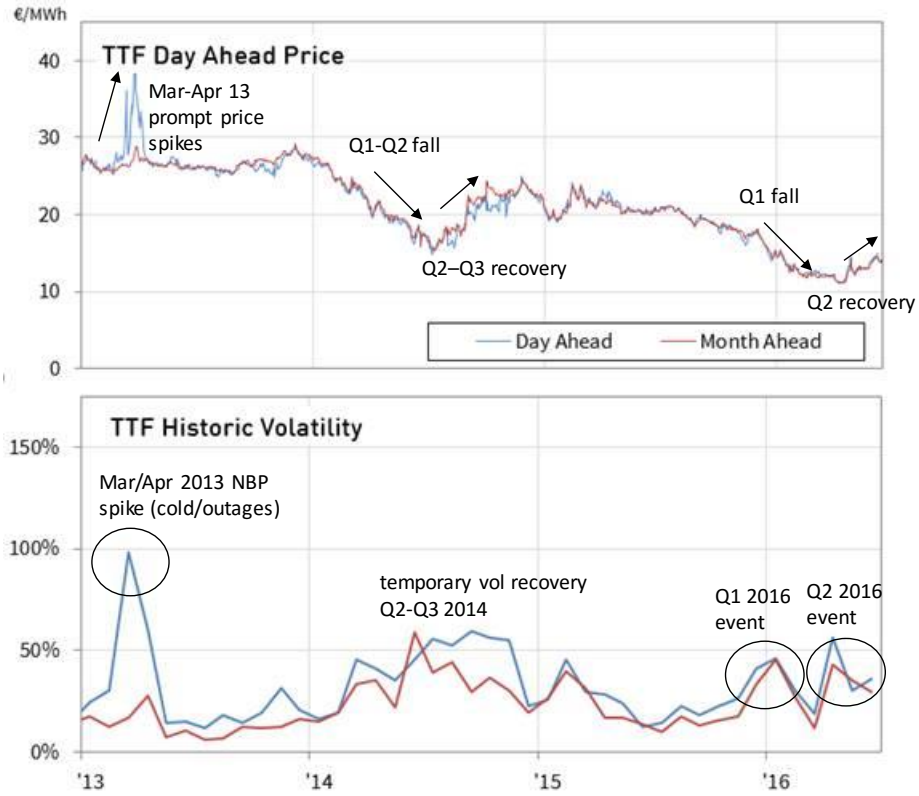
Q2 2016: TTF volatility commentary

Q2 2016 short squeeze

Chart 1 shows a pronounced pickup in TTF volatility in Q2 2016, after trailing off towards the end of Q1. The primary driver of this was a sharp 'short squeeze' across European hubs in late April. Given big price declines and bearish market sentiment from Q1, gas portfolios were positioned for further price falls at the start of Q2. But as the market recovered in April, market players were forced to cover short positions (or 'squeezed').

Chart 1: Evolution of TTF prices and historical prompt volatility (2013-16)



The trigger for the price rally was a combination of an early spring cold snap and North Sea supply outages caused TTF and NBP prices to move sharply higher. Forward prices rose 20% along the curve in the second half of April. Prices then plunged 10% in a day towards the end of the month. These are very large price moves across such a short time period and caused a big jump in historical volatility in late April.

The impact of short term supply and demand shocks such as those in April are typically focused in the front of the forward curve e.g. via surging day-ahead and within-month prices. But the April price move saw large parallel shifts in prices across the forward curve. That is a characteristic of a classic short squeeze in a market weighed down by strong bearish sentiment since the start of the year.

The transmission mechanism from prompt prices to the front of the forward curve was driven by gas storage dynamics. There was a sharp draw down in storage inventories to plug the supply gap caused by the April cold snap and production outages. This led to storage operators having a greater requirement to purchase volumes for injection across the summer, triggering a rally in summer hub prices.

However portfolio positioning also played a significant role in the price swings behind the April spike in volatility. One of the practical implications of the strong bearish market sentiment that prevailed in Q1 was that gas portfolios were likely to have been positioned for further price declines. This may have been via:

1. Trading desks being outright short gas, or
2. Gas portfolio's being underweight on hedge volumes required to meet demand.

Either way it leaves the market exposed to sudden shocks to the upside. Behind the rally in gas prices was a similar unexpected rally in oil prices. The combined gas and oil rally is likely to have been partially fuelled by energy trading desks being forced to buy volumes as portfolio risk management limits were breeched (e.g. 'stop loss' and 'VaR' limits). This can create a self-reinforced surge as the price rally triggers further stop loss buying.

Comparison of Q1 and Q2 volatility pickups

The April situation described above was the second 'volatility event' so far in 2016. It is interesting to contrast this with the first event in Jan-Feb 2016. In order to do this we focus in on Q1 and Q2 using the Energystock historical volatility tool as shown in Chart 2.

Chart 2: Energystock day-ahead and month-ahead indices (Jun 2015 – Jun 2016)

The Q1 pick up in volatility began in Dec 2015 as Brent crude prices plunged below 40 $/bbl in a move that culminated in the Feb 2016 low below 30 $/bbl. European hub prices also fell sharply across this period in what was a Q1 global commodity price rout. TTF volatility rose across this period consistent with the uncertainty associated with these events. But once the gas and oil markets started to stabilise, volatility fell again in March.

The Q2 volatility event was different. The events that drove the jump in volatility were compressed into a much shorter time frame, focused around the sharp price movements associated with the late April short squeeze. In Q2, volatility suddenly jumped higher in the last week of April, compared to a more gradual increase across Dec-Jan.

The nature of the historical volatility calculation in Chart 2 (across a 30 day historical window) means that the impact of these events continued across the next month (i.e. through May). But given the

price volatility around the short squeeze was a relatively isolated event, volatility levels have declined again in June.

It will be interesting to see how volatility evolves across the remainder of 2016. Two important factors to watch are:

1. To what extent the Dutch government will constrain the flexibility of the giant Groningen field along with reducing production volumes.
2. Whether the UK Rough storage outage announced on 22nd June will have a more prolonged impact on gas supply flexibility in North West Europe.

But the conclusion so far in 2016 is that volatility conditions are recovering relative to 2015.