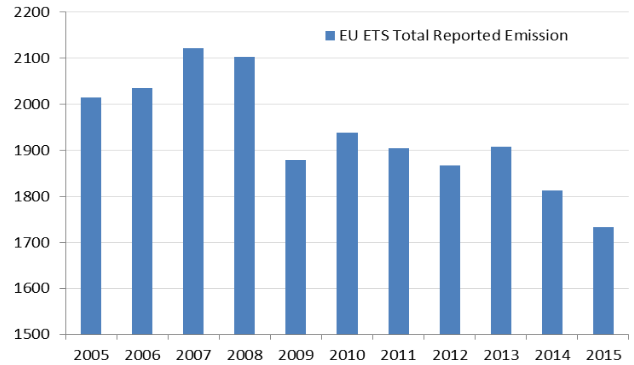
As we explained above, at the outset, the carbon market was created to spur companies on to invest in alternative energy in order to reduce their environmental impact.

However, the mechanism has never really been proven effective.

Since the end of 2008, pollution allowance prices have fallen below 15 EUR/t, then 10 EUR/t, with economists and manufacturers in agreement that prices have long been too low to make the scheme a real incentive. In other words, polluting is cheap, and committing to the energy transition is not lucrative enough (based on the sale of pollution allowances being the only form of revenue linked to making this commitment).

Equally, it would seem that investments in alternative energy or energy efficiency are increasingly justified on a purely economic basis, as they are able to generate direct savings. Manufacturers' decisions to make an effort to reduce their environmental impact is therefore likely not linked, or at least only tenuously linked, to complying with pollution allowances. The image projected by companies which are active on this front is one reason for going down this road. Moreover, it seems that national support policies make a greater contribution to developing alternative forms of energy- let us not forget the negative impact that the decrease in support had on solar energy development in Germany- than the carbon market, which is ineffective in its current form.

CO_2 Emissions of ETS Participants (Millions of Tonnes)

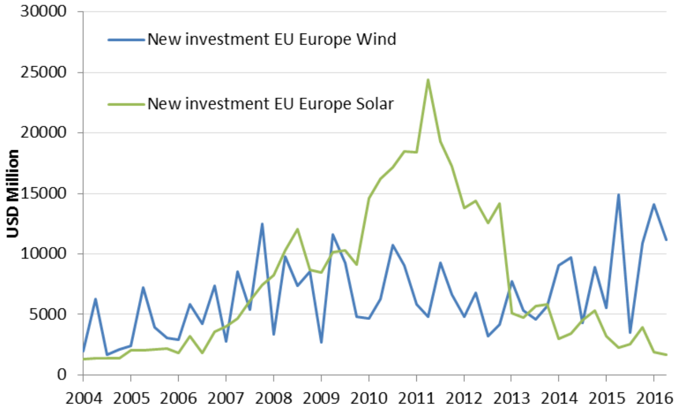


Source: Bloomberg, BBGI Group SA

Despite the fact that the ton of CO2 remained very cheap, CO2 emissions have indeed fallen sharply over the last ten years (-14%) when we look at the emissions of those countries participating in the European carbon market.

We believe that the seeming correlation between the fall in carbon prices and the slowdown in investment in the alternative energy sector in Europe (particularly in solar technology) is in fact more closely linked to the economic difficulties from which Europe is still struggling to recover. Indeed, the economic crisis forced governments to revise their investment spending downwards.

Investment in Solar and Wind Technology



Source : Bloomberg, BBGI Group SA

Can carbon prices in Europe be normalised?

As we have highlighted, recent events could considerably stall the reforms the carbon allowance system in Europe so needs. However, there are two different scenarios that would enable prices to bounce back.

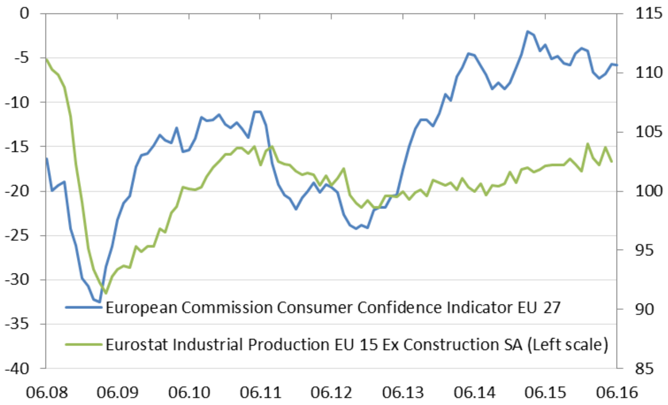
Firstly, although investors seem resigned, it is possible that the United Kingdom could negotiate staying in the carbon market. In that case, the country would take part in the carbon market without being a member of the European Union, just like Lichtenstein, Norway and Iceland. Such a decision would likely spark a rise in pollution allowance prices. We mentioned above that Ian Duncan, rapporteur to the European Parliament for carbon market reform, stepped down after Brexit. Nevertheless, he remains in office for the time being. The members of the working group refused for the position to be taken over by a Polish member of the European Conservatives and Reformists Group. The Polish and the British make up the overwhelming majority of this group, so the position would have de facto fallen to the Polish. However, today Poland is one of the countries most strongly opposed to environmental action due to its high dependence on coal. As such, Ian Duncan has taken back up his duties: *"At the request of my colleagues on the Environment Committee, I have agreed to continue in my role as rapporteur on the reform of the Emissions Trading System (EU-ETS iv), pending any change in parliamentary rules in relation to UK MEPs".*

The future of the ongoing reform process therefore looks less dim than at the end of June.

Furthermore, the situation in Europe is slowly improving from an economic viewpoint, and we believe the impact of Brexit to be overstated. As we set out in our Weekly Analysis dated 01/07/2016 (*"Will Brexit have a discernible impact on Europe's GDP?"),* if the impact on European GDP sits at around -0.3% over the next three years, we do not believe that Brexit will cause any real economic shock in Europe, and the region could even come out of the situation stronger. This will require authorities to back off in terms of budgetary policy.

Any improvement in the economic situation, and especially industrial production, will of course have a positive effect on the prices of ETS allowances. Any improvement to the situation in Europe will further boost demand for these contracts. Although it remains rather behind compared to the improvement in consumer confidence, which has really taken back off since 2014, industrial production in the 15 largest European countries (excluding construction) has nonetheless increased from 99.2 to 102.5 points since the end of 2012.

Consumer Confidence and Industrial Production



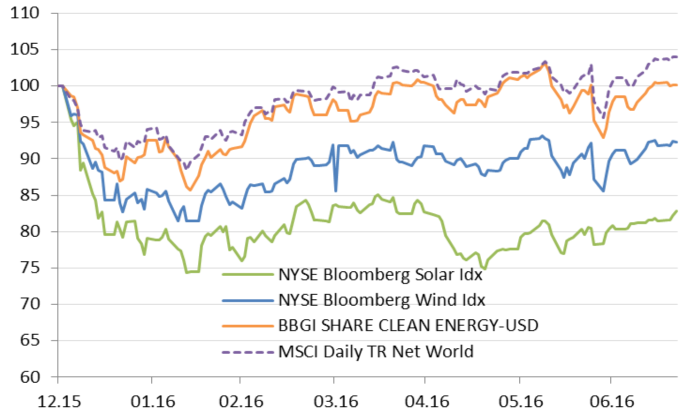
Source: Bloomberg, BBGI Group SA

For those investors seeking exposition to the European carbon market due to prices being at their lowest since the end of 2013, there is a specific ETF (ETFS Carbon). The price of carbon can also be taken to be a rather accurate proxy for the economic situation in Europe. These investors should therefore be convinced that there will be a recovery in Europe despite Brexit, and that negotiations regarding the carbon market will continue to include British politicians.

The alternative energy market offers interesting entry points

More generally, the alternative energy market remains a priority sector for us in the second half of 2016. We are favouring diversified investment in this volatile segment of the market. There are considerable investment opportunities with current valuations, taking into account how robust fundamentals are. The graph opposite shows the performance of the NYSE Bloomberg Solar and Wind indices, as well as the BBGI Share Clean Energy Fund, since the start of the year.

Solar - Wind – BBGI Share Clean Energy Fund



Source: Bloomberg, BBGI Group SA

Conclusion

After correcting -20% in a few days, the carbon allowance market still bears the hallmark of uncertainty following on from Brexit being announced. Brexit could slow down the ongoing reform process.

However, the possibility of the United Kingdom continuing to take part in the carbon market, even after having left the European Union, cannot be excluded.

Prices could normalise, especially if Europe should feel the impact of recent events to a lesser degree than predicted. Improvement to industrial productivity could prove an interesting starting point.

Nonetheless, we are prioritising a diversified approach in the alternative energy segment, which is still enjoying excellent prospects, and which could therefore catch back up over the second half of the year.

BBGI Group SA
Rue Sigismond Thalberg no 2
1201 Geneva -Switzerland
T: +41225959611 F: +41225959612
info@bbgi.ch - www.bbgi.ch