Il Sole 24 ORE

ENQUIRY The five multipliers of risk

The dark side of the markets. When big finance can get out of control

The strategies and excesses that can amplify crashes

by Morya Longo

The most interesting aspect of the flash-crash that hit the world's stock markets in early February was the reaction by economists, analysts and investors. Many of them rushed to comment that the global economy remains sound and that in any case the bourses can return to growth. That is true. However, that very flash-crash showed that turbulence can arise not for economic reasons (which might just be a pretext), but from imbalances to be found in the financial markets themselves. Algorithms, particularly aggressive investment strategies, large-scale betting on parameters like volatility. Plus speculation… and more.

In these years of zero rates and overly abundant liquidity on the financial markets, there's been a sort of Darwinian evolution among investors. Like modern giraffes version 2.0, many investors have "extended their necks" to seek financial returns and profits in places nobody could previously reach. To squeeze every last drop out of the market they've begun to bet on the VIX volatility index, they've established strategies based on correlations that are sometimes "drugged" by liquidity, they've ventured into illiqued asset classes, or Methuselah bonds.

When yields are at zero, the quickest way to increase them is to use financial engineering: the only engineering that can magically create money from money.

These strategies are certainly remunerative, but they have possible hidden risks: new risks, that are often under-estimated. The desperate search for returns that we've seen in recent years could, in short, be the true "bug" in today's markets. That's because it has influenced investors' behaviour by favouring the development of technical mechanisms that can multiply rises (sooner) as much as falls (later). This doesn't mean that the risks will necessarily materialise. Central banks are paying close attention. But potentially they exist, and they could get out of control. Here, in this investigation, are the five dark sides of finance, one by one.

1. "VIX" POPULI

Volatility bubble: the "fear" index has become distorted

The case of the VIX index, which measures Wall Street volatility and is usually called the "fear index", is the only "bug" to have emerged thus far.

It is worth noting how it revealed itself to the world in recent days, because the same mechanisms could be replicated in other situations. Given that yields were very low on the bond markets and shares were very dear, many managers began to seek profits by speculating down on volatility. In other words, on the VIX index, on which futures and financial instruments are built. What misled everybody was the fact that the VIX was very low and so was signalling a low degree of "fear". That favoured exposure on the equity markets and speculation on the VIX itself. In actual fact, however, the VIX wasn't low because there was no risk, but because all these strategies were creating a bubble on the VIX itself. In short: a new risk was mistaken for a non-risk.

Speculating on "fear"

There were some very aggressive strategies speculating on the VIX, such as Levered Long/ Short VIX. These are adopted by niche investors with barely 7 billion in funds managed. But as soon as volatility increased they collapsed, creating a domino effect on many other, bigger, investment strategies. In a cascade effect they began struggling and had to sell stocks: Vol-Targeting funds, naturally (400 billion under management), CTAs (350 billion), Risk Parity (500 billion) and many exchange-traded funds (ETFs). And that's how the flash-crash started: forced sales by all those investors whose strategies depended on low volatility.

Unresolved problems

But what we've seen so far turned out to be just the tip of the iceberg. "If volatility remained at high levels for 2-3 weeks, funds based on VaR would also be forced to reduce exposure on the equity markets", explains Matteo Ramenghi, chief investment officer (CIO) at UBS Wealth Management Italia. And here we start to deal with truly gigantic numbers. Value at risk (VaR), a parameter that measures portfolio risk linked to market volatility, is very widely used in the managed savings industry. So, if volatility stayed high for long, the stock market adjustment could also resume.

2 DANGEROUS RELATIONS

Anomalous adjustments: when risks run in tandem

In this upside-down world even the investor's best friend, diversification, could turn into a systemic global boomerang. Because this concept, in the age of abundant liquidity, has been engineered into too many investment strategies that have ended up distorting the correlations between different asset classes. The International Monetary Fund (IMF) itself has calculated that correlations have increased since the financial crisis with respect to the pre-crisis period.

Anomalous correlations

To be clear: at one time it was highly probable that when the equity markets were performing well the bond markets suffered. And vice versa. Shares and bonds traditionally had an inverse correlation: in times of optimism you invest in the stock market, in times of fear you take refuge in government bonds. This rule wasn't always followed, but in the past it often worked. After the crisis, however, everything changed. In recent years, thanks to the abundance of liquidity, shares, bonds, emerging

countries and government bonds have all gained. Traditionally decorrelated sectors have become correlated. Suffice to note that in 2017 no asset classes closed the year with a loss.

Anomalous speculations

This anomaly has influenced investment strategies in recent years. Diversifying risk when all asset classes are moving in tandem is, in fact, more difficult. Investors may well have welcomed the fact that everything was on the up in recent years, but now that everything is falling the correlation risk in their portfolios is high. "We need only think of risk parity funds", observes Alberto Gallo di Algebris. "They, for example, buy bonds to offset equity risk. But if both sectors are growing and volatility remains low, these funds tend to become over-exposed on the more risky markets. Now that we're in the opposite phase, in which both shares and bonds are losing ground, the problem comes into play". The IMF wrote in 2015 that an increase in correlations during the stress phase is often a contagion factor. Well, that's exactly what's happening today, when both the stock markets and government bonds are falling.

3. BONDS RUN AGROUND

The illiquidity virus that's got its grip on bonds

Another recent phenomenon is the lack of liquidity in some secondary markets, notably bond markets. Paradoxically, during the period of major capital injections by central banks, large parts of the market became illiquid, which means it's difficult to sell securities when the need arises. The reason is that the rules established after the crisis of 2008 forced the big merchant banks to no longer act as "guarantors" of marketability. Once they were the big "market makers", now much less so. In the years of the boom in bond issues, the secondary markets therefore "ran aground".

Liquidity lag

This is a problem. An illiquid market is like a cinema with no emergency exit: if a fire breaks out it becomes a trap. A sudden change of mood on the markets could create a liquidity shock, as the IMF wrote some time ago. The problem mainly concerns funds and ETFs specialising in niche markets. They give clients the possibility of selling their investments quickly, but if they're positioned on illiquid securities they in turn cannot mobilise the underlying investments. And there are lots of illiquid market niches. For example, leveraged loans weighing on funds and ETFs to the tune of $156 billion. Or high-yield bonds. And many other sections of the bond market. But the problem also concerns leveraged ETFs, which amplify (upwards or downwards) the performance of an index. According to Morningstar, this market is worth 65 billion.

Latent risk

"Many of these people promise their clients liquidity that doesn't actually exist", observes Francesco Castelli of Banor Capital. "Only two dangers have a truly destructive potential for the markets", adds Luigi Nardella of Ceresio SIM: "leverage or illiquidity". And sometimes the two combine.

For as long as the market is optimistic, there's no problem, but if the mood changes the chickens could come home to roost.

4 DURATION RISK

The perils behind the boom of "Methuselah" products

The ravines and gorges of the markets where investors have ventured in search of returns include one that's causing some trepidation: long-term bonds. Issuers being equal, the longer a bond's maturity the more the risks, and thus the yields, increase. The concept is intuitive: if a company issues a bond that reaches maturity in three years' time the investor's risk is low. But if it issues a bond that reaches maturity in 50 years' time, the danger of something going wrong is higher. So in these years of distortion, where scraping together yields counted for more than keeping an eye on risk, investors bought large amounts of "Methuselah" bonds.

The boom in long bonds

Some time ago even Argentina issued a century-long bond. A country that went into default just 17 years ago asked investors to put their trust in it for the next 100 years. And they did. No less absurd is the offer from rock-solid Austria, which issued paper of a similar duration at a paltry 2.1% But the phenomenon is widespread in companies too. In 2017-18 alone US companies issued $1,600 billion in bonds. But what counts more than their yields is their duration: while in the 1990s corporate bonds had an average maturity of less than five years and a yield of 9.5%, now the average duration is over eight years and the remuneration just 2.5%. In short: today's investors are risking a lot and earning little. If they're happy…

The danger around the corner

The longer the bonds, however, the more they're subject to price volatility. An interest rate rise of 1% is all that would be needed to halve the value of the Austrian bond. "In general", observes Fabio Brambilla of Controlfida, "a triple rate rise by the US Fed would lead to a loss of nominal value, in the world of American corporate bonds alone, of nearly $100 billion". And that is precisely the problem with Methuselah bonds: they're very sensitive to rate rises. For this reason, many investors are selling, as the Bank of America data show.

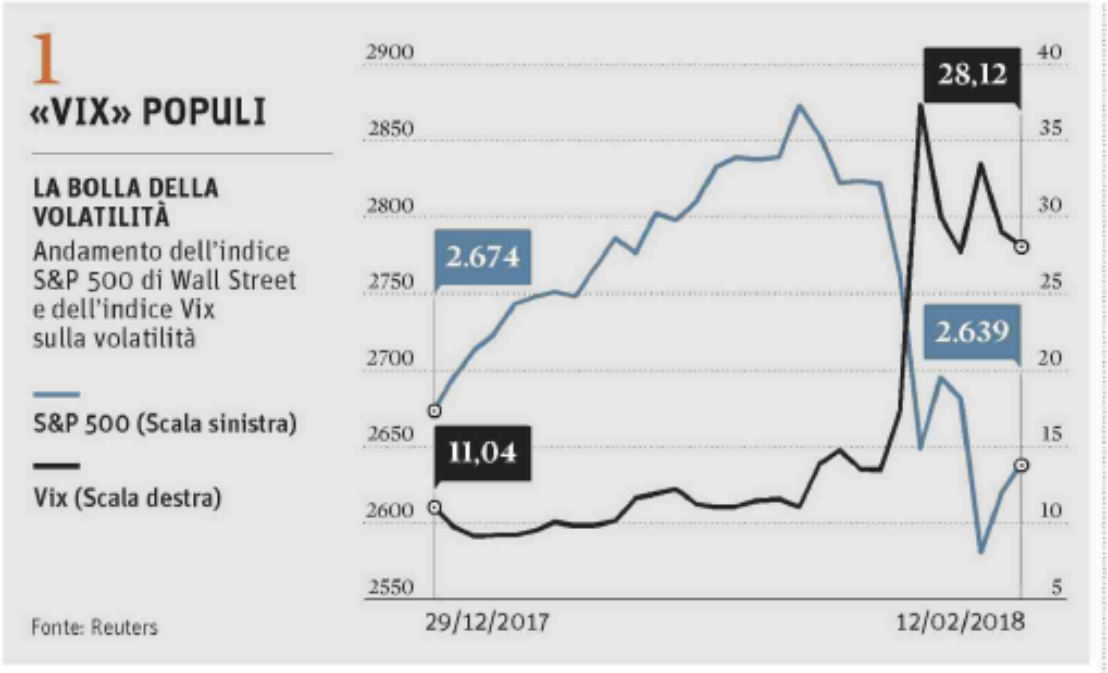
5 THE FLASH-BOYS

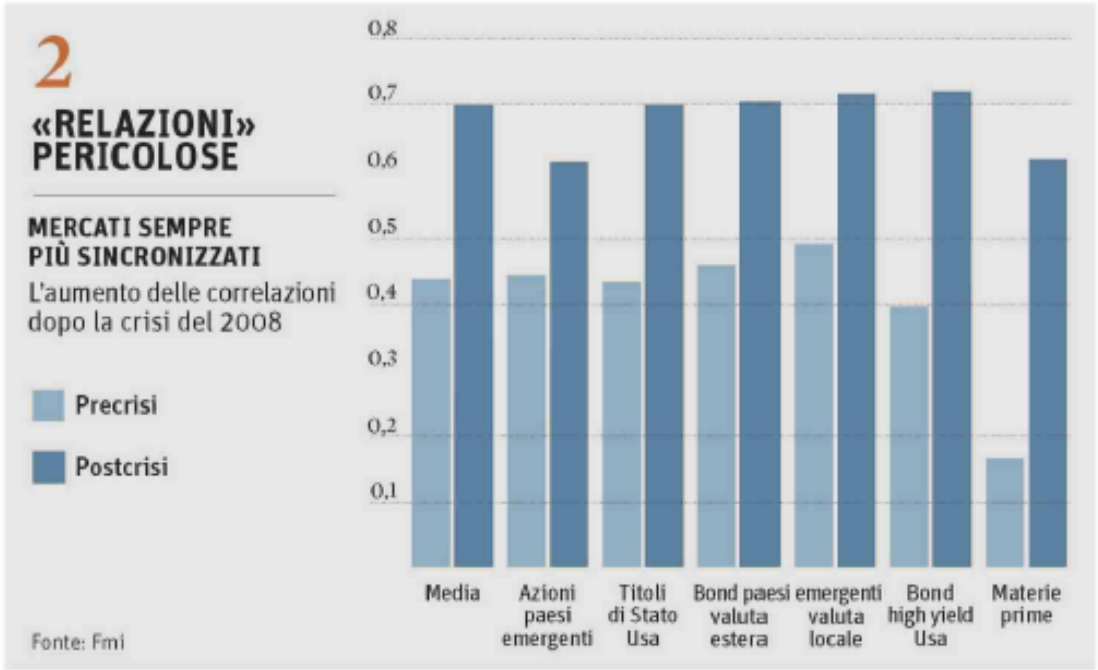
That "bug" in the algorithms that's moving the Bourse

In today's world, 66% of stock market trades are done through algorithms. In other words, by computers that buy and sell shares autonomously by following complex mathematical calculations. But the flash-crash showed that these apparently perfect machines can still make serious mistakes. And very quickly trigger automatic sales. The reason is that the algorithms base their calculations on historic data series, but give excessive weight to more recent ones.

Distorted optics

That’s where the problem arises. Market data in recent years have been distorted by the immense amount of liquidity: so they can “deceive” the algorithms. What happened in early February is emblematic. As we’ve mentioned, many algorithms use the VIX as the parameter to measure “fear” in the markets. Given that until January the index was very low, they interpreted this as a signal of low fear levels. So they invested in increasingly risky securities. But in actual fact the VIX was low because of the monetary “drug”: it wasn’t indicating low fear levels, but a bubble. But this eventuality wasn’t envisaged by the historic series.





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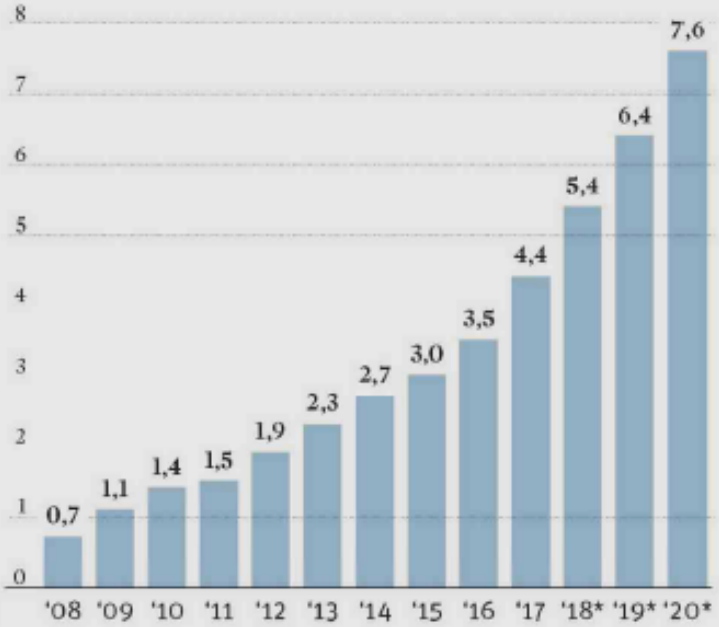
BOND IN SECCA

INVESTIMENTI SEMPRE PIÙ PASSIVI
La crescita degli Etf. Asset netti in migliaia di miliardi di dollari



* Stima
Fonte: EY su dati Morningstar Direct

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«DURATION-RISK»

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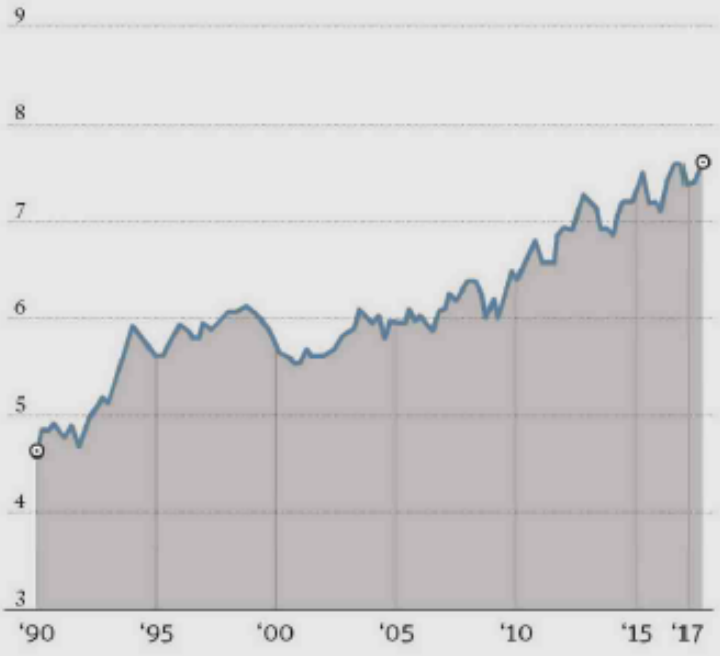
Durata media delle obbligazioni aziendali Investment grade dagli anni '90. Dati espressi in anni



Fonte: LPL Research e Bloomberg