Part 2 : THE GREAT FANTASY

Bruno Syrmen
CIO Alternatif - Partner
bsyrmen@seven-cm.com
+33 1 42 33 75 22

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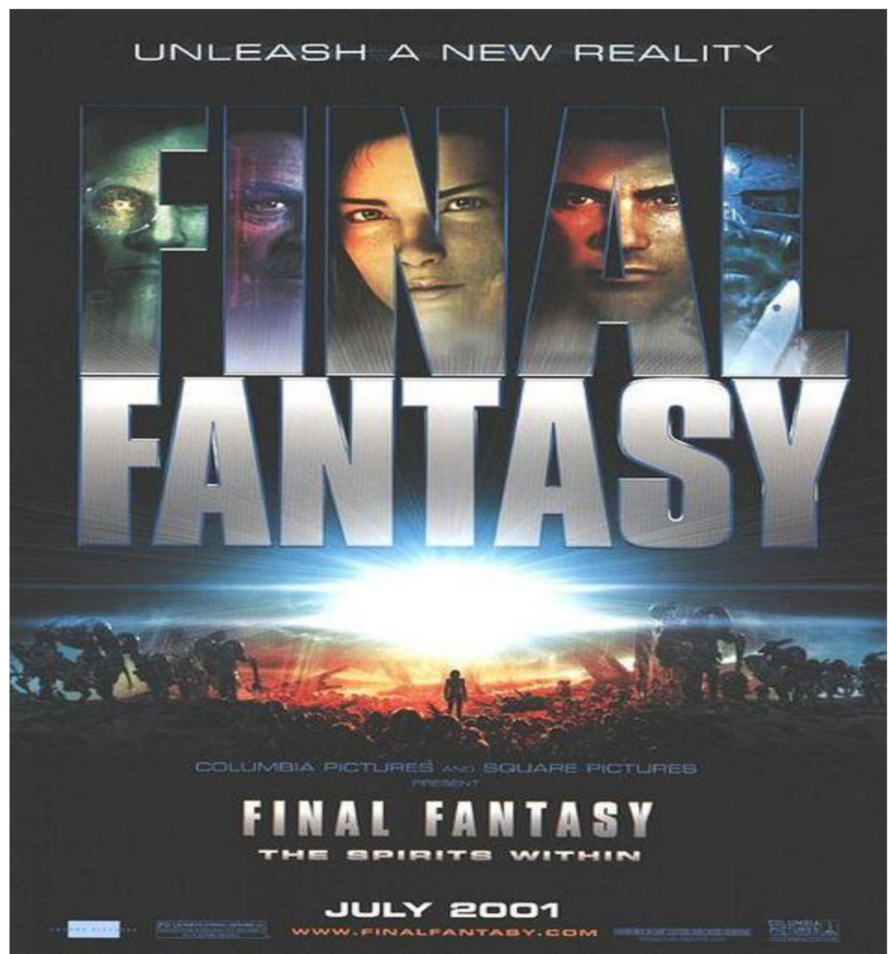
Fantasy

ˈfantəsi,ˈfantəzi/

noun

the faculty or activity of imagining impossible or improbable things.

Synonyms: imagination,creativity,fancy,invention,originality,vision, speculation,daydreaming, makebelieve, reverie.



Past Performance is not necessarily indicative of future results.

Chuck Prince, Citigroup CEO in July 2007 :
"As long as the music is playing you've got to get up and dance. We're still dancing."

- **Introduction**

In the first article of this series: "The problem of liquidity in the financial markets", we studied in detail the last two main occurrences of the so called Flash Crashes in the US Equities Markets.

And we showed that during the last few years, the combination of the ever growing popularity of certain securities (ETF for instance) and the new regulatory environment (particularly in the USA with the Dodd Franck Act) have led to new market dynamics and behaviors. And that under certain circumstances this can lead to serious liquidity problems when liquidity is much needed, i.e. when one wants to quickly exit an existing position.

In this second article, we shall principally study and analyze what might happen to some other sectors of the financial markets when the next financial crisis strikes, given the current liquidity conditions.

More precisely we shall examine the current state of liquidity in the much bigger and much more important Fixed Income Markets.

And we shall show that the very structure of the fixed income markets have changed a lot since 2008, and that unfortunately things in some areas, like Investment Grade credit for instance, are as bad as they are in the equities markets.

Finally, we shall add some considerations regarding the near collapse of the markets on Wednesday and Thursday October the 10th and 11th.

A last warning sign of things to come?

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- **The US CORPORATE BONDS MARKET.**

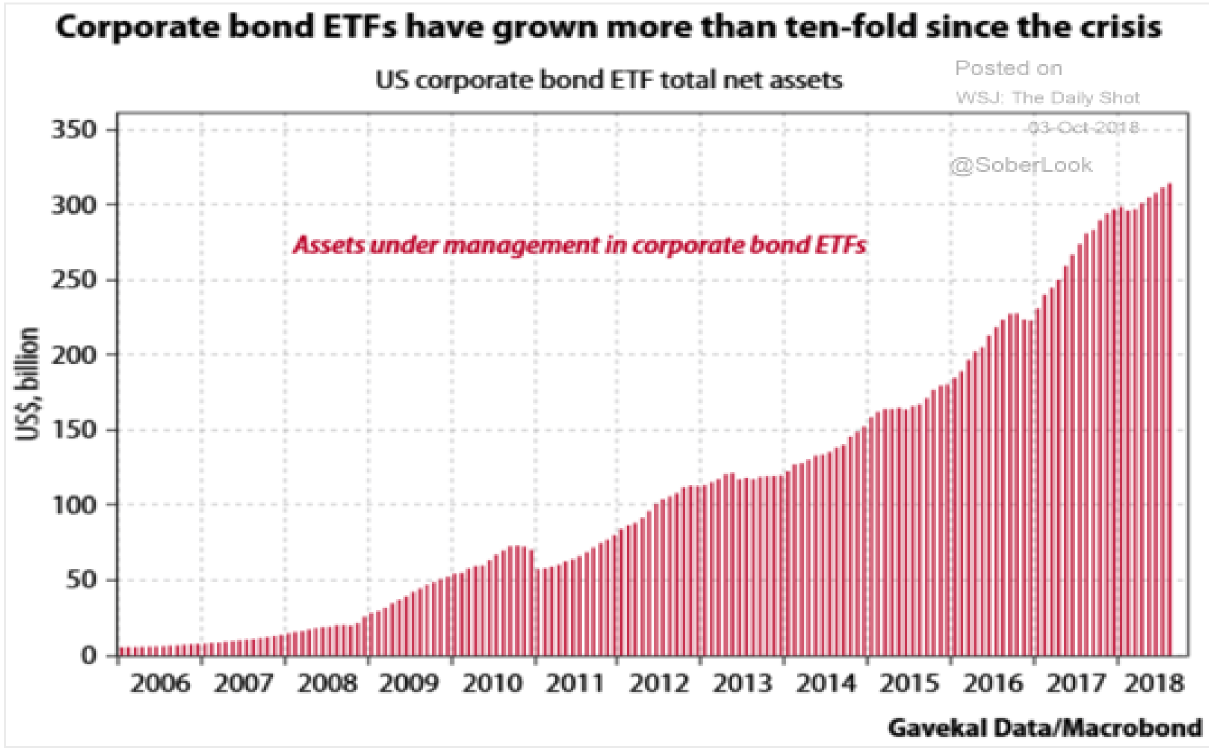
Everyone is well aware of the massive increase of the amounts of sovereign debt around the world.

All this has been well documented and discussed at length.

This particular series of articles has been inspired by, among others, a brilliant and fascinating article written by M. Louis GAVE for Gavekal Research back in May 2018: “The illusion of liquidity and its consequences”.

In this “must read” article, there is a striking chart showing the growth in US corporate bond ETF AUM since 2006.

Here it is:



Source: Gavekal research

Assets have been multiplied by roughly 13 in 10 years and have doubled in less than 4 years. Impressive indeed!

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And, as you can see in the figure shown below (courtesy of WSJ Daily Shot), IG Corporate assets keep flowing in (another +$2.5bn in September 2018).

And although the much riskier High Yield Corp sector has suffered a $3.5bn outflow Year to Date, including a $1.5Bn outflow in September, during the last week of September the biggest high-yield ETF (HYG) got a record capital inflow as shown in the second chart below.

Figure 5: Fixed Income Sectors

In Millions	September	Year to Date
Aggregate	2,376	20,426
Government	1,863	25,122
Inflation Protected	297	5,076
Mortgage-Backed	144	3,826
IG Corporate	2,497	9,936
High Yield Corp.	-1,506	-3,539
Bank Loans	358	1,267
EM Bond	821	3,123
Preferred	-543	19
Convertible	65	543
Municipals	55	3,566

WSJ: The Daily Shot
03-Oct-2018
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Top two and bottom two categories per period are highlighted. Source: Bloomberg Finance L.P., State Street Global Advisors, as of September 28, 2018.

Source: WSJ The Daily Shot

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Source:Bloomberg

Overall, the year to date inflow in Bond Funds and Bond ETF as a whole reached $69bn.

All these people have, whether they are aware of it or not, lent money. If a big chunk of them want to get their money back at approximately the same time (for whatever reason) they will have to SELL!

The $69bn question will then be: Who will buy all these bonds?

. The New Structure and Dynamic of the BONDS MARKETS

Let's go back to 2008 and the great financial crisis.

What was particularly striking at that time for many market participants was not the collapse in real estate or equities markets. As Louis Gave put it:

> "The true surprise was that instruments like money market funds and triple-A rated structured products that had been considered "liquid", proved to be anything but. Numerous fixed income products went from being perfectly liquid one day to untradeable the next.

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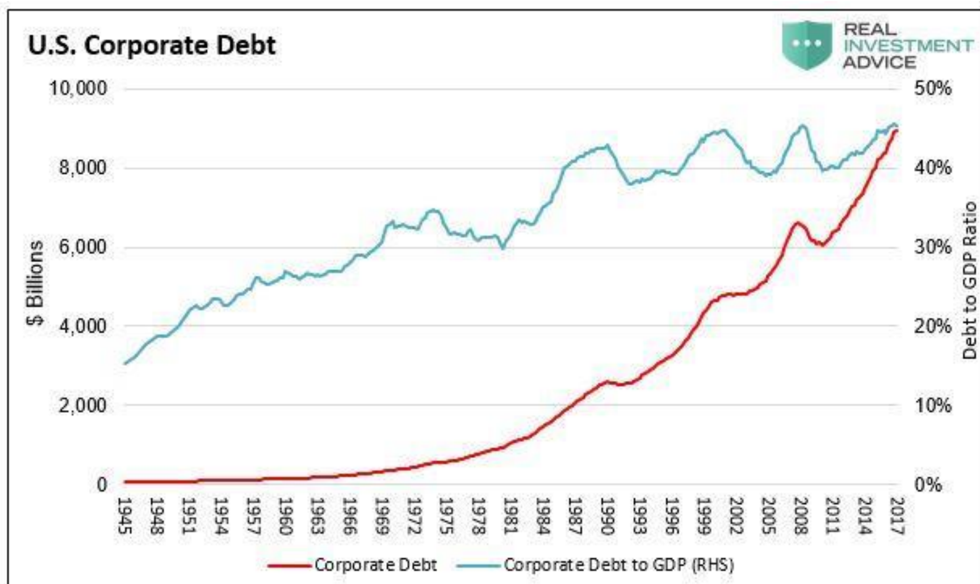
> And this change was not a gradual deterioration. It was a sudden regime change. All of a sudden, investors who thought they held liquid instruments found their investments gated, frozen and sometimes even unable to price."

Some of the so called "side pockets" established at that time still exist, by the way.

Fast forward ten years of central banks QE during which every potential borrower in the world became addicted to ultra-low interest rates and we end up with the highest ever debt contracted by the US corporates ($9tn), as shown by the following FED chart.



Source: Saint Louis FED

On the other side, in order to avoid a repeat of the 2008 collapses on the financial markets, the authorities set up a whole new set of very strict and tight rules and regulations, the famous Dodd-Franck Act. Among many other things these tighter regulations discouraged banks from making markets in corporate and HY debt. Experts estimate that Dodd-Frank requirements have reduced major bank market-making abilities by around 90%. This is HUGE! Obviously, their bonds inventories (used for market making) have shrunk in similar proportions: one estimates that it went from almost $300bn to roughly $30bn.

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And it's not the only major change when it comes to market making: human market makers, supposedly slow and often reliant on valuations (reversion) have largely been replaced by programmatic liquidity that is faster and relies on volatility-based VAR to quickly adjust the amount of risk taking (liquidity provision). This trend strengthens momentum and reduces day-to-day volatility, it therefore increases the risk of disruptions.

So we currently stand with a corporate bond market bigger than ever before, with the new main actors: corporate bond ETF and mutual fund shareholders. As we have seen before, these funds have exploded in size and their very conception assumes a market with ample liquidity.

When the ability of the traditional market makers to provide liquidity is barely 10% or 20% of what it used to be…

It is therefore pretty clear that the US Corporate Bond market is very different from what it was ten years ago. Now, you have to remember that in the financial industry,

a lot of the models used either to "predict" or to estimate potential risks in a given market, are based on financial history and past behavior of this market. Are these models still relevant nowadays?

So we are left with the conjunction of four problems:

- Corporate debt (IG and especially HY) issuance has exploded since 2009.
- Tighter regulations discouraged banks from making markets in IG corporate and HY debt.
- Owners of a huge part of the corporate bonds (ETFs and Mutual Funds) ARE expecting daily liquidity, even in adverse conditions.
- Potential failure of the widely used history-based financial models leading to way-off-the-mark predictions or risk estimations.

. The risks faced by US Corporate Bonds investors in the next financial crisis

When the next global financial crisis will strike, whatever the trigger, many assets holders will be keen to sell. In the Fixed Income markets investors will be desperate to get rid of their high yield bonds first and then of their investment grade ones.

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Many of these investors will assume they can exit their positions at a moment's notice. And these totally misplaced assumptions are effectively the great fantasy of the modern bonds markets.
In a fast collapsing market, seeing a number printed on your screen for any security does not guarantee that you will be able to sell any of this security at THAT price, and although you can may be sell some at that price, there is no guarantee either that you will be able to exit all your positions at this same price.
In a real fast, fierce and devastating bear market you do not necessarily sell what you want but what you can at whatever price is available…
And as we have already stated in part 1, ETFs are legally required to meet redemptions, so if half their holdings are not quoted because of a total lack of bids, they will have to sell the ones that still trade, usually the most sought after bonds, and therefore keep the crap ones that nobody wants which means risking an even greater loss on these if redemptions keep coming. Worst case, an ETF can end up with several bonds that will not trade for days or weeks and therefore unable to calculate any NAV…
This issue is known as the underlying liquidity issue which is defined as the ability for a bond fund to establish daily market value.

The market price of some bonds held in a fund, especially those that are investing in less liquid markets, may not be readily available. If a bond fund holds securities that are illiquid, meaning they do not trade very often, then a realistic current price may be difficult to obtain. Many fixed income ETFs hold thousands of securities, some of which do not trade daily or even weekly. This means that pricing is dependent upon estimates of the value on those bonds. These estimates of value may be derived from a third-party pricing service, surveys of bond market trading desks and internally generated models. Mispricing of securities is a known problem and one not typically considered until the fund is forced to sell. If the fund receives an inordinate number of redemption requests, what happens if they have bonds that do not trade very often but are nevertheless required to liquidate based upon investor requests? It is likely that the sale price could vary, and sometimes significantly, from the last assumed price. Again, this is most likely to occur at the wrong time for investors.

These concerns have not yet emerged as a deterrent in the new age of passive investing popularity. We have only seen slight glimpses of what may be ahead in terms of challenges for the passive investor, but it is fair to say this could be a major problem.

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Investors optimistically assume they will be able to exit as easily as they entered these funds and at the stated value seen on their statements or trading screens. In a calm market the concerns are minor but there are serious questions about that reality should a wave of selling hit bond ETFs all at once.

For the time being, bond market liquidity is fine because hedge funds and some other non-bank lenders have filled the gap. The problem is they are not true market makers. There is no legal requirement for them to buy when you want to sell.
That means all the bids can “magically” disappear just when you need them most.
These “shadow banks” are not in the business of protecting your assets. They are worried about their own profits and those of their clients.

. Passive investing Bonds exposure

Traditionally, investors who wished to get exposure to bonds relied on their banks or brokers for individual debt securities. Finding a specific bond, bar a sovereign bond, is usually more difficult and therefore can be costly in terms of Bid/Ask spread. And this problem is still present when an investor wants to sell his individual bonds.
The wonderful innovation of bonds index mutual funds and ETFs therefore presents the enormous advantage of eliminating the expansive and time-consuming process of buying and selling individual bonds.
Even better, any investor can now choose, via a sub-index, the sub-category of bonds he wants to get exposure in!
For instance: Treasuries securities or Investment Grade corporate bonds or even mortgage-backed securities, asset-backed securities and collateralized debt obligations…
This flexibility is fairly remarkable. It is so easy to buy a unit of these funds that most investors will almost assume that one will get rid of this same unit as easily, whatever the market conditions. We already discussed the underlying liquidity issue. There is another one: the so-called *optimization.*
Here is what it means according to Michael Lebowitz (Realinvestmentadvice.com) :
“The structure of index funds and ETFs are such that in many cases the fund managers are only able to establish positions in the underlying stocks or bonds of the indexes they track with some imprecision.

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This means they will use creative means of gaining desirable exposures and then gradually, if possible, reposition over time in order to more closely track the index. This tends to be a much bigger problem for bond funds. Since full replication of a bond index is generally not possible, bond funds rely on "optimizing" the portfolio in order to most effectively replicate the index".
Clearly optimization is not ideal to replicate the performance of an index on a daily basis. Thus the ETF might suffer performance drift from the target index (tracking error). Unfortunately, the flaws of replicating with optimization are often exacerbated during periods of market stress…

. Passive investing hidden risks are about to emerge

It is obvious that since 2009, passive investing has tremendously increased its market share at the expense of active investing. Easy to understand, cheap, reliable and supposedly perfectly liquid. Nothing to dislike about them, right? But what is trendy and fashionable will eventually become unpopular. **The hidden risks we described above, all embedded in bonds funds or ETFs will emerge sooner or later and those who bought the fantasy of the permanent liquidity in the modern era bonds markets will end up crying and screaming for help from the traditional buyers of last resort: the central banks. Whether the central bankers will be keen to buy so called junk bonds is another debate…**
Also, don't let it be lost on you that the developed countries sovereign debt can be affected as well. Here are a couple of interesting charts from Goldman Sachs on the BTP (Italian Treasuries) liquidity during the penultimate episode of the BTP/Bund spread widening which occurred last spring.

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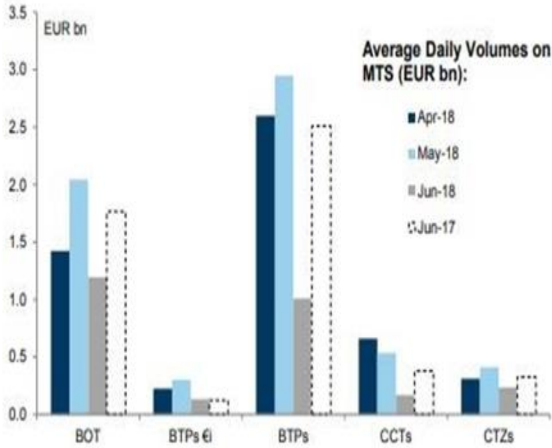

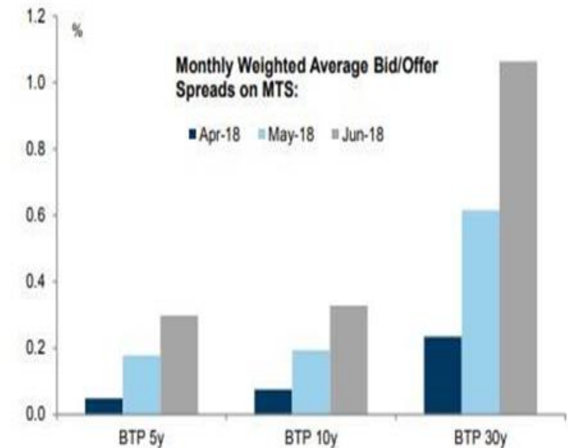

Source: Goldman Sachs

Where you can clearly see that the traded volumes were consistently lower while the bid/offer spread on all the BTPs was relentlessly increasing…
In a matter of less than 3 months, the liquidity conditions of the third biggest sovereign debt market have significantly deteriorated, leading to a much more volatile price action.

. CONCLUSION

So we have shown that the new conditions, dynamics and behaviors of the modern Bonds Markets could make these markets extremely vulnerable to massive unwinds of existing long positions.
From the so-called Junk Bonds (HY bonds) to even some developed markets sovereign bonds like the Italian BTPs, passing by the Investment Grade Bonds (where nearly 50% are rated BBB, i.e. a one notch downgrade away from becoming Junk…) the liquidity might vanish very quickly leaving thousands of investors stranded with remaining positions in securities they do not want to hold any longer.

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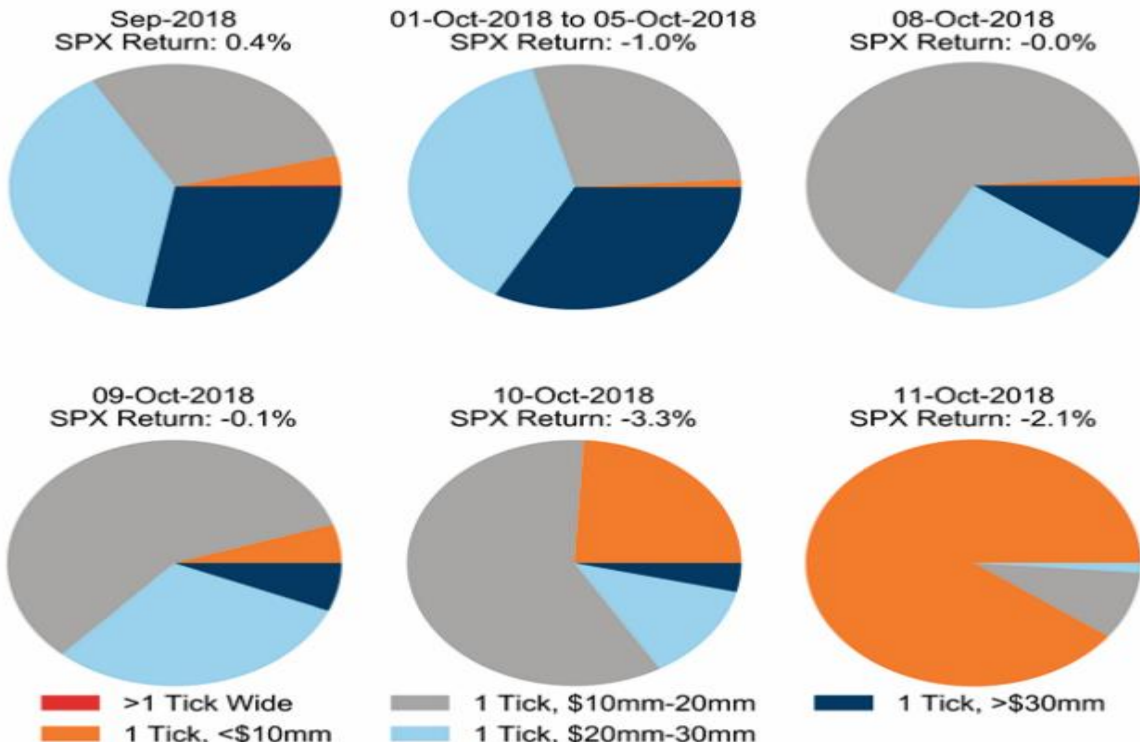
These trapped investors will rediscover, but a bit late, that when it comes to permanent and efficient liquidity in the bonds markets, the Japanese Government Bonds (thanks to the BOJ), the German SCHATZ/BOBL/BUND and of course the US Treasuries are still the ultimate references… Although their yields are not very appealing.

. ADDENDUM

Following the 2 days sharp selloff which took place last week on the 10th and 11th of October, we thought it was interesting to provide you an update on the liquidity of the SP500 Index Futures and of the FI ETFs.

And as charts are sometimes more useful and more telling than words, here are two coming from Goldman Sachs showing how the DEPTH of the bid/ask spread on SP500 Futures has evolved last week and over the last 4 years.

As you can see, the liquidity conditions on the SP500 on the 11th were pretty dire…



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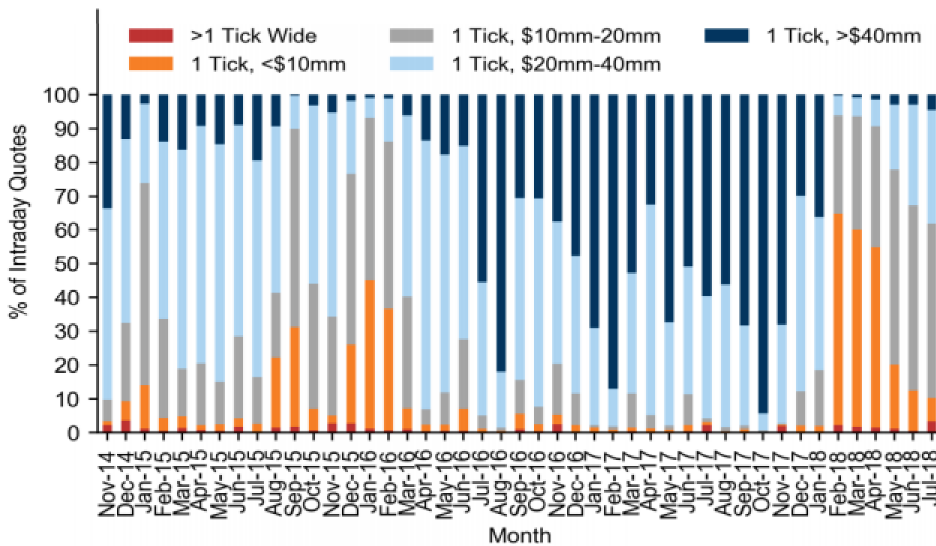
From a longer-term point of view, the liquidity conditions in February, March and April this year were already worse than in January 2016 and August/September 2015 when Flash Crash 2.0 occurred… Not a healthy evolution.

Exhibit 12: E-mini SPX future bid/ask quotes below $20mm notional are more common now than in most of 2015-7

Monthly distribution of average bid/ask width (# of 0.25 ticks) and depth ($mm notional), based on 5-minute intraday snapshots



Source: Goldman Sachs Global Investment Research, Reuters

Source: Goldman Sachs

On the Fixed Income side of the markets, let's have a look at 3 charts provided on the 15th of October by the WSJ Daily Shot: the week of the 8th of October was the first week in ages of massive outflows in the IG world.

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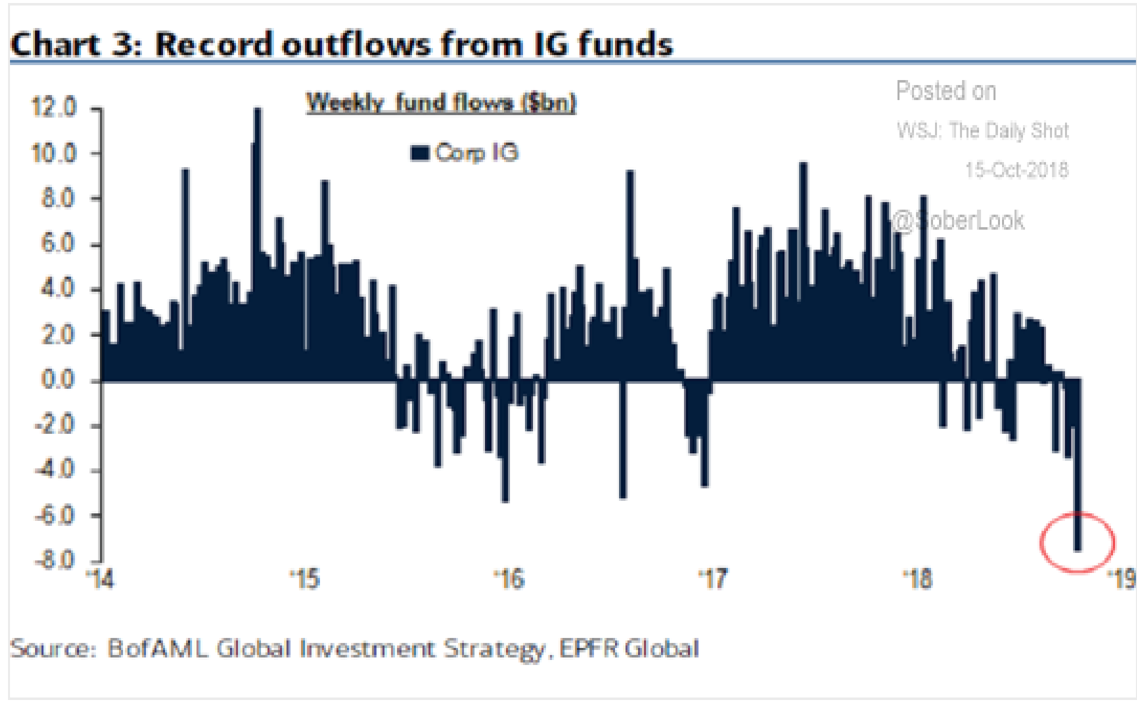
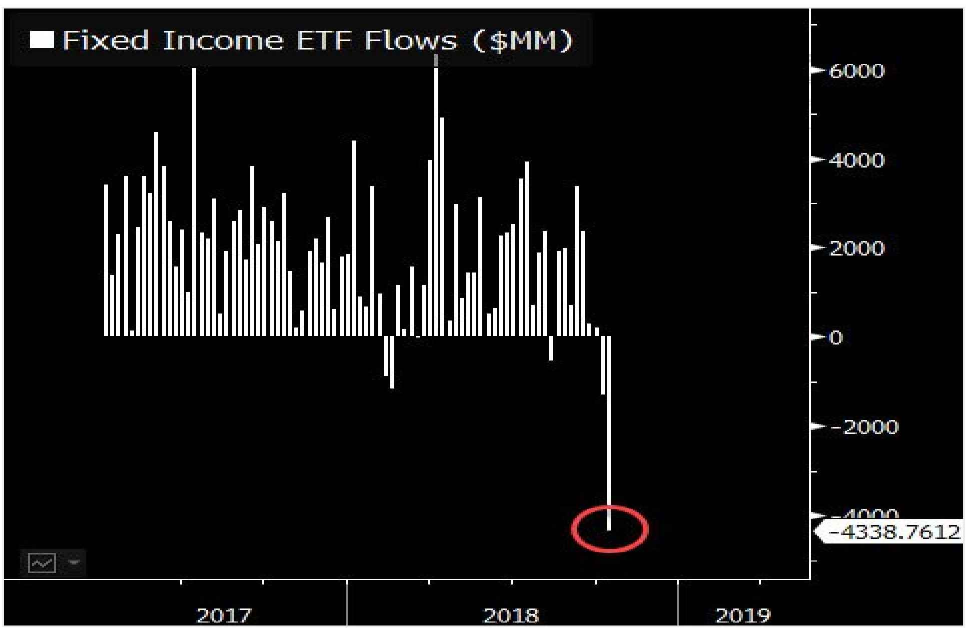


Source: WSJ The Daily Shot

And more generally, the WHOLE Fixed Income ETF universe has faced huge redemptions.



Source: WSJ The Daily Shot

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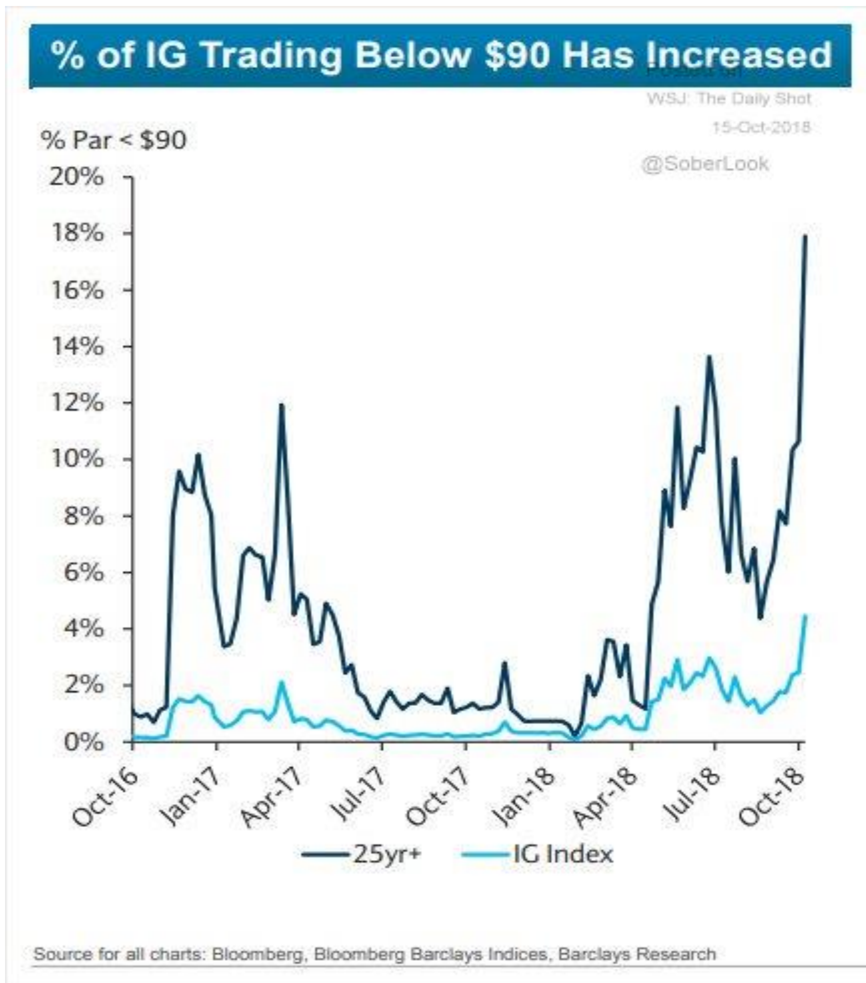
So far the liquidity seems to have been decent and continuous enough to absorb the significant increase in sales, but: the percentage of investment-grade bonds trading below 90 cents on the dollar hit a multi-year high, especially the longest duration. This has to be monitored.



Source: WSJ The Daily Shot

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References:

Those interested in these topics can consult some of the following articles:

- https://www.sec.gov/news/studies/2010/marketevents-report.pdf
  Official report on the Flash crash V1.0
- The Evergreen Gavekal chart book of September 2015.
- https://www.sec.gov/marketstructure/research/equity_market_volatility.pdf
  Official Document on Flash Crash V2.0
- https://www.blackrock.com/corporate/literature/whitepaper/viewpoint-us-equity-market-structure-october-2015.pdf
  BlackRock report on Flash Crash V2.0
- The brief but excellent “The illusion of liquidity and its consequences”
  Louis Gave – Gavekal Research May 2018
- The excellent Daily Shot (WSJ)
- The very good series of 8 articles on the debt issue: “Train Crash”
  John Mauldin – Thoughts from the frontline May-June2018
- The Heisenberg Blog
- https://www.ft.com/content/cdbdd01a-95b4-11e8-95f8-8640db9060a7
  Passive investing is storing up trouble: FT 02/08/2018
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- Sailing Versus Rowing: Active Versus Passive
  Michael Lebowitz via RealInvestmentAdvice.com
- https://www.finra.org/sites/default/files/OCE_researchnote_liquidity_2015_12.pdf
  Finra report on Corporate Bonds liquidity

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