sandbag

Prices in the EU ETS

Internal briefing note

February 2017

Summary

- **Prices in the EU ETS are currently too low to reduce emissions or stimulate much needed investment to build a prosperous low carbon economy.**
- **The response of the market shows that reforms currently proposed by the ENVI Committee alone are inadequate. Projections showing on average a very large price rise look implausible.**
- **More needs to be done to create a more appropriate supply demand balance, and so restore prices to more effective levels, or control prices by introducing auction reserve prices.**
- **Even with additional action the existing surplus will prevent any price shocks.**

Assessment of different price projections

Prices in the EU ETS have been persistently low, falling from nearly €30/tonne at the start of Phase 4 to around €5/tonne now. The current level is too low to stimulate either short term abatement or longer term investment in decarbonisation, which is widely acknowledged to be at least €40/t and likely in the range approximately €50-100/tonne[1].

Prices are expected to recover in the long term. The chart below shows historic prices and projections of future prices from a range of organisation. They largely agree on the price recovering into the range €20-30/tonne by 2030, although the low case scenario from Sandbag stays below this level due to the expectation of continuing surplus. However, the projections differ substantially in path of prices in the next few years. Some show a steady increase, others show a very large increase over the next five years.

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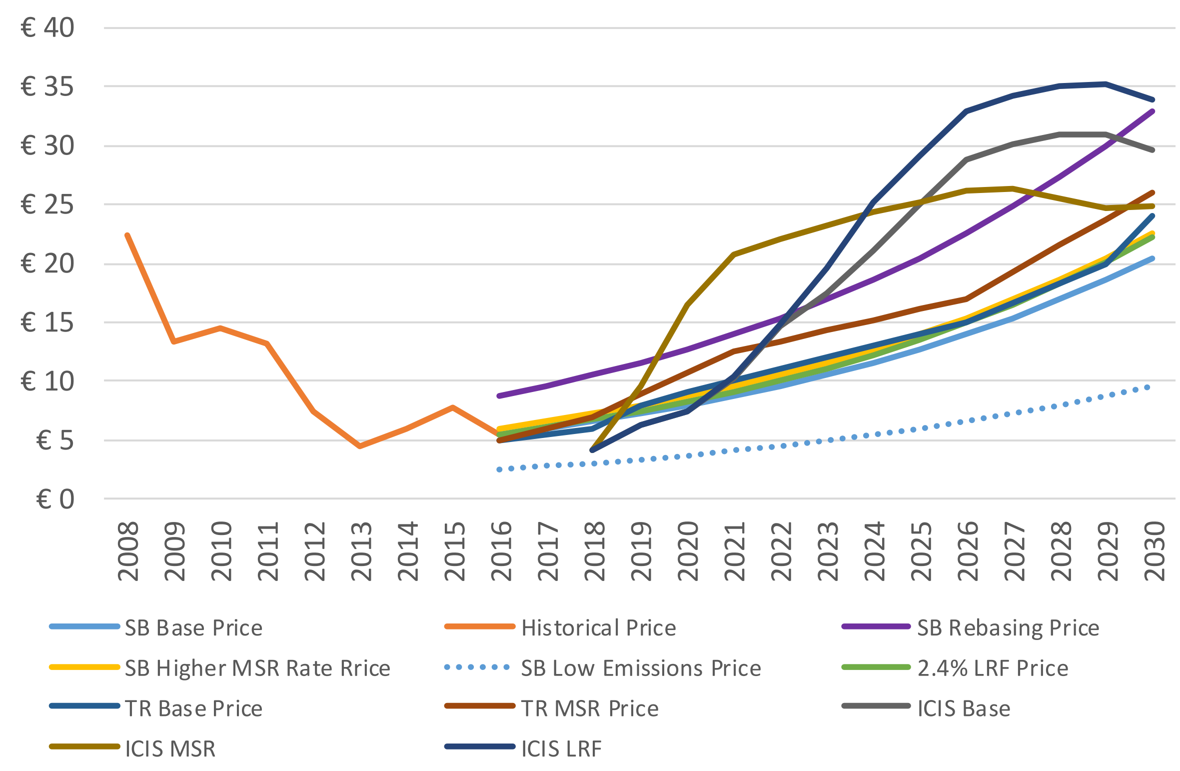
[1] WEF Davos discussion. The range 50-100 was given in US dollars, but given their approximative nature, the 6% difference at present exchange rates has been ignored.

Chart 1: Annual average prices under the EUETS



The projections also differ in their response to the changes proposed by the ENVI committee. Some show a large response while others show a much smaller response. The Thomson Reuters and Sandbag projections both show quite a small response – in the range of €1-2/tonne over the next several years.

Many of these projections imply that the measures in the ENVI report will have little effect, and that prices will remain weak and ineffective for many years. Some projections show a larger effect. However, these seem implausible on a range of grounds. Much more therefore needs to be done to restore an effective price, although any of the measures are likely to lead to only a moderate increase in prices, because the existing surplus provides a very large cushion for the market.

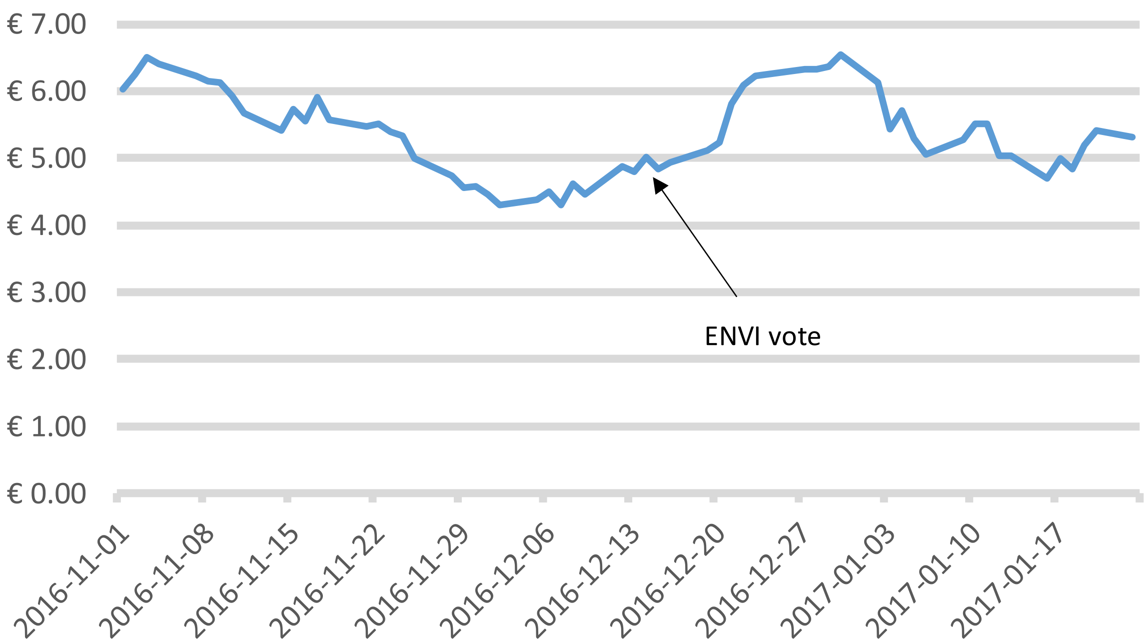
The projections showing a very large response to the measures in the ENVI report seem implausible in the light of:

- The market response to the ENVI vote
- The implied rate of return projections
- Previous history of price projections.

Reaction in the market to the ENVI vote

The market for EUAs did not strengthen in reaction to the ENVI vote. Indeed, if anything the market weakened, with prices falling back to some extent (see chart below).

Chart 3: Lack of response to prices in the ENVI vote



Source: www.quandl.com; raw data from ICE

Had the ENVI vote implied any significant tightening of the market the price would have risen, although with scaling back of any rises to reflect the possibility that the legislation would complete the process, with a further rise once the legislation was passed. The absence of any upward movement in price is strong evidence that the market does not expect the measures to significantly raise prices over the next few years.

Implied rate of return

Further information from the market is the rate of return on investment implied by the various price projections under the respective base case is shown below.

	Price in 2018	Price in 2020	2yr Rate of Return	Price in 2023	5yr Rate of Return
Sandbag	€6.53	€7.90	10%	€10.51	10%
Thomson Reuters[2]	€6.00	€9.00	22%	€12.00	15%
ICIS Tschach[3]	€4.10	€7.50	35%	€17.50	34%
Market	€5.01	€5.13	1%	N/A	N/A

[2] Approximate price levels as shown in chart
[3] Study published by Eurelectric

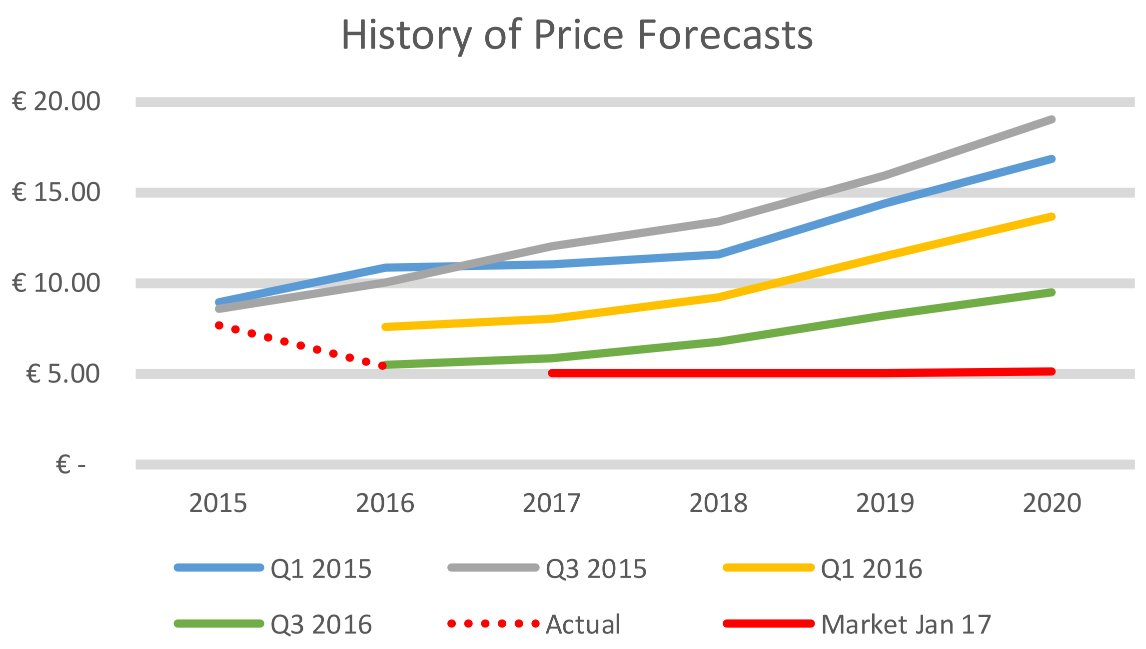
If the above projections were actually an expected average level it would be possible to buy EUAs now, sell them in two years, and earn an average compound rate of return of up to 35%. If this were really available then many investors, including hedge funds, would now be buying EUAs, as this would be an attractive rate of return despite the risks (which would include the possibility of both higher and lower returns). The fact that they are not implies that such returns are not actually expected. It could be that there will be a sudden price jump if the legislation is passed, but as with the market view this seems unlikely.

Exchange settlement prices[4] of EUA futures show that the market only expects a return of about 1% between 2018 to 2020. There are no longer term exchange prices quoted, which has been a feature of the market since inception that is to a large extent due to the perceived uncertainty in a market created by regulations.

History of price projections

The history of prices forecasts under the EU ETS shows that there has been a systematic tendency to overestimate prices. Indeed initial projections showed average prices for the current phase to be €30/tonne, or about six times current levels. Similar overestimates of price have been made in other markets, notably California, where some of the organisations projecting high prices in the EU ETS in future projected higher prices in California. In practice prices have been low, and would have been lower except for the presence of the auction reserve price.

Price forecasts have also consistently been much more optimistic when compared to the actual market forward curve.



Source: Carbon Pulse Quarterly Price poll (www.carbon-pulse.com); www.quandl.com

[4] ICE Daily market report from 25 Jan 2017. Rate of return calculated based on Dec18 and Dec20 prices.