The Big Picture SDS, XT21

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francescomaggioni.com
IT +39 393 70 40 234
UK +44 757 681 62 43

"Quantitative approach for asymmetric results"

Inversion on SP500: the question is not if, but when.

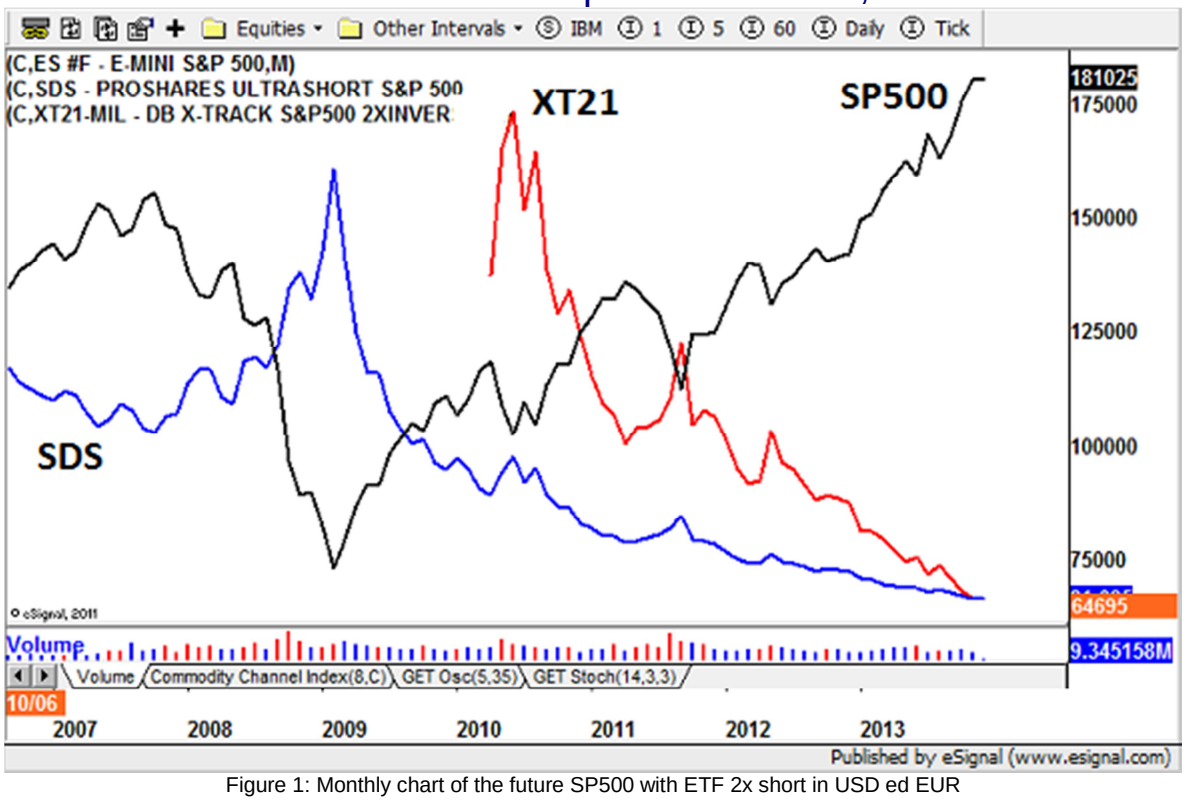


Figure 1: Monthly chart of the future SP500 with ETF 2x short in USD ed EUR

The above is the linear, monthly chart of the future on SP500 (black line) with two 2x Short ETF on the same index: one is the USD denominated ETF with the ticker SDS (blue line) the other is the EUR denominated ETF with the ticker XT21 (red line). The latter is traded in Europe and is denominated in euro: the reason why I am also showing this ETF is because typically ETFs traded in Europe which have an underlying in a different currency are not hedged.

Where to invest right now? I often say that it is better to invest in something that is trending instead of putting money in something that someone belives will make an inversion soon. I am referring to those who put their money in beaten stocks just because "it has lost too much, it cannot go lower".

So right now the strongest trend is indeed the SP500 and its constituents.

The goal of this study is not to promote investments neither in SP500 nor in the 2x Long or Short ETFs but to make an analysis on the market and its inverse ETFs to see whether the joint analysis makes sense. It should indeed.

Another goal of this study is to analize the two ETFs because due to the currency they have slight different behaviours.

There is no need to read this study or see the chart above to know that the American market is right now at all time highs, but what it is interesting to note from a linear chart, more so than from a candlestick chart, is that since July 2012 the SP500 started a considerable run up with a record low volatility. Stocks especially tend to have a considerable high volatility in their behaviour, or at least higher than other instruments. So this lack of volatility is, to say the least, suspicious.

From my personal experience I prefer to invest in instruments which do have some sort of volatility.

Figure 2: Madoff fund compared to SP500

We have many different examples of instruments, or investments which returned generous profits with record low volatility but at some point, the compressed volatilty exploded all in once.

The point is that any investment which brings outstanding performances with way below average volatility, it is the investment that people must avoid. Or to be aware of what kind of investment is and be ready to be in for only a small period of time, hoping not to be the last one who enters.

The chart at figure 2 is one of Madoff's fund performance compared to the SP500, does anyone remember what happened just four years ago?

The Defender, one of Madoff feeder fund, took seventeen years to go from zero to seven thousands, but few days to go from seven thousands to zero..!

The intention here is not to compare the SP500 with a fund and people involved in a fraud, my intention is only to show how a strangely low volatile fund ended up giving back the compressed volatility to its investors, all in once. What I could safely say is that for Madoff, as well as for the SP500 nowadays, both performances have been (and in one case still is) manipulated by external agents in order to obtain the desired outcome.

For what concern the SP500 the direct intervention of the Federal Reserve is resulting in over 30% of the American GDP (that is at fifteen trillion dollars) injected in the stock market.

Isn't it a manipulation?

That's why this oustanding performance obtained with a record low volatility is a dangerous mix and has the characteristics to end very badly: because history tends to repeat itself.

It is true that part of the performance and company valuations are justified by better-than-expected macro data but that is a subject out of scope on this paper, as I only look at charts.

Let's now look at the two ETFs in the chart, also here we see a volatilty compression, more so than on the index.

The question is then when it is the time to exit the long side on the SP500 and when it is to enter into the ETFs short?

On a pure technical analysis stand point, a first sign of an inversion is when after a retracement, the instrument (in this case SP500) will do a lower high, meaning that it cannot break previous high and therefore there are more sellers than buyers that prevent the index to go higher.

Likewaise on the ETFs, the inversion will happen when after a first bounce, a higher low will materialize during the following downward movement.

But what we are witnessing in the markets isn't natural so don't (at least) expect a natural behaviour. There is a probability that the american index won't simply retrace but it could start a sudden and violent downward movement outright. That is how volatility compressions end up.

Volatilty compression is like a spring which is tighten until it cannot be compressed anymore and release all the energy created.

In the same way, the ETfs could have potentially sudden and violent spikes up which will declare the trend inversion.

Below you can see a monthly chart of the VIX where you can see after periods of compressed volatility what kind of reactions followed in a short period of time.

Figure 3: VIX Montlhy chart and its 100 periods moving average.

I would like to focus your attention not only at the volatilty spikes and how those tend to happen suddenly but also at the blue line, which is a 100 periods moving average.

The typical long term moving average, the 200 periods does not work on this chart since there are too few data points, so that is why you see the 100 periods instead. It is however a good proxy. What is striking from this chart is that notwithstanding those huge spikes, the moving average is flat and the reason is because there is a tendency in the price action of the VIX to what is called "mean reverting". That is, prolonged periods of subnormal volatility are compensated by short periods of huge spikes. That's a confirmation of the boom and bust process that we are

experiencing for the last thirteen years. I do not predict the future, I only look at the charts and make some assumptions, some are reasonable, some less so but nevertheless important to keep in mind.

Trying to have an idea of what lies ahead look at the VIX, not even at the 2008 explosion, but simply at the small spikes that happened in 2010 and 2011: the first instance was the Greece situation that arose for the first time while the second instance was another European led mini-crisis.

Just for the sake of complete information, for those non european, during the 2011 crisis the Italian Index FTSE MIB went below the 2009 low and became the lowest low of the last twenty years.

So what can be done with such situation that we are in?

Right now there are no signs of trend inversion which therefore do not justify yet not even a first trade into the ETFs short.

When the moment will come and signs of a trend inversion will materialize, for which you will not need to ask to investor professionals to see clues of them but you will be able to clearly recognize them by yourself (because most probably there will be information that will make the market shift suddenly), are there levels on the SP500 that are possible target levels of this retracement / trend inversion?

Let's start looking at the SP500 future as the ETFs are simply derivatives of this:

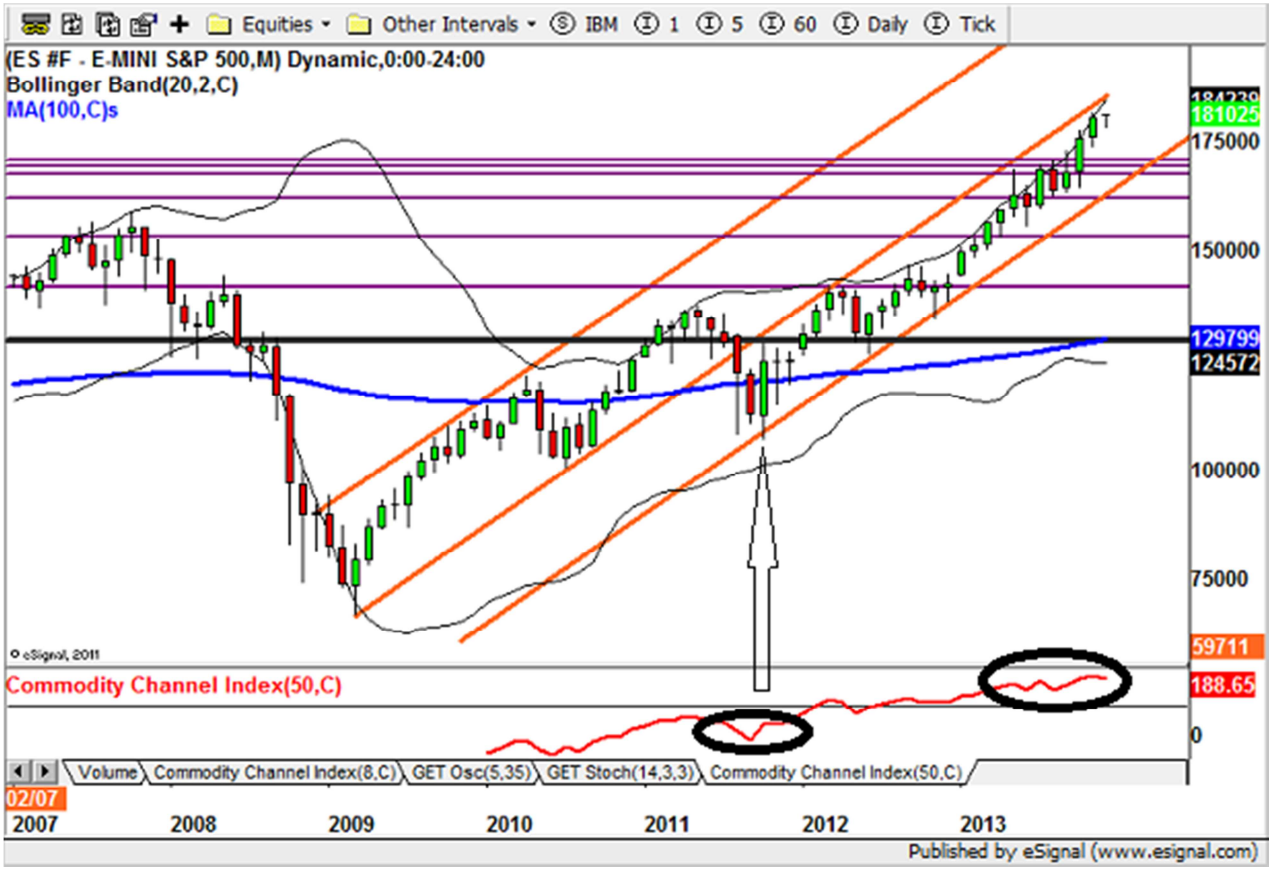


Figure 4: Monthly chart of the Sp500 future with the 100 period moving average

The above is the monthly chart of the american index future. What is clear is that the index is now in a prolonged period of overbought condition, way over the overbought condition.

Prices are almost reaching the upper side of the channel, set at 1840 points circa, in which the index has been inserted since 2011.

The last few monthly candles do not show any sign of inversion yet but a continuation of the current trend, as said before. When the inversion will arrive (because my personal opinion is that we will be witnessing an inversion and not a retracement) you can see some target levels drawn on the chart.

The purple lines are static horizontal supports and the first level, the one between 1670 and 1710 points seems to be a hard one to violate as the index went into a sideways movement for three months before continuing its upward movement.

Once this level will be violated, which I call the “Maginot line”, and needs to be defened if more deep downward movements want to be avoided, the following target levels become more wide between one another.

The following level is around 1600 future points (just below it there is the previous all time high set in 2007), then 1540 points. After this the next support is at 1420 points, quite a jump.

But it is the following to which I would like to draw your attention: the 1280 future points which in the chart is well represented by the thick black horizontal line.

I decided to make that level well recognizable because it is the level where the SP500 spent more time in the last thirteen years, almost thirty months in total on one hundred and fifty six months, a staggering 20% over 13 years.

To bring additional evidence of this, the 100 periods moving average is indeed at the same exact level of the horizontal line arriving at this level after years of flat movement. What is the meaning of a long term flat moving average? That for the last eight years despite huge movements up and down, we are trapped in a wide sideways market, with no direction.

The fact that the US marktet is now making new fresh all time high doesn’t change the evidence of a sideways market. The moving average will begin trending higher when the index will remain for prolonged period of time (more than it did so far) with potential new highs at 2500 future points. In my personal opinion this is only sci-fi, or at least it will happen after a new long consolidation phase around 1400 points and above.

But what if the moving average is set to remain flat for the time being, how that can be achieved?

Basically to counterbalance the recent upward trend in the SP500, the market should go way below the blue line basically to go back to the 700-1000 points. At this stage even this view is sci-fi, I acknowledge that.

What can be then a realistic scenario?

Well, it will not surprise me if the index will go back where it has spent the most time, to its 1280 level, which means a -29% from current levels.

Another evidence of the importance of the 1280 points level is that it was at the same time the last time when the CCI 50 periods has been in a neutral position (it can go negative and positive, therefore neutral is at zero): you can see on the chart the correspondence of the two factors looking at the vertical arrow, on figure 4.

To recap: from the current levels I would expect a more or less deep downward trend which depending on the news we will receive in the near future will state whether we will be witnessing a mere retracement or a trend inversion.

ETF SDS:

the American ETF 2x short on SP500 could be a valuable instrument to use when and only when clear signal of inversions even short term are present.

The static levels which can be targets for long positions are the following: 62 usd, 80 usd, 150 usd, 170 usd and 260 usd. If the 260 usd will be violated it is possible to test a double top.

The 1280 future points of the SP500 correspond to the 80 usd level for this ETF.

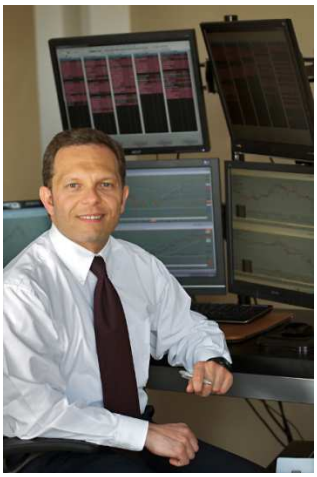
ETF XT21:

This ETF is traded in the European exchanges and could potentially be even more attractive then the one above. Basically all ETFs which have as an underlying a non euro instrument are not currency hedged. Therefore this one has two kickers to its performance: one is provided by the direction or performance of the underlying, the second is provided by the direction or performance of the EUR/USD exchange rate. That is why on figure 1 the performance of these two ETFs differs so much in 2011.

Since the EU/USD moves in the same direction of the stock market, a downward movement in the stock market will most probably result in the appreciation of the USD vs. the EUR and therefore an additional positive performance of this ETF.

The static levels which can be targets for long positions on this ETF are the following: 7.80 euros, 8,70 euros, 10 euros, 12 euros, 16 euros which if violated a double top could be expected.

The 1280 future points of the SP500 correspond to the 13 euros circa level for this ETF.



Mr. Maggioni has been working in the financial markets for the last 11 years covering different roles and working in tier 1 consulting companies and banks worldwide.

In recent years his studies have been focused on the psycho-emotional aspects of trading and how those aspects have an impact on traders' behavior.
Before starting this venture, he was head of a hedge fund desk at HSBC Private Bank in Monaco and before that he was employed at Credit Suisse Asset Management (CSAM) in Zurich covering the in-house single manager hedge funds.

Most of his experience in hedge funds was gained while working in a Swiss family office where he was in charge of the research and analysis as well as due diligence for US and European hedge funds. He also performed quantitative analysis and portfolio construction for several funds advised by the family office.

Prior to that he worked as an external consultant for KPMG Financial Services in the Milan office. In 2002 he has been hired by Ernst & Young LLP, San Francisco as auditor for hedge funds, auditing large single funds and fund of funds. In 2000 he joined Ernst & Young in Milan as an auditor for mid-sized companies.

Mr. Maggioni holds an MBA from IUM and a Portfolio Management degree from the University of Chicago GSB.

Useful Links:

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