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

IT'S VOL-MAGEDDON !!!

PART V: CREDIT MARKETS

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Following the comprehensive and thorough review of the equities volatility markets (Part I) Commodities volatility (Part II), Currencies (Part III) and Emerging markets volatility (Part IV) in 2018, we shall now focus on the volatilities behavior of some of the main credit markets. Obviously we'll review some of the most important sovereign debts (USA, Germany and Italy) but we shall consider the volatility of one of the biggest US Corporate IG ETF, before completing this study with the volatility of the biggest US High Yield ETF.

For every single one of these markets we shall study their prices evolution and the consequences that these evolutions had on their volatilities, implicit and historical.

And we'll try to explain the rational (or not) reasons which led these markets to move the way they did in 2018.

And finally we will exhibit some conclusions which were not necessarily expected.

As indicated we shall start with the biggest and most liquid sovereign debt market in the world: the US Treasuries and more specifically the 10 years T-Note. A brand new chapter which could be called :

Disappointed hopes of high volatilities

I/ US 10 YEARS TREASURY VOLATILITY

1/ HOW DID THE YEAR START

We have indicated many times in the previous parts that 2017 had been one of the least volatile year since 1960. And this was true for many asset classes!

And US Treasury notes were no exception.

Surprisingly, this situation will change dramatically from the very start of 2018.

Indeed, it seems that many credit markets players became aware, all at the same time, that the US Federal Reserve had planned to hike the Fed Funds rates 3 or 4 times in the calendar year. This triggered a massive exodus from the US credit markets and particularly from the US Treasury notes.

And from the 2nd of January, waves of selling relentlessly battered the T-Notes market.

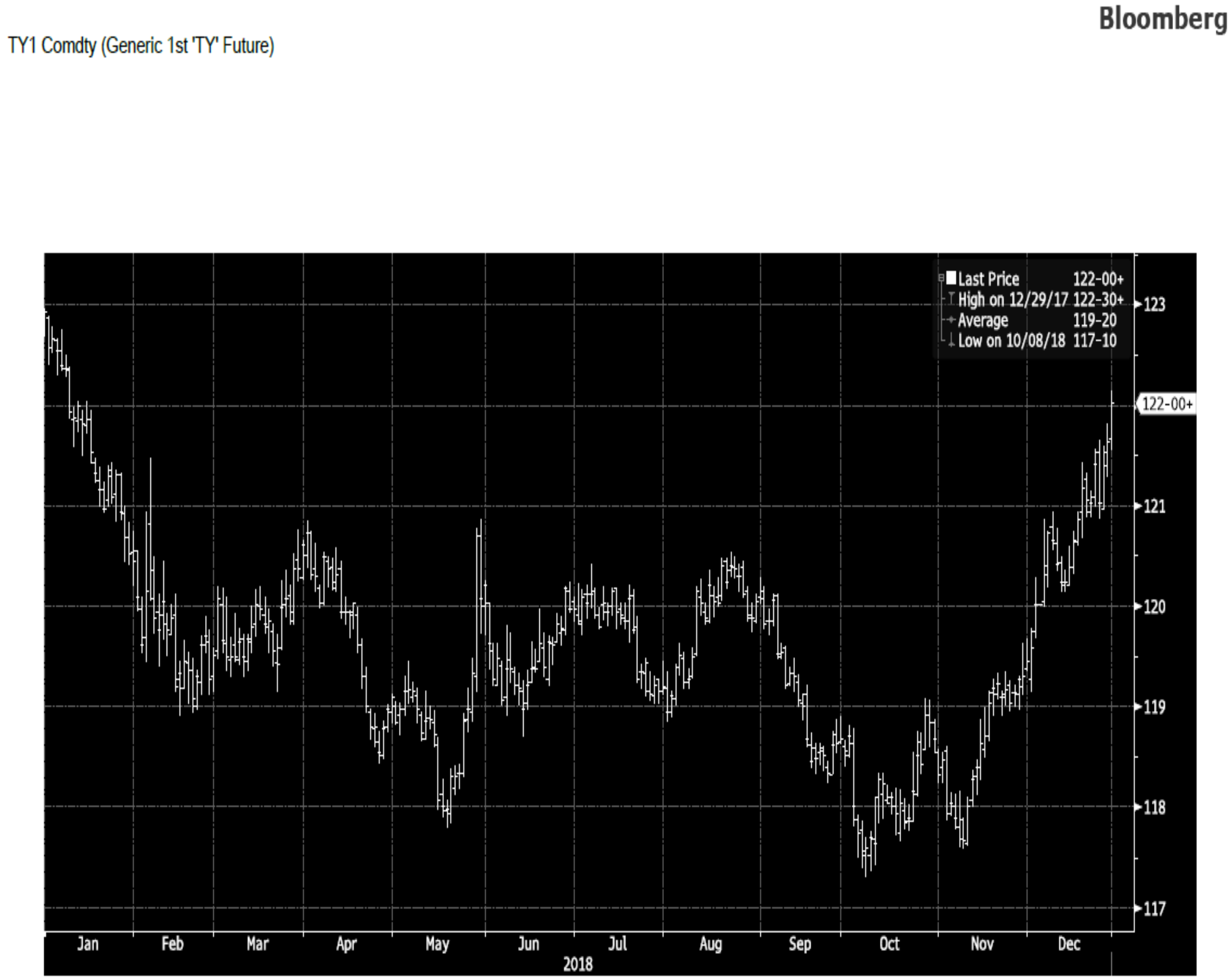
During 3 weeks the selling pressure was overwhelming. It even got worse, until the beginning of February when the 10 years T-Note price broke the 120 mark on the downside, which corresponded to a 3% yield on the 10 years US T-Note.

As described in the Part I, it is the moment the equity market decided that it could no longer ignore the persistent rise in long term interest rates…..

Both the mini panic and the so called Vol-Mageddon on the equities markets

triggered a brief but fierce bounce of the fixed income markets, before the sellers came back and pushed the T-Note prices below 119 mid-February.

Level on which the T-Note finally found a decent support, at least until the end of April, as you can see on the below graph.



Source: Bloomberg

Of course, as it is often the case, such bearish sequences do have a significant impact on volatility…..

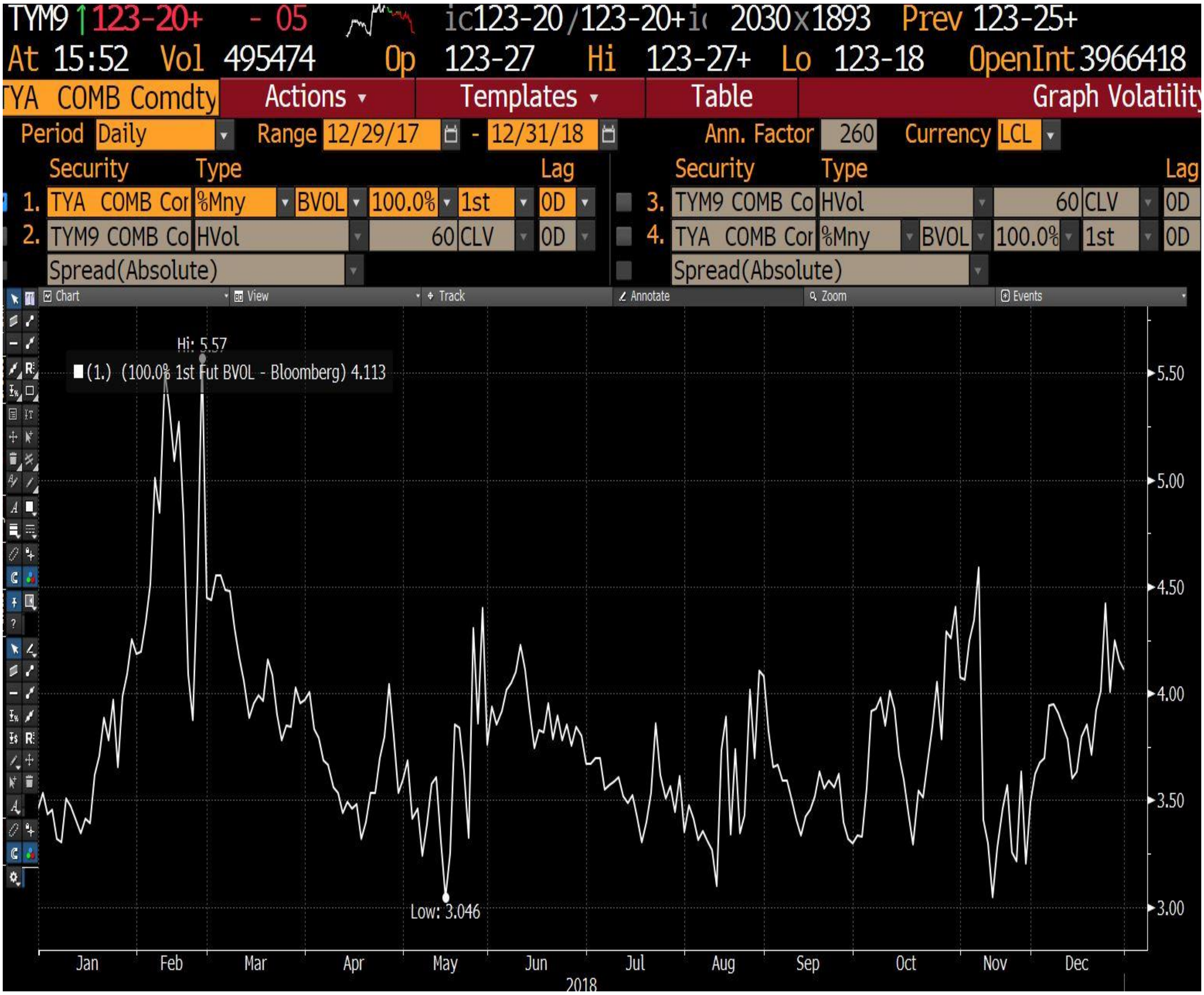
Though the 10 years T-Note implicit volatility was capped by 3.5% until the 20th of January, its take off was brutal ! The 4% mark was reached on the 25th of January, the 4.5% mark at the beginning of February, the 5%, then the 5.5% mark were reached a few days later in the middle of the Vol-Mageddon period.
Then almost as quickly as it had gone up volatility started to deflate reversing all the end of January move and breaking through th 4% mark around the 20th of February,

Before a last upward spike induced by more and more widespread fears that the FED would raise rates 4 times in 2018! And so the implicit volatility peak was reached at the end of February at 5.57% . Still that was a respectable 60% increase in 2 months!
But no one knew by then that this level would remain as the highest point during the year…

2/HOW TO ESTABLISH A QUITE NARROW TRADING RANGE

Indeed after 2 so eventful months, the market went really quiet, and from the 1st of March until the 2nd of April, the T-Notes prices bounced back gently towards 121.
Long volatility positions started to be heavy and costly to run, therefore plenty of them were unwound from the beginning of March, leading the implicit Vol. towards 3.75% before settling around 4% for the rest of the month.
As April looked like a perfect mirror image of March for the T-Note prices, the sell off was relentless, but it took place in a relatively calm and ordered way.
Although a new annual low was reached after the middle of the month, the implicit volatility followed the same way, at least at the beginning! It continuously came off down to 3.3% before managing a sharp bounce up to 4%, when the future T-Note was making new lows, and finishing April around 3.65%.
May more or less followed the same pattern with future prices still heading south, It traded below 118 during a full week (cf chart below) taking with it the implicit Vol. which consistently came off down to its yearly low of 3.05% reached mid-May !
From this point in time, the T-Note future evolved in a narrow range, between 118 and 121, and therefore contributed to further compress the implicit volatility within an even narrower range: between 3.1% and 4.4%.... See the chart thereafter: Implied Vol in 2018.

Boredom, boredom, boredom!….



Source: Bloomberg

A very quiet summer ensued varying because of, expected, rates hikes from the FED and more and more impressive US macro economic indicators, which, so late in the economic cycle was already very surprising!

So when Jay Powell ; the FED chairman, officially announced, in the Jacksonville summer symposium that there would still be another TWO rates hikes before the end of 2018, it triggered another rush to the exit!

And the T-Note market came off from 120.1/2 towards its lowest level of the year reached on the 8th of October at 117.10/32.

This move didn't really have any effect on the implicit volatility because it took one and a half month to unfold.

And so the implied volatility climbed back from 3.1% at the end of August towards just above 4% in September then 4% again at the beginning of October.
Nothing rare whatsoever in these moves….
But this very downward move, pricewise, of the US Treasuries was also the main cause of the widespread October crisis on the world financial markets, what has now became famous under the label Red October.
So when investors realized as soon as the 10th of October that ALL the equities markets in the world were collapsing together, that the emerging markets currencies found themselves under attack one after the other, that Commodities, first and foremost Oil were setting up collapses that you simply can't see elsewhere, then good old reflexes came back with a vengeance: BUY Sovereign Bonds and particularly US Treasuries!
This allowed the T-Note to develop a superb bounce towards 119 first (end of October). But as in the meantime, the sell-off in worldwide equities markets was uninterrupted, the bounce extended towards 120 (end of November) and to climb up to (almost) 122 on the 31st of December! Which meant that the T-Note had actually barely moved over the course of the calendar year 2018!
Although this obviously contributed to support a higher implied Vol., the highest point reached during the Q4-2018 was just above 4.5% at the beginning of November, level which has never been associated (and rightly so) with severe market stress…..

3/ CONCLUSION

At this stage, we can certainly conclude that 2018 was a year during which the volatilities of the US Treasuries and particularly the volatilities of the 10 years T-Note were fairly contained. A bit like the FX Rate Volatility of the USD/EUR (see part III) it has been confined in a relatively narrow range. And without giving any hint of a much bigger structural move to come…
The most surprising thing is that the massive volatilities storms which exploded in virtually every asset class during the Vol-Mageddon period, from February 2018, were all coming from the intense sell-off in the credit markets, especially the American ones, which constituted one of the main theme of 2018. It is striking that the asset class which was the root of pretty much all the problems which plagued the financial markets in 2018 was the only one to avoid a real Vol-Mageddon.
At the end of the day, it seems that the Credit markets players were never as worried by the yields increases consequences as other asset classes players, particularly in the equities space. Finally the Equities investors spent pretty much the whole of 2018 trying to get rid of assets which were burning their hands, keeping the Markets moves spiraling downwards and therefore spurring the continuous volatilities increases!

II/ EUROPEAN SOVEREIGN DEBT VOLATILITY

We are now going to consider 2 of the main major components of European Sovereign debt: the German one and its flagship Bond : the 10 years Bund, and its Italian equivalent the famous 10 years BTP .

1/ HOW DID THE YEAR START

And the answer is:…. Exactly in the same way as on the leading market, the US Treasuries,
studied in I/ just above.

By sympathy with the US T-Note the Bund started 2018 with a significant sell-off which lasted the whole of January.
At the opposite, the 10 years Italian BTP seemed totally immune against its peers sell-off!

Not disturbed in any way by what was happening elsewhere in the Credit markets, it even tried an exit on the upside, when the first BTP future traded above 130 a few times around the 20th of January.

Never the less during the first couple of months of 2018, BTP evolved in a quite narrow and perfectly horizontal range ….

Consequently, its implied Vol. never benefitted from any support, and as a result, came off consistently until mid-February. Loosing overall 2 full points during the period as you will see on the underneath graph.

Source : Bloomberg

While the BTP didn't take any part in the Vol-Mageddon, the Bund contributed according to its means, and its implied volatility finally took off from the 3.75% area towards the end of January to reach 5.60% close to the end of February. Representing a 50% increase in about a month. See the following chart:

Source: Bloomberg

So we have, at last, identified the first major financial product which didn't play any role in the Vol-Mageddon! The exception to the rule. And, IRONICALLY, it is probably the most volatile developed markets Sovereign debt instrument, the 10 years Italian BTP!
As we shall see next, its time in the sunshine would come soon enough.

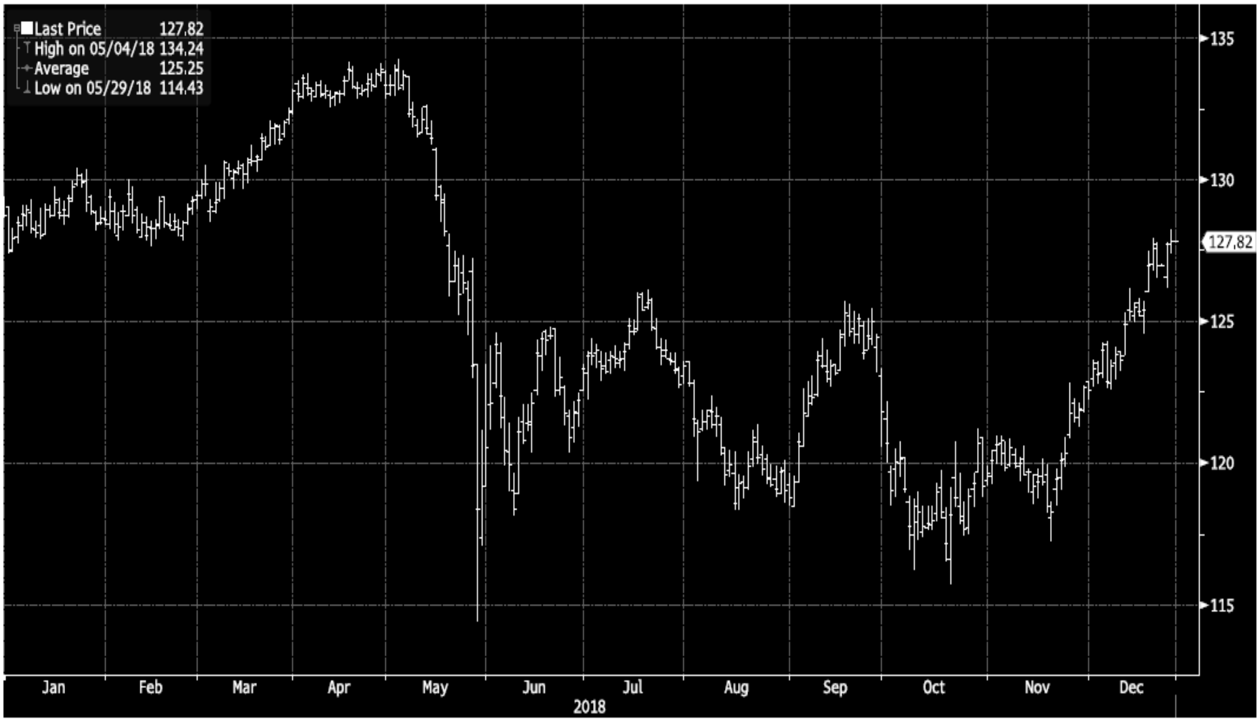
2/ VOLATILITY: A (HUGE) SPIKE THEN NOTHING…

From the beginning of March the situation on most asset classes started to normalize.

And as an indirect consequence BTP and BUND volatilities kept coming off during March and then Avril, to reach yearly lows of 4.838 % at the end of March on the BTP and of 2.844% in April 2018 on the 10 years Bund.
Interest rates markets, in a slow but steady upward path since the end of February reached yearly highs at the beginning of May 2018, as the graph below of the front month BTP future will show you:

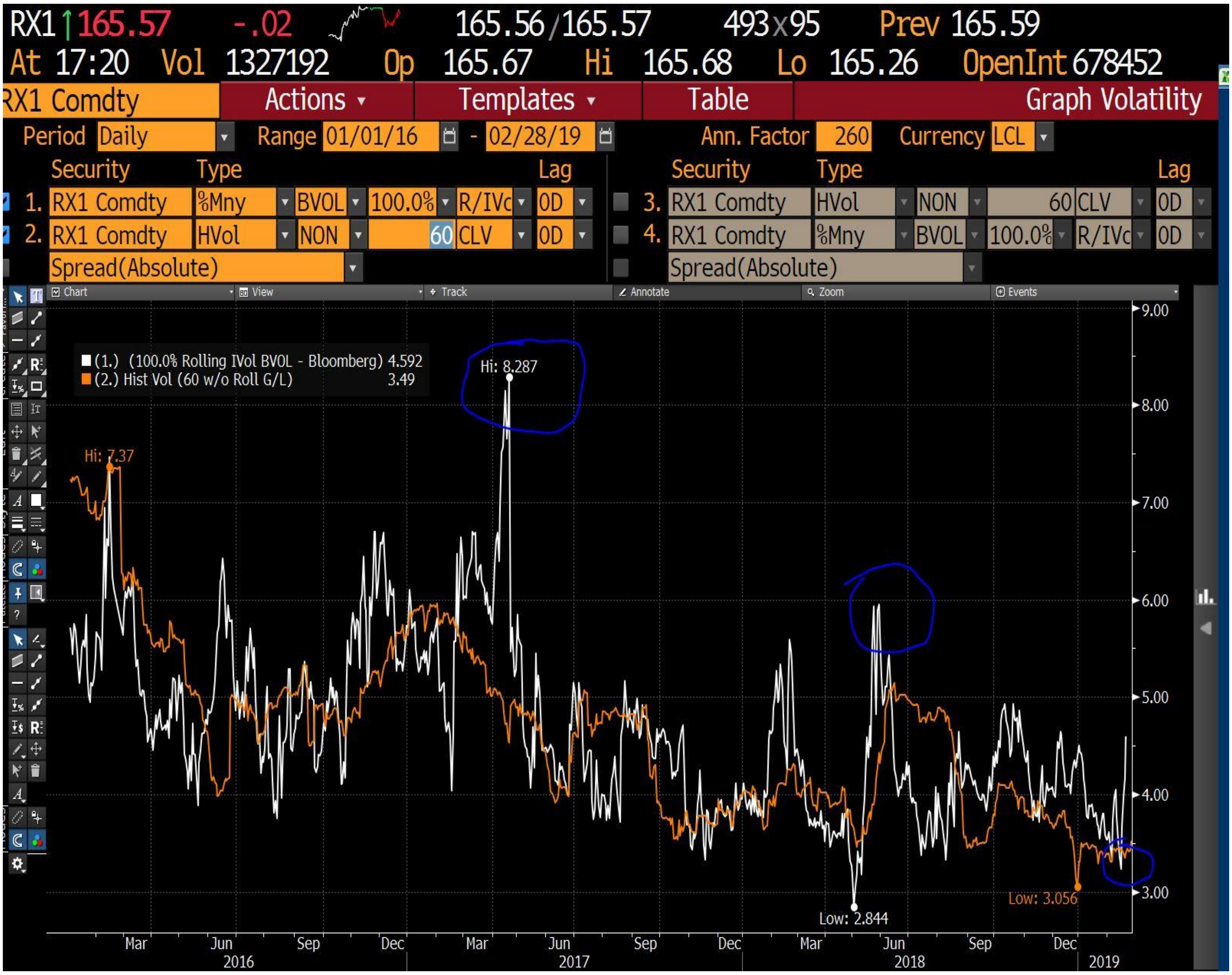
Bloomberg

IK1 Comdty (Generic 1st 'IK' Future)



Source: Bloomberg
It is at this point that numerous investors were reminded that there was still no government in Italy. Indeed following the Italian general elections, which took place early in March, and the debacle of the traditional political parties, Italy was going through an umpteenth institutional crisis, i.e without any majority to run the country….
This crisis lasted 89 days, before an agreement between 2 populist and anti-European parties (the 5 * Movement and La Lega) was finally agreed by the presidency leading to the formation of the new Italian government led by M. di Maio. Even for Italian standards, such a crisis is long, VERY long.

So from the beginning of May, starting to loose patience, the investors, and especially the foreigners, started to get rid of their Italian Bonds even faster than they had accumulated them! And as you can see on the preceding chart, in a matter of 1 month (25 days) le future BTP lost almost 20 figures, falling all the way from 134.24 to 114.43 ; a collapse of epic proportions !
As usual, the options market took notice of the Italian yields repricing and exploded North, flying fast from 5% to 17% !!
A massive increase of 240% in 3 weeks! A real Vol-Mageddon short Vol. traders ! (See graph in 1/).
The German Bund, as used as a safe heaven as it can be, felt the impact of that kind of moves on its implied volatility which climbed back towards just below 6% at the end of May, which was a new yearly high.
As you can clearly see on the chart below: this level was still way below the highs of the previous years!



Source: Bloomberg

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As the last 2 graphs show, after these volatility peaks, nothing happened ! NOTHING, neither on the German Bunds prices nor on their Vol, which remained range-bound, even ignoring the last BTP implied volatility peak, triggered by the tough and intense negotiations with Brussels to set decent Italian budget deficit targets for 2019. The huge uncertainties coming from these negotiations having contributed to take the implied Vol. to its new yearly high of 17.12%, reached mid-October…..All this to close the year on levels just above 10%.

3/ CONCLUSION

We can therefore conclude that political decisions taken at the State level DO HAVE a capital importance on the long term behavior of developed states interest rates markets. And although the BTP ESCAPED Vol-Mageddon at the beginning of 2018, all the political constraints which overwhelmed it later in the year triggered much more serious and devastating episodes on the options markets.
At the opposite, the 10 years German Bund, just like most other European states obligations (Irish, Portuguese, French, even Greeks…), experienced a much quieter year. Or at least with far less movements, let's put it this way….

III/ IG CORPORATE BONDS VOLATILITY.

When the desperate search for yields and FOMO are stronger than the fear to loose ……..

1/ HOW DID THE YEAR START

In the USA the leading credit market is the 10 years T-Note, therefore the index of corporate Bonds Iboxx USD Liquid Investment Grade actively followed the T-Note prices variations.

So the first 6 weeks of the year were complicated… During those: waves after waves of selling hit the market…. Before it stabilized between 272 and 274, until the end of April when the US IG started another sudden downward wave. See the chart there after.

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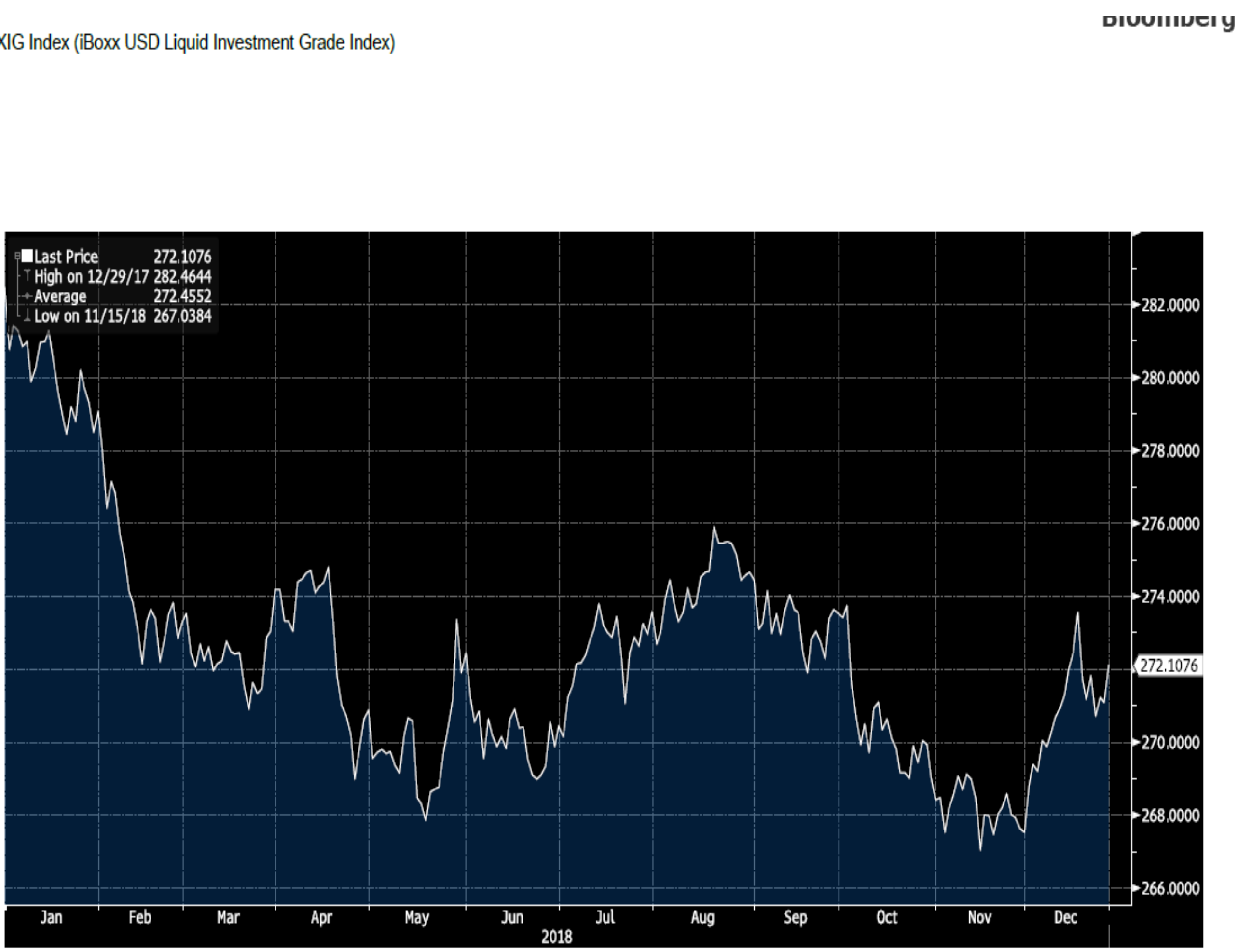
IBOXIG Index (iBoxx USD Liquid Investment Grade Index)



Source: Bloomberg

The circumstances prevalent in the US Interest Rates markets at that time were so stressed and tight that volatilities could not avoid climbing. And they indeed skyrocketed, like they did for plenty of other assets classes, going from 4.19% (yearly lowest) in January to 7.6% (yearly high...) at the time of the Vol-Mageddon in February. A respectable and appreciable (from a long point of view that is…) increase of 81% in a few weeks….

2/ VOLATILITY: AFTER THE BUMPY RIDE, THE CALM….

Following such a start to the year, we could have thought that the fireworks would start again during the fall when the US Treasuries ended up being under enormous pressure (See I/)….

Surprise, surprise: NOT AT ALL…. From mid-August, the IG market, followed the 10 years T-Note nosediving down to its yearly low (just above 267) reached mid-November.

But this roughly 4% sell-off, which lasted 3 Months was never fierce enough to frighten many players let alone to prevent them to invest in this part of the credit market. So, surprisingly, although the equities of these very same IG companies were slaughtered on an almost daily basis, therefore contributing to a general tightening of the overall credit conditions, thus to difficult times for some of these most fragile corporates, investors' appetite for that kind of assets never faded away….

Under these conditions, US IG indices implied volatility established itself in a very narrow trading range, from mid-March onwards, from 4.25% to 5.75% for the remaining of the year, with the exception of the last Vol peak (above 6%); around Mid-December.

Please have a look to the below chart which show you the implied Vol. variations of one of the main US IG ETF : LQD.

Where you'll be able to see, as well that the historical Vol. remained stuck in an even narrower range: between 3.37% and 4.79%.....

Source: Bloomberg

3/ CONCLUSION

So in kind of weird way, especially compared to other products at first glance LESS volatile, ETFs and Indices specialized on US IG Corporate Bonds were looking very much like “Sleeping Beauties”.
This tends to demonstrate that when an asset class is over hyped, you really need fast deteriorating market conditions in order to just DETER the players not to use their preferred strategy: « Buy on Dip ». !

IV/ US HIGH YIELDS CORPORATE BONDS VOLATILITY

When people are reminded that Junk effectively means rotten…

1/ HOW DID THE YEAR START

2017 was a truly remarkable year in the High yield markets in the sense that the investors interest and hunt for HY was absolutely relentless! Obviously the beginning of 2018 was a carbon-copy of 2017, with massive and permanent inflows in the HY Debt markets.
These in-flows were so big and so regular that the sell-offs on the Sovereign and IG Debt Markets described earlier on were totally offset and eventually the main US High Yield ETF : the iShares iBoxx High Yield Corporate Bond (HYG) finished the month of January almost unchanged…..

As you will see on the below chart, the first 2 weeks of February were much more tricky….

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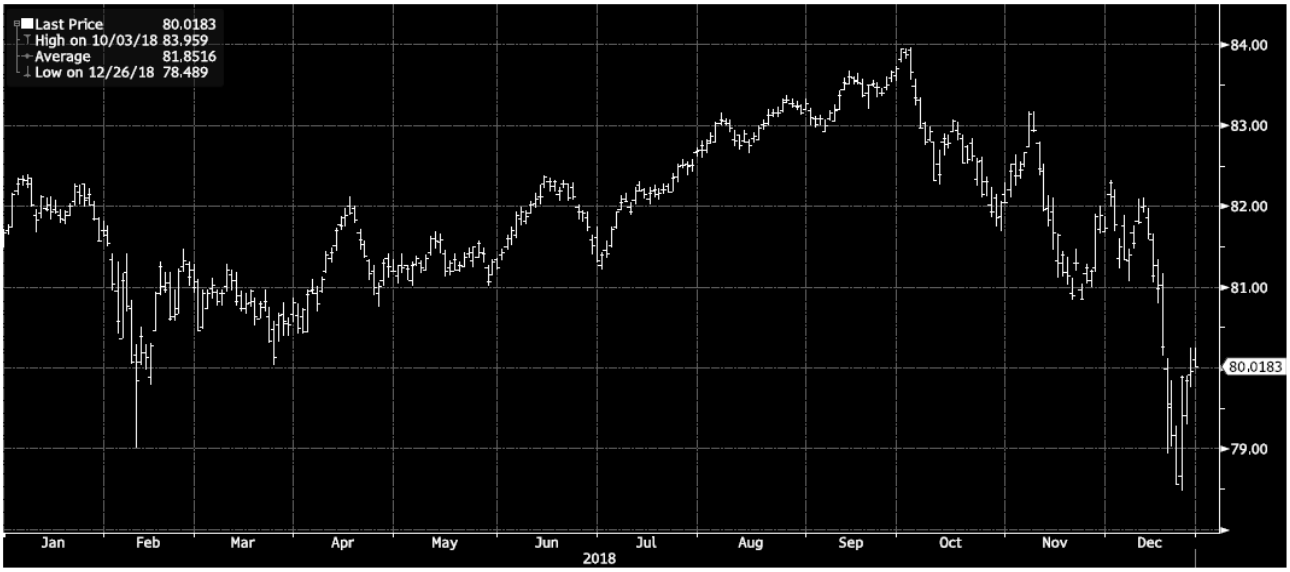
HYG US Equity (iShares iBoxx High Yield Corporate Bond ETF)

Bloomberg



Source: Bloomberg

The downward acceleration at the time of Vol-Mageddon is indeed very sharp. But you have to acknowledge that the bounce was as fast and as sharp as the sell-off! No one will be surprised that the inevitable peak of volatility was quite fierce as well with the HYG 3 Months Implied Vol. exploding from 6% to 10% in a few days. Before settling down just under the 8% mark towards the end of February, during the HYG prices consolidation between 80 and 82 which lasted until May. This lengthy consolidation triggered a continuous decrease in implied Vols which reached 4% in early May.

2/ VOLATILITY : THE FINAL FIRE WORKS

As the US Credit Markets players were still desperate to get some decent yields on their Bonds portfolios, they came back, slowly but surely, into the HY Bonds. Bonds that nobody think about as being Junk when everything is right, and by the middle of the year, as everything was right, the HYG Market established a new yearly high soon followed by many others until the 3rd of October, the very day the Dow Jones established its historical high, when HYG topped at 83.9.
As you can expect under such circumstances , implied volatility followed the exact opposite way, setting a new yearly low at 3.178% in July and remained absolutely flat until the 3rd of October…. Depression was paroxysmal on the HYG Historical Vol. which reached a multi decade low at 1.905% on…. the 3rd of October….

See the chart below :

Source: Bloomberg

But with the new development we now call Red October, things suddenly changed! And they changed radically!

The price of the HYG ETF quickly nose-dove, in line with the equities, to break through 82 before the end of October then 81 in November, before reaching a yearly low at 78.489 on the 26th of December. A significant fall of 6.52% in 2 and a half Month.

As usual implied Vol. went the other way and very quickly exploded towards 6% then 8% in November, and as the sell-off intensified in December, a real spike occurred which took volatility on its yearly high at 13.589% around Xmas time.

We are therefore talking about a real explosion of implied volatility of 328% from the lows! This huge move has to be compared to a fall of 6.52% of the underlying assets prices …..

No need to say that any player who would have stayed short volatility over the entire period would have been absolutely slaughtered!

3/ CONCLUSION

So it appears that it is at the end of this review that we finally found out the asset class, within the credit markets, which saw its volatilities exploded higher towards stratospheric levels!
This is not a real surprise. What can be seen as slightly surprising is that it reacted so fast and so much to the Red October when all the other credit markets reactions were subdued….
Carefully thinking about that, it's clear that the bonds in the HY ETFs or HY Indices bear mediocre notations for a reason….
And this reason is quite simple: the balance sheet of the companies rated High Yield are usually "fragile" and their business models are not necessarily reliable…..

In short : « JUNK MEANS JUNK » !

So from the moment people start to fear, rightly or wrongly, that the US economy is bound to a marked slowdown, although the general default rate is actually still very low (less than 2%),
The future profitability of these companies is then challenged very quickly !
At this point in time, High Yield or not, a lot of investors start to feel uncomfortable holding paper that burn their fingers!
Hence the massive outflows which struck the US High Yields Bonds during the all of Q4 2018.

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