FROM THE CALM OF 2017 TO THE VOLATILITY STORM OF 2018.

VOLATILITY IS BACK WITH A VENGEANCE

IT'S VOL-MAGEDDON !!!

PART II: COMMODITIES MARKETS

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I/ INTRODUCTION

In this second part of our study of volatilities in 2018, we shall focus on the Commodities markets.
Given the fact that there are far too many commodities markets to study, we shall consider only a few of them, the biggest, most liquid and most important ones: Crude Oil, US Natural Gas, and Gold.
So we will start this second part with a detailed analysis of the Crude Oil Volatility. And more specifically the WTI (West Texas Intermediate the US benchmark) Volatility.

II/ CRUDE OIL VOLATILITY

HOW TO LOOSE 35% IN 6 WEEKS
AND WIPE OUT VOLATILITY SELLERS
ANOTHER CRUDE OIL SAD STORY

1/ How did we start the year

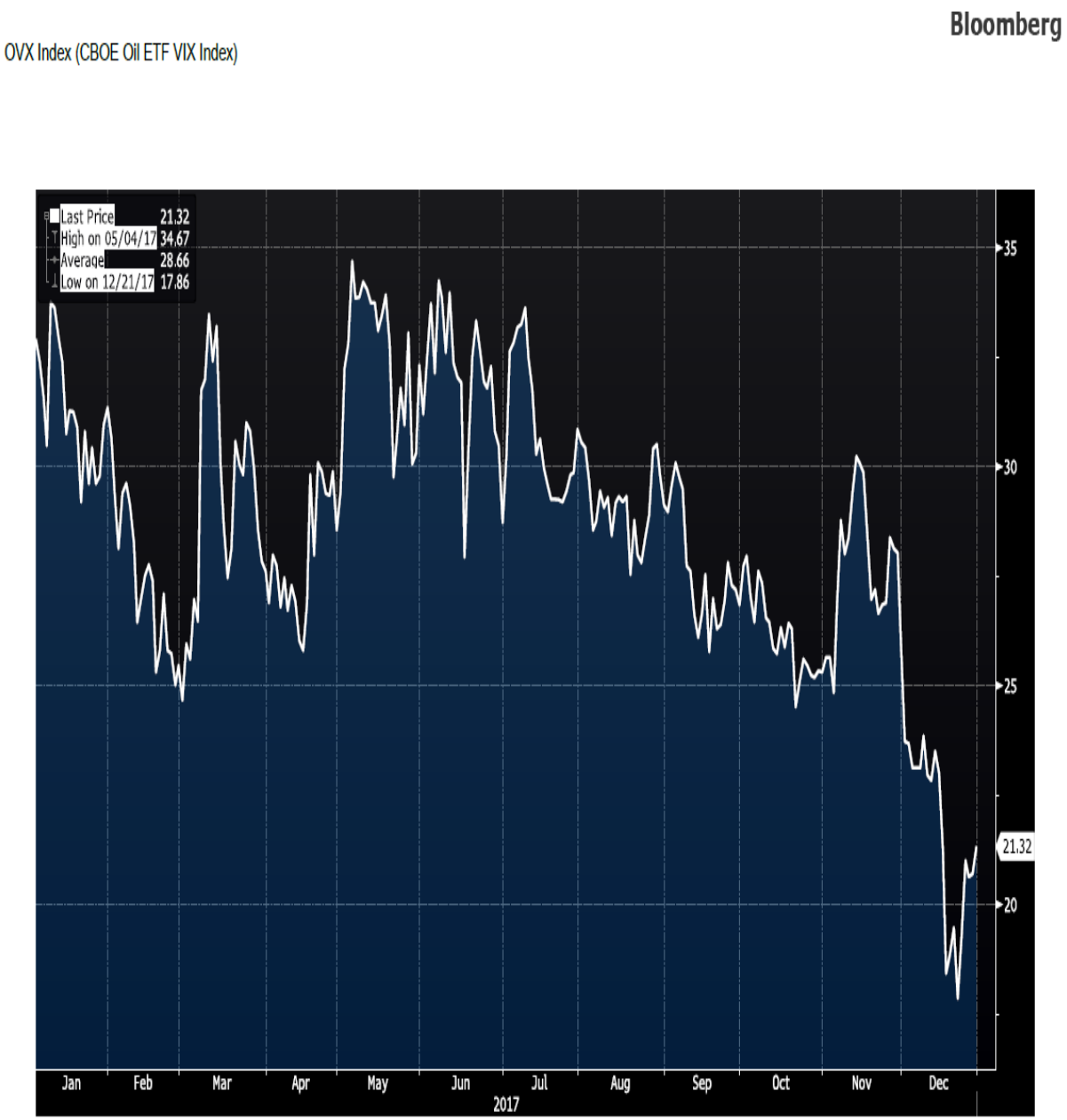
On the 2nd of January 2018, following a relatively small, quiet and smooth rise during 2017, especially in the second half of the year from the 43.45 low reached in June to the High of 60.51 on the 29th of Dec, the WTI stood at: 60.42 $/Bbls. See the daily chart of the front month NYMEX WTI Future below:

Bloomberg

CL1 Comdty (Generic 1st 'CL' Future)

Source: Bloomberg

Of course this 39.25% regular and consistent rise in six and a half months triggered massive sales of the crude volatility, which came off from the High of sub 35's all the way to a (very) low point of 17.86% reached on the 21st of Dec. And following some short covering the WTI volatility ended 2017 at 21.32% as shown below in the chart of the OVX index, which is the equivalent of the VIX index for the WTI.

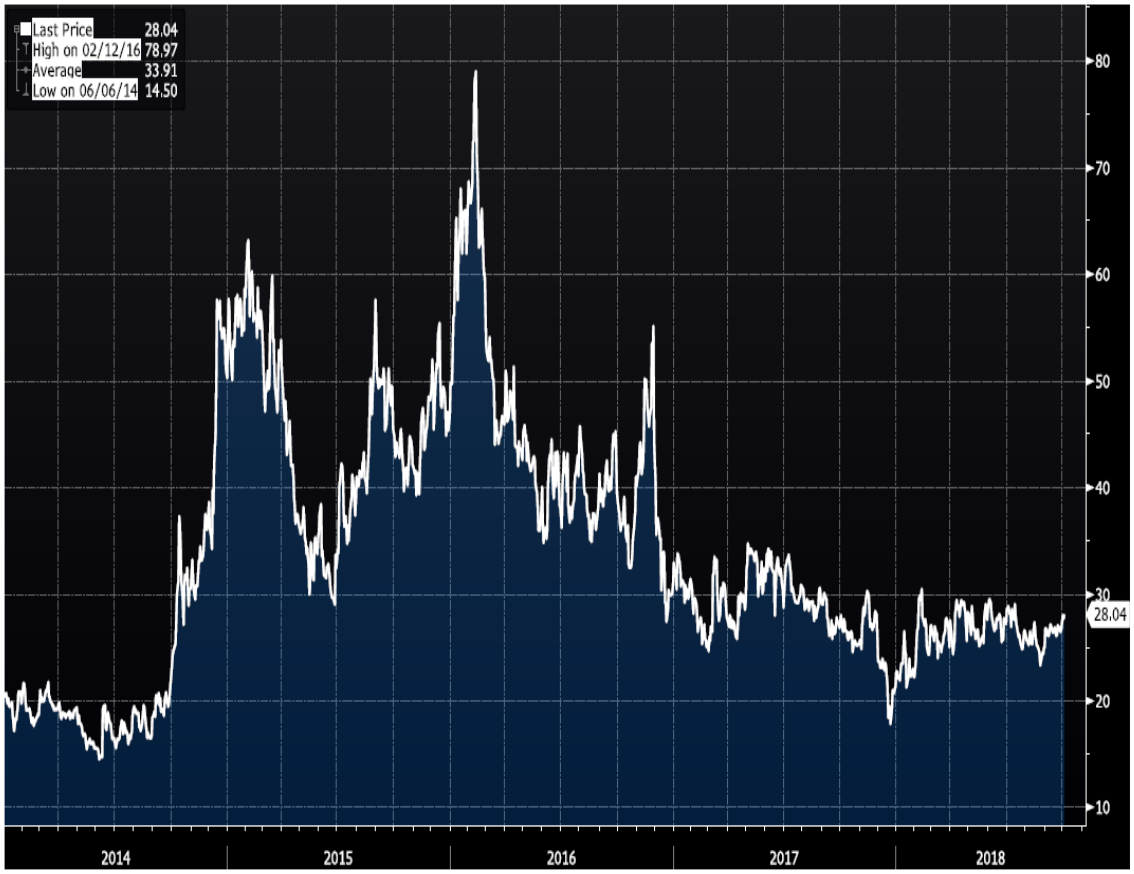


Source: Bloomberg

People not familiar with the Crude Oil market and its volatility can have the feeling that the year 2017 was actually not so quiet as volatility got halved, but to give you a better sense of perspective, have a look at the OVX chart from the beginning of 2014 to the end of September 2018. The range-bound volatility of 2017-2018 is much clearer to see. But these kind of compression phase in Oil volatility usually ends in a fairly abrupt way as can be seen in July 2014 when the WTI started its 20 months collapse from 113.77 to 26 (in February 2016). And the WTI volatility skyrocketed from 14.5 in June 2014 to 50 at the end of the year. Definitely not a good time to short Volatility…..

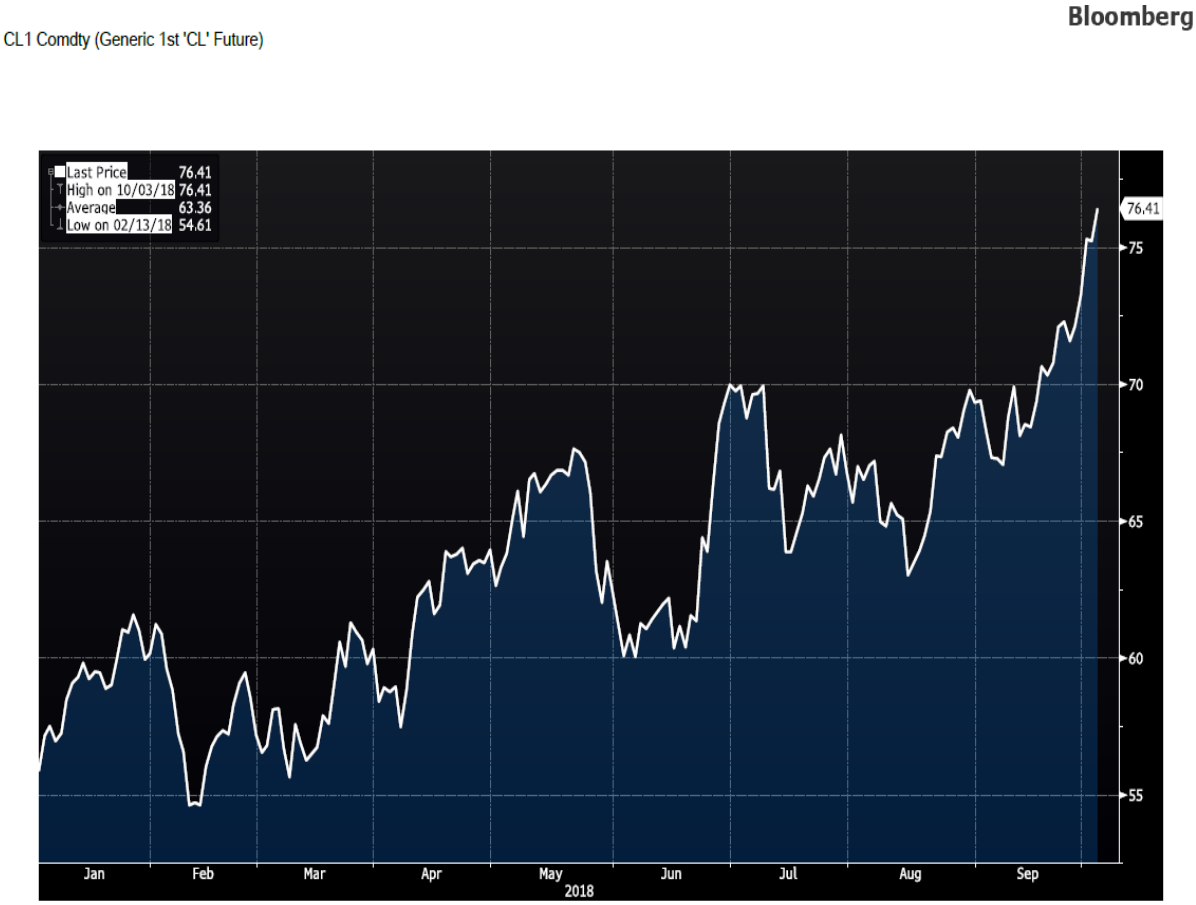
Bloomberg

OVX Index (CBOE Oil ETF VIX Index)



Source: Bloomberg

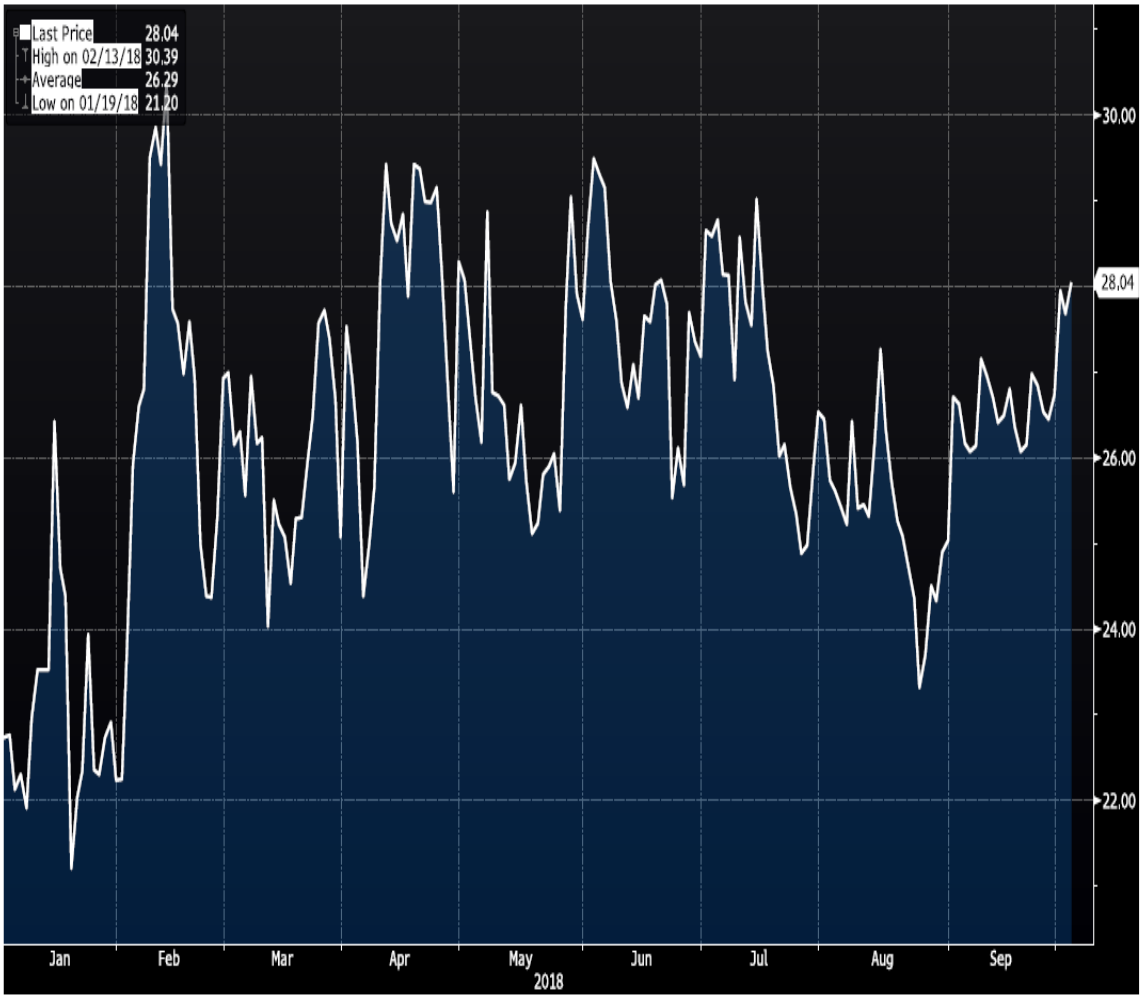
So 2018 started like 2017 had ended, with a consistent rise in WTI prices from the low point of 54.61$/Bbls reached in February during the first big correction of the equity markets to a high of 77.53 $/Bbls on the 3rd of October, the very same day the Dow Jones printed its historical high….



Source: Bloomberg

This 42% rise, smooth predictable and regular didn't really appeal to potential volatility buyers. It remained range-bound between 21% and 30% as you can see in the chart below:

OVX Index (CBOE Oil ETF VIX Index)



Source: Bloomberg

2/ The Volatility Explosion

That's how rosy things looked on the 3rd of October 2018 in the Crude Oil markets. As usual, when the jitters start to spread in the equity markets, the WTI follows. And with the second correction of 10% or more on its way in October, WTI stalled and started to come off. In sympathy with the SP500 index. But not only.

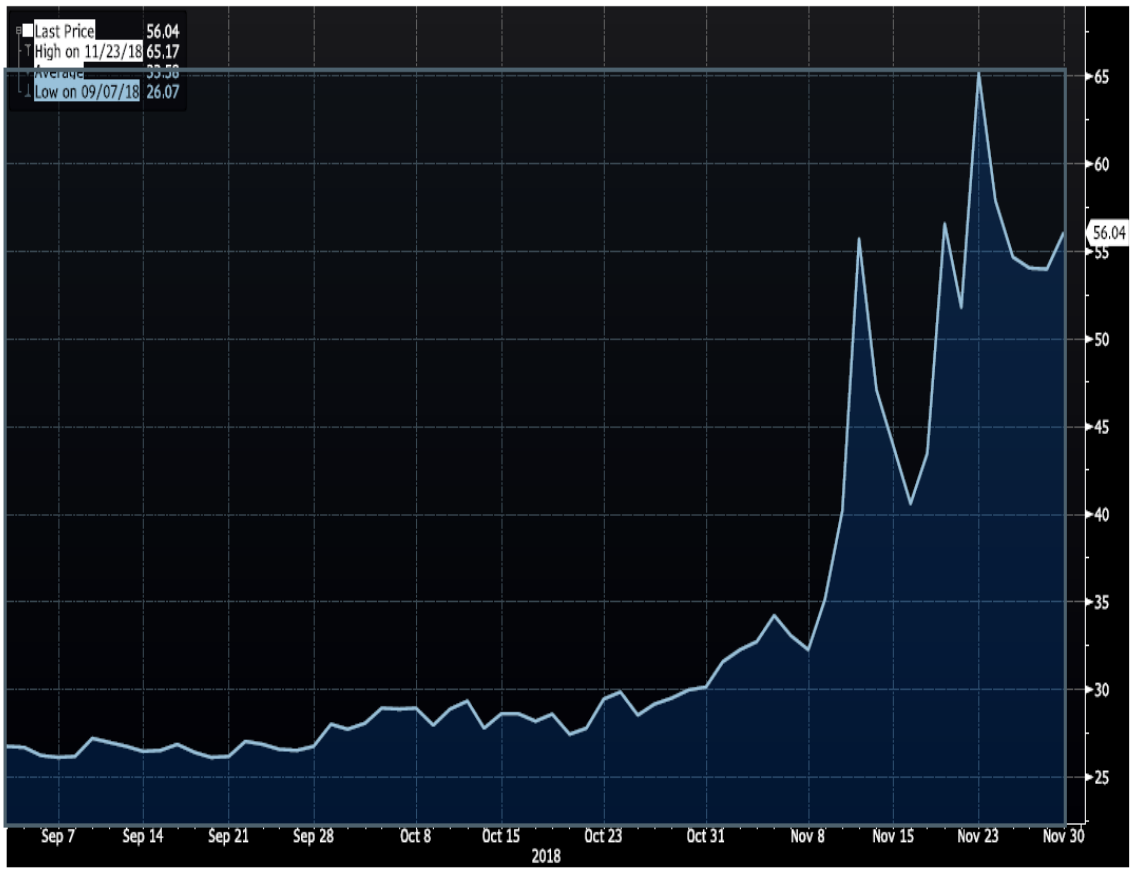
As often, you had to take into account the geopolitical context (US Mid term elections, Kashoggi murder, OPEC Russia talks…) and another factor of ever growing importance: the US were on their way to become the biggest Crude Oil producer, with up to 11.70 Millions barrels produced EVERYDAY in November. Thanks to the so called Shale Oil revolution. What a lot of people were not aware of is that among the myriad of small, local, independent Shale Oil producers three quarter of them were forced to hedge a big chunk of their production with their lenders (i.e their banks) in order to avoid another wave of bankruptcies like in 2015/2016 when the prices were collapsing. And to do so, many sold WTI Swaps, but as many did buy Put Options on WTI. The strikes they were mainly interested in were concentrated between $55 and $60 as usually these production businesses are profitable as long as WTI prices remain above 50. So the WTI options market, i.e the volatility market had to absorb a HUGE amount of Put buying. An amount too big to be recycled between all the volatility players. And therefore a huge amount of Volatility sold by the market makers and banks on every single maturity up to Dec 2019…..

Bloomberg

CL1 Comdty (Generic 1st 'CL' Future)

Bloomberg

OVX Index (CBOE Oil ETF VIX Index)



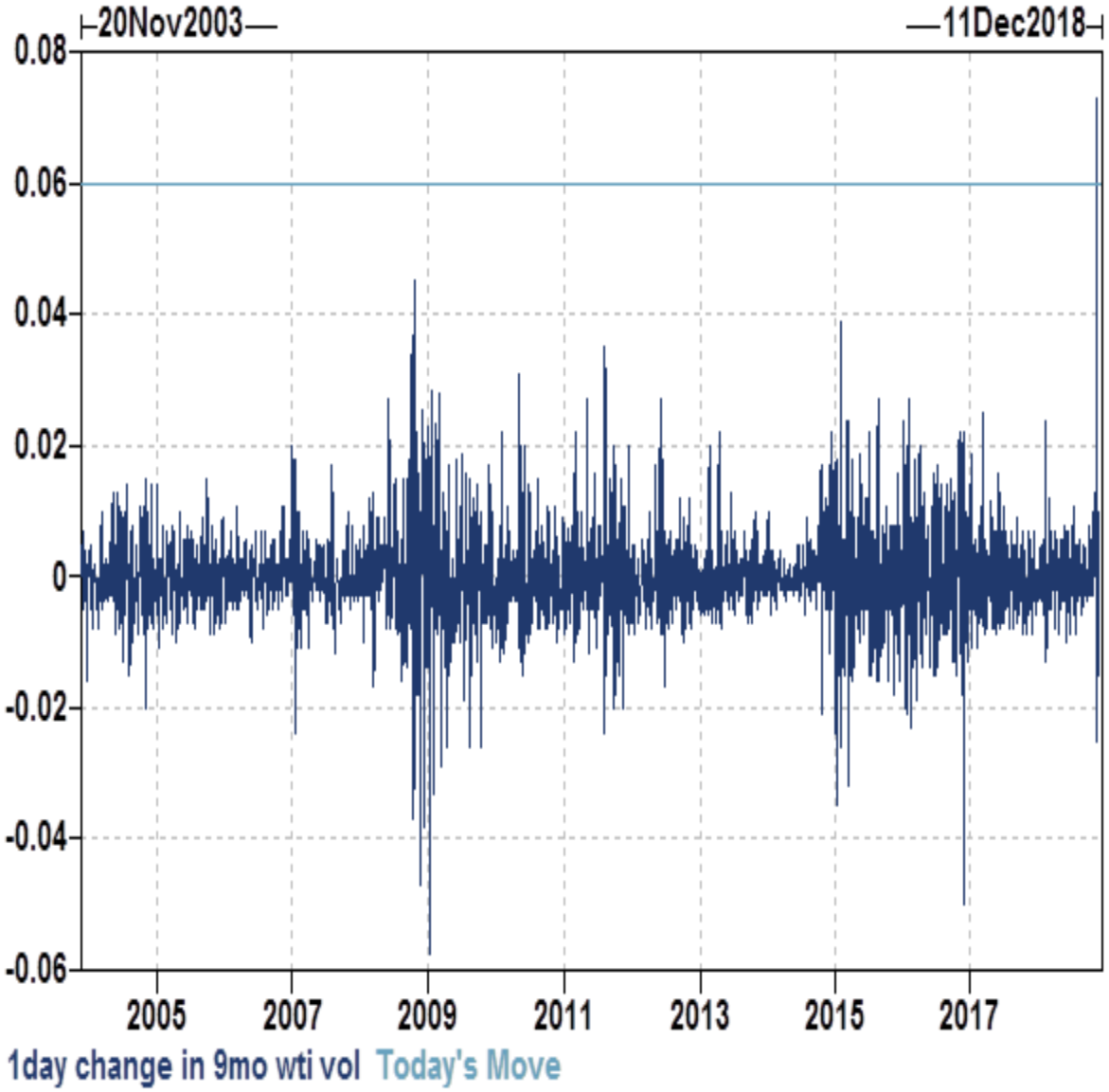
Source: Bloomberg

These 2 charts show you the relentless fall of the WTI front month future and the explosion of the WTI volatility which occurred both during the month of November. Two days in particular stand out:

- the 13th of Nov, when the WTI breaks through 60$ convincingly (falling as low as 55.19, thanks to the well-known effect of the options negative gamma) and triggering the first massive Vol spike, up to 55%. This day is, so far, the **biggest single day Vol move of all time in the WTI market by any metric**. WTI 3 months, 6 months, or 9 months volatilities. No matter where you looked, **it was the single biggest move of all time.**

And we are talking here of a market which went through hugely volatile periods during its Boom and Bust history. A market which went through 2 Gulf wars, the great recession (from 147$/Bbls to 30 in 6 months and ATM Vol at 100% for more than one month) and still no one had ever seen a day like that. An unbelievable 38.79% jump from 40.14% to 55.71% on the OVX.....

The chart below shows the largest single day Vol moves over the last 15 years for the usually far less volatile 9 months volatility. Up almost 8%!



Source: GS Desk Analytics

- And the Black Friday: 23rd of Nov during which the WTI front month reached 50 for the first time having closed at 54.63 on the eve of Thanksgiving. A collapse of 7.70% which triggered another Vol spike: with OVX up 25.83% from 51.79% to 65.17%.

3/ The Consequences

As often in the volatility markets when you have such drastic moves, you do end up with casualties. Because this time, the main culprits were the Put options buyers, the casualties are among the options market makers who were bearing both the gamma risk and the pure Vol risk, the Vega risk, which was conservatively estimated by Goldman at more than 50 Millions $ overall: i.e for every 1% increase in the volatility, the loss would be 50 Million $. And 3 Months Vol went up more than 35% in a fortnight… It's very difficult to know yet the amount of damages suffered by banks trading desks. What we know for sure is that 3 independent small boutiques of options market making blew up. Especially one which was very active in the back months (From 6 months up to 2 years out were the Vega risk is considerable); And as I write these lines, the Dec 2019 WTI Volatility (One year Vol) is still around 32%, far higher than the 25% around level experienced during the last couple of years.

III/ U.S NATURAL GAS VOLATILITY

THE DANGER OF FORGETTING SEASONALITY
HOW TO WIPE OUT VOLATILITY SELLERS
DURING A MASSIVE UPWARD MOVE…..

1/ How did we start the year

Following a major top in June 2008 at 21.74$/Mmbtu, Front month US Nat Gas Future went all the way down to 2.08 reached on the 21st of Dec 2017. The culprit for this relentless move: SHALE GAS, which as early as 2007 contributed to a permanent increase of the US Gas production. To the extent that by the end of 2017, the storage capacities were full, leading to the downward spike you can see on the chart below.

As with many other asset classes, this "consistent, smooth and regular" downward move was accompanied by persistent volatility sales, as you can see in the chart below which shows the Front month Future NG in Yellow(LHS) and the IVOLNG Index (the 3 months US NG Implied Volatility) in white(RHS)

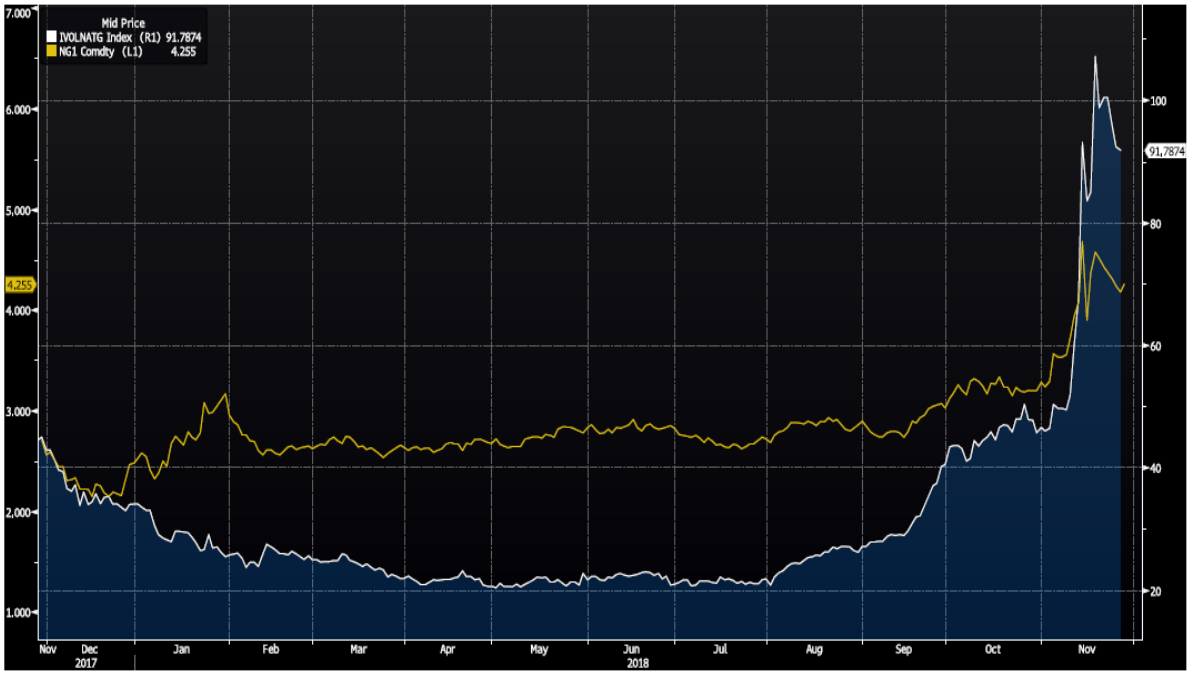
Source: Bloomberg

2/ The Volatility Explosion

The beginning of 2018 would therefore be more of the same: "If ain't broken, then don't fix it". And so, although the Front Month Future Nat Gas bounced back from its Dec 2017 lows to firmly establish itself above 2.5$/Mmbtu from January onwards, the 3 Month implied volatility kept drifting lower until the ultimate compression of the summer 2018, where it stayed just above 20% for about 4 months. See the chart below: as flat as a pancake….

Bloomberg

IVOLNATG Index (Natural Gas 3M Implied Volatility)
NG1 Comdty (Generic 1st 'NG' Future)



Source: Bloomberg

At the opposite of what triggered the huge volatility spike in Crude Oil, the causes for the Nat Gas Vol explosion were much more fundamentals. When the winter comes in North America, one of the main drivers of Nat Gas prices is the weather forecast, 5, 10 and 15 days in advance. And the month of November 2018 was unusually cold, VERY cold. So cold that the Gas demand for heating skyrocketed! Hence a massive spike: 3.5$/Mmbtu broken on the 08th of Nov. than 4$/Mmbtu on the 13th and the inevitable parabolic extension: 4.66 on the 14th!

Consequently, all the Vol sellers had to take notice as their books/positions got significantly shorter with every passing day, thanks to the negative gamma…. So they scrambled to cover! Look at the chart below which shows you both the front month Nat Gas (yellow curve) and the 3 month implied Vol (White curve) during the last three months.

Bloomberg

IVOLNATG Index (Natural Gas 3M Implied Volatility)
NG1 Comdty (Generic 1st 'NG' Future)

Source: Bloomberg

Obviously, exactly as in the Crude Oil market, a record number of players were short Volatility, one way or another. Hey it had worked very well until September 2018. But then…. And as you can see, for some they had to pay UP to north of 100% Volatility to cut their short positions! And even someone who had patiently waited for the volatility to climb back towards 50% as it did in Oct18 or on the 8th of Nov before shorting it would have suffered huge losses if the position had been unwound on the 19th of Nov when the 3 Months implied volatility reached 107.15% spurred by panic buying!

3/ The Consequences

As you can see on the above chart, the Nat Gas prices are now down, back to 3.65$/Mmbtu, and of course, the implied 3 months Vol is back towards 50% again, following this other magnificent example of short squeeze. Note for example that out of the 3 times Nat Gas futures traded above 4.5, only ONCE did the implied 3 Months Vol trade above 100%.

In the Nat Gas case, the main casualty was a small boutique, optionsellers.com, thought to have managed around 150 Millions $ with, mainly one strategy: sell volatility (as confirmed by its very name!). This company got liquidated at the end of Nov, leaving no other options for his CEO than to apologize to his "clients" in a video! (That you can see here if you are interested: https://www.youtube.com/watch?v=VNYNMM0hXXY)

After a close look at the positions held by Optionsellers.com, it appears that they were short of many UNCOVERED Calls. Meaning they had almost **NO** Long Nat Gas futures positions to hedge their short Calls position…. So the blow up was inevitable during the spikes in prices and then in Vol. For a guy who had co-authored a book on this particular topic: "The Complete guide to Option Selling" as recently as May 2018, it seems that he might now be in a position to write another (and final?) chapter: How to blow up….

IV/ GOLD VOLATILITY

WHERE YOU CAN SEE THAT VOLATILITY SPIKES DO NOT HAPPEN AT THE SAME TIME. THE EXCEPTION TO THE RULE!

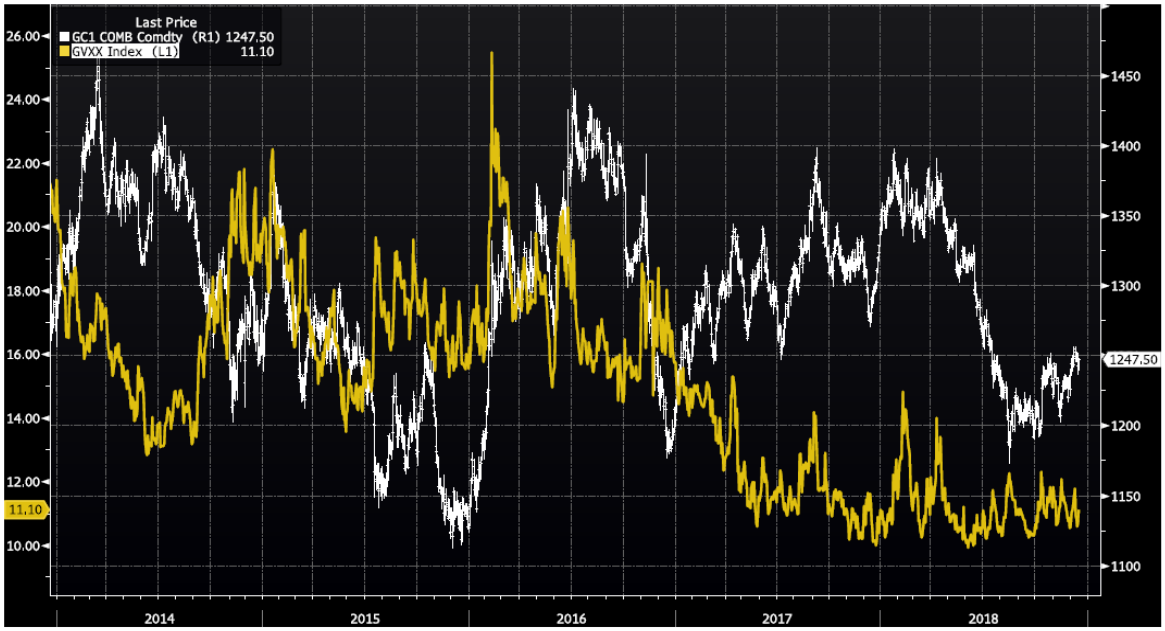
1/ How did we start the year

Following what looks more and more like a major bottom in the price of Gold in Dec 2015 (1112.80) Gold continued to recover gently in 2017, to end the year at 1341$/Oz.

Have a look at the below chart which shows the price of the Front month Gold Future (White) and the CBOE Gold Volatility Index GVXX (yellow).

Bloomberg

GC1 Comdty (Generic 1st 'GC' Future)
GVXX Index (CBOE/COMEX Gold Vol Indx)



Source: Bloomberg

As you can see, the compression in Gold Volatility has been relentless since the spike above 25% (beginning of 2016), especially during the last 20 months or so.

2/ The Volatility…. Compression

Gold started to climb a bit more in January before coming off until 1173 reached on the 11th of August, and bouncing back slowly towards 1250$/Oz where we are at the time of writing. Overall a trading range 16% wide at most. Not enough to trigger any kind of jitters for the volatility sellers….

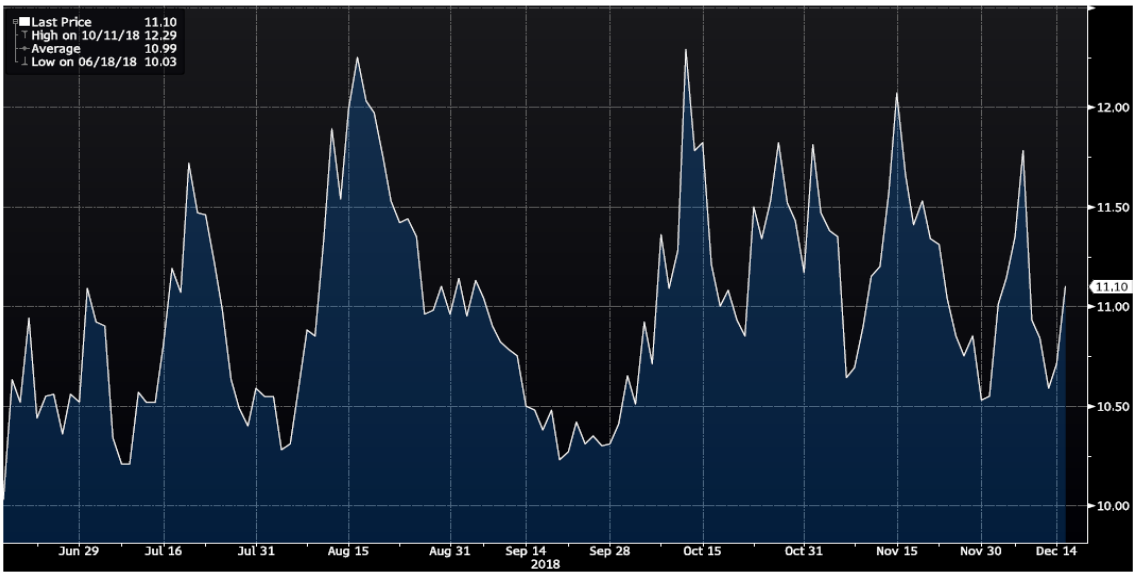
Quite the opposite actually as the relative stability of gold attracted some volatility sellers kicked out of the equities markets or other commodities.

The following chart will show you that the Gold volatility trading range this year was nicely defined: from 10% to 12.3%!

Happy days for the Gold options sellers!

GVXX Index (CBOE/COMEX Gold Vol Indx)

Bloomberg



Source: Bloomberg

3/ The Consequences

The first conclusion we can draw from the Gold volatility market is that the short Vol trade was still profitable in general.

The only question remaining is: for how long will it remain profitable? Indeed, as indicated by the first graph of the Gold paragraph, the compression pattern in Gold Vol looks more and more like the Crude Oil Vol or the Nat Gas Vol at the end of 2017....

And we all know now what happened to these volatilities in 2018!

Never the less, this second part of the volatility storm study shows us that within an asset class, here the Commodities, all volatilities do not behave in exactly the same way at the same time. Far from it actually, as the calm of the Gold Vol market could not have been further away from the hectic Crude Oil or Nat Gas Vol markets.

Numerous factors contribute to explain this difference, especially geopolitical factors, seasonality factors, or the way one particular commodity is perceived at a given time. Typically, Gold being seen as a safe heaven, is usually less volatile than many other commodities.